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**CORRELATION BETWEEN KNOWLEDGE AND
BEHAVIOUR WITH COVID-19 HEALTH PROTOCOL
COMPLIANCE FOR ADOLESCENTS IN AL-
KENANIYAH JUNIOR AND SENIOR HIGH SCHOOL,
EAST JAKARTA, INDONESIA 2022.**

MASTER THESIS

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APPROVAL

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DECLARATION

I hereby declare that this thesis is my own work and that, to the best of my knowledge and belief, it contains no material previously published or written by another person nor material which has been accepted for the award of any other degree except where due acknowledgment has been made in the next.



13/07/2022

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ABBREVIATIONS

ABHR	Alcohol-based Handrub
CDC	Centers for Diseases Control and Prevention
COVID-19	Coronavirus disease 19
SARS	Severe Acute Respiratory Syndrome
SARS-CoV-2	Severe Acute Respiratory Syndrome Coronavirus 2
WHO	World Health Organization
IPC	Infection Prevention and Control

ABSTRACT

Tarmizi, SF. (2022). Correlation between Knowledge and Behaviour with COVID-19 Health Protocol Compliance for Adolescents in Al-Kenaniyah Junior and Senior High School, East Jakarta, Indonesia 2022. Yeditepe University, Institute of Health Science, Department of Public Health, MSc Thesis, Istanbul.

COVID-19 has the potential to be dangerous both individual health and the health of other communities. COVID-19 has affected nearly the entire human population since its emergence. Adolescents and young adults have been identified as a potentially low-compliance group with preventative measures aimed at curbing the virus's spread especially with social distancing measures. The purpose of this study evaluate the socio-demographic characteristics, knowledge, and behaviour of adolescent COVID-19 health protocol compliance. This study also to investigate whether there is correlation between adolescents sociodemographic characteristic, knowledge and behaviour with health protocol compliance. This research is a cross-sectional study with univariate and bivariate analysis between independent and dependent variables using the *Chi-Square* test. A total of 327 students follow this study. In this study, adolescents were interviewed on sociodemographic (age, gender and education), knowledge and behaviour related to preventive behaviour and COVID-19 health protocol compliance. Most of adolescents in this study seem to to have low knowledge and behavior in terms COVID-19 prevention. Majority of adolescents not following COVID-19 health protocols. The data were analyzed by using SPSS 26 program. The result of this study shows that three of the five independent variables have a significant correlation with health protocol compliance, with gender (*Pvalue* 0.002), knowledge (*Pvalue* 0.001) and behaviour (*Pvalue* 0.000).

Key Words : COVID-19, Adolescents, Behaviour, Health Protocol Compliance

ABSTRACT (Turkish)

Tarmizi, SF. (2022). Al-Kenaniah Ortaokul ve Lisedeki Ergenler için COVID-19 Sağlık Protokolüne Uyum ile Bilgi ve Davranış Arasındaki İlişki, Doğu Jakarta, Endonezya 2022. Yeditepe Üniversitesi, Sağlık Bilimleri Enstitüsü, Halk Sağlığı Anabilim Dalı, Yüksek Lisans Tezi, İstanbul.

COVID-19, hem bireysel sağlık hem de diğer toplulukların sağlığı için tehlikeli olma potansiyeline sahiptir. COVID-19, ortaya çıkışından bu yana neredeyse tüm insan nüfusunu etkiledi. Ergenler ve genç yetişkinler özellikle sosyal mesafe ile virüsün yayılmasını amaçlayan tedbirlere karşı düşük uyumlu olarak tanımlanmıştır. Bu çalışmanın amacı, ergenlerin COVID-19 sağlık protokolüne uyumunun sosyo-demografik özelliklerini, bilgi ve davranışlarını değerlendirmektir. Bu çalışma aynı zamanda ergenlerin sosyodemografik özellikleri, bilgi ve davranışları ile sağlık protokolüne uyumu arasında bir ilişki olup olmadığını araştırmayı amaçlamaktadır. Bu araştırma, Ki-Kare testi kullanılarak bağımlı ve bağımsız değişkenler arasında tek değişkenli ve çift değişkenli analizlerin yapıldığı kesitsel bir çalışmadır. Bu çalışmayı toplam 327 öğrenci takip etmektedir. Bu çalışmada ergenler sosyodemografik (yaş, cinsiyet ve eğitim) bilgi, önleyici davranışa ilişkin davranışlar ve COVID-19 sağlık protokolüne uygunluk konularında görüşülmüştür. Bu çalışmadaki ergenlerin çoğu, COVID-19'un önlenmesi açısından düşük bilgi ve davranışa sahip görünmektedir. Ergenlerin çoğunluğu COVID-19 sağlık protokollerini takip etmiyor. Veriler SPSS 26 programı kullanılarak analiz edildi. Bu çalışmanın sonucu, beş bağımsız değişkenden üçünün sağlık protokolüne uyum, cinsiyet (P değeri 0,002), bilgi (P değeri 0,001) ve davranış (P değeri 0,000) ile anlamlı bir korelasyona sahip olduğunu göstermektedir.

Anatar kelimeler: COVID-19, Ergenler, Davranış, Sağlık Protokolü Uyum

1. INTRODUCTION and PURPOSE

1.1. Background Information

Coronavirus disease (COVID-19) has been an international health issue. The world is facing and dealing with the COVID-19 pandemic. The World Health Organization proclaimed the COVID-19 outbreak a global pandemic on March 11, 2020 (1). It quickly spread, causing an epidemic in China and a rising number of cases in other countries around the world. There were 21,294,845 confirmed cases and 761,779 confirmed deaths worldwide as of August 16, 2020. (2). According to WHO, there are 206,693,357 confirmed cases and 4,352,488 confirmed deaths as of August 16, 2021. (3).

Globally, as of 13 September 2021 there have been 228,016,104 confirmed cases of COVID-19, including 4,685,095 deaths reported to World Health Organization. There are 87,962,546 confirmed cases in America Region, Europe 68,305,044 confirmed cases, South East Asia 42,498,922 confirmed cases, Eastern Mediterranean 15,449,977 confirmed cases, Western Pacific 7,887,346 confirmed cases and Africa 5,911,505 confirmed cases (4). By 14 September 2021, Indonesia is one of the highest number of new cases after India and Thailand reported by World Health Organization South-East Asia region (5). As of 1 April 2022, the World Health Organization had received reports of 486,761,597 confirmed cases of COVID-19 and 6,142,735 deaths. The region with the most confirmed cases is Europe, with 202,639,049 confirmed cases, and the region with the fewest confirmed instances is Africa, with 8,580,381 confirmed cases (6).

Indonesia has reported the first positive of COVID-19 cases in March, 2020. Positive cases of COVID-19 found increasing day by day in Indonesia. According to data of COVID-19 cases in September 16, 2020, there have been 228,993 confirmed cases, 9,100 deaths and 164,101 recovered cases confirmed by the Government of Indonesia (7). Since around 15 September 2021, the Indonesian government reported 4,178,164 confirmed cases, 139,682 deaths, and 3,953,519 recovered cases from 510 districts spread throughout 34 provinces. (8). Based on 10 November 2021, there have been 4,249,323 confirmed cases of COVID-19, 143,592 deaths and 4,096,194 recovered cases reported by the Government of Indonesia (9). The province with the highest number of cases is DKI Jakarta with 862,371 positive cases, West

Java 706.613 positive cases and Central Java 485.579 positive cases as 11 November 2021 (10). Indonesian government reported 5.927.550 confirmed COVID-19 cases, 152.975 deaths and 5.494.606 recovered cases from 510 districts across 34 provinces according to the data on 16 March 2022 (11).

A health protocol is a set of guidelines that explains a process to be followed in order to control a detailed disease. According to international recommendation and Indonesia national health protocol these include wearing mask, hand washing with soap, social distancing and avoid who do not live in your household as much as possible (12,13,14,15). But, the preventive measure can not be accepted for entire group. Previous study conducted for the public to actively engage to preventive measure, can not be applied yet (16). In the first year of COVID-19 pandemic, as 14 September 2020, reported 50% compliance about health protocol (17). COVID-19 Task Force mentioned that 60% from 99 district in Indonesia do not comply about the government health protocol (18).

Adolescents are a critical target group because they are increasingly responsible for their own health behaviours (19). Despite the fact that younger people are less likely to become ill and the fact that those who do are frequently asymptomatic, they can still spread the virus (20). There have been described adolescents and young adults as a potentially low-compliance group with preventative measures aimed at curbing the virus's spread especially with social distancing measures (21). It is quite difficult for adolescents to follow health protocol about social distancing because in this age, adolescents prefer to spend time with their friends (22). Almost adolescents did not applied for preventive measure, those about infrequently to wash their hand, they did not applied both social distancing and wear a face mask related to preventive disease (23). Another study said that most adolescent had a strong understanding of COVID-19 prevention measures, but they quite often failed to put them into practice (24).

Several factors that contribute non-compliance with health protocols. One of factor that contribute is gender. As shown in a study that gender has a significant relationship with compliance to COVID-19 transmission prevention protocols among adolescents (23). In comparison, males are more non-compliance than females, but this pattern varies by behaviour (21). Further, women are more likely to have changed their behaviour related to health protocol compared to men (25). Another factor that related to adolescents non-compliance about health

protocol is age. According to the study results, age is positively associated with compliance to health protocol measures. (25). Age will be associated with individually implementing steps to prevent the virus's spread. According to the study results, age is positively associated with compliance to health protocol measures (26). Furthermore, the higher education, the more compliance to practice preventive measure, the mind-set of well-educated people is important in influencing their attitude and behaviour. A study reveals that significant relationships between educational background (16). Beside sociodemographic factor, one of the important thing is knowledge. The significance of improving COVID-19 knowledge may lead to improvements in their attitudes and practices toward COVID-19. A study was conducted in China show that good knowledge about COVID-19 statistically significant with negative practices related to preventive measure (27).

1.2 Problem Statement

COVID-19 has the potential to be dangerous both individual health and the health of other communities. Many people have adapted their behaviour greatly in the previous year to protect themselves against coronavirus infection. People's behaviour change during COVID-19 pandemic, this including wear a face mask, wash the hand more regularly, avoid the crowded places and social distancing according to international recommendation and Indonesia national health protocol. Unfortunately, this preventive behaviour can not be applied by community, which include adolescent who are of productive age for activities.

Adolescents, as a result, require a strong awareness and understanding of the importance behaviour in implementing community prevention protocols. Compliance with the protocol either reduce or break the chain of transmission of COVID-19 cases. According to study, adolescents who comply with wearing masks (39.7%) and who do not comply with wearing mask (60.3%), and those who comply with keeping the distance (6.9%) and those who do not comply (93.1%) keep their distance. There are (48.3%) adolescent who wash their hands obediently and (51.7%) adolescents who do not wash their hands obediently (28).

Based on the description of the problem in the background of study above, further research on adolescent compliance in adhering to health protocols to prevent the spread of

COVID-19 is required to determine what factors are related to adolescent compliance in COVID-19 preventive measures.

1.3 Objectives of Study

1.3.1 General Objective

The general objective are is to assess the socio-demographic characteristics, knowledge, and behaviour of adolescent COVID-19 health protocol compliance in Al-Kenaniyah 2022.

1.3.2 Specific Objective

The specific objectives are:

- Describe adolescents sociodemographic characteristic including age, gender and educational background.
- Describe adolescents knowledge about preventive COVID-19 disease.
- Describe behavior for preventive measure during the pandemic on adolescents.
- To investigate whether there is correlation between adolescents sociodemographic characteristic including age, gender and educational background with health protocol compliance.
- To investigate whether there is correlation between adolescents knowledge with health protocol compliance during this pandemic.
- To investigate whether there is correlation between behaviour with health protocol compliance on adolescents.

1.4 Significant of Study

Based on the context of this study, it is obvious that the main compliance with health protocols is low, even though COVID-19 disease is still present. We still facing and dealing with this COVID-19 pandemic. As long as this pandemic persists, preventive measures must be implemented. Furthermore, after the Indonesian government's restarted of school activities on September 14, 2021, intensity of adolescent meetings will lead to increase. This study will evaluate whether adolescent compliance to health protocols will continue as it did at the start of the pandemic. The comprehensive findings of this research could be represent as indicators to take a health program at the at the community level, particularly among adolescent in school. This study hopefully could be useful to understanding the same topic research and also this study will be an example to be studied more by whoever interesting with the related topic or research.

1.5 Research Methodology

Adolescent sociodemographic characteristics, which including age, gender and educational background are independent variables in this study, which was conducted on adolescents aged 14-18 years old. Furthermore, knowledge about COVID-19 disease prevention and behaviour for preventive measures on adolescents during the pandemic. Adolescents compliance with health protocol during the pandemic is the dependent variable in this study. This study was conducted on junior and senior high school students at Al-Kenaniyah, East Jakarta, Indonesia, that use a quantitative research approach and *cross sectional* design, with univariate and bivariate analysis between independent and dependent variables using the *Chi-Square* test.

2. LITERATURE REVIEW

2.1. COVID-19 Pandemic

Coronavirus have been related to mild and moderate respiratory infections (29). The primary mode of transmission of the severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) is thought to be respiratory droplets from person to person (30). Not only the virus can be infected when someone cough, sneeze, talk but also when comes into contact with the contaminated surface then contact with his or her eyes, nose, or mouth. Droplets typically don't linger within the air and don't travel quite six feet (about two meters) (31). This disease has a typical incubation period of 1-14 days (32). The simple symptoms of this disease are fever and cough in first of 2-3 days (33). Body aches, vomiting, diarrhea and loss of smell are the other symptoms of coronavirus disease (34).

An unknown disease emerged at the end of 2019 and brings attention. It first emerged in Wuhan, Hubei Province, China, a city of 11 million people (35,36). The number of contaminated has expanded exponentially since the first case then it rapid spread throughout the country and the world (37). On December 31, 2019, the first unknown pneumonia reported by China to World Health Organization (38). It has confirmed thousands of new COVID-19 cases and the disease surged in late January and earlier February 2020 (39). COVID-19 had spread to 19 other countries as of January 31, 2020, infecting 11,791 people and causing 213 reported deaths. The World Health Organization actually classified the COVID-19 pandemic a Public Health Emergency of International Concern on January 30, 2020. The World Health Organization declared the COVID-19 outbreak a global pandemic on March 11, 2020. (1,40)

2.2. COVID-19 Preventive Measure

Individual responsibility to society, COVID-19-related behaviours were similar to health-related behaviour. These behaviours are classified into three types: preventive behaviour, which include hand cleansing, use face mask, keep social distancing as well as quarantine.

2.2.1 Facemask

The COVID-19 virus spreads primarily through respiratory droplets and make contact with. When an infected person coughs or sneezes, respiratory droplets are produced. Anyone who comes into close (within 1 m) contact with someone who has respiratory symptoms (coughing, sneezing) is in danger of being exposed to potentially infective respiratory droplets. Droplets can also land on surfaces where the virus may remain viable thus, an infected person's immediate environment can function a source of transmission (contact transmission) (41, 42).

Face masks are a type of personal protective that may help to keep respiratory viruses and bacteria at distance (43). Face masks are more typically used to protect against respiratory infections that spread through droplets that travel short distances and are communicated by coughing or sneezing. Face masks usually fit loosely, making it difficult to disperse larger sprays and droplets and preventing hand-to-face contact (44).

Masks are thought to shield people in two ways: source control, which reduces the emission and spread of respiratory viruses through airborne droplets also aerosols, and wearer protection, which reduces respiratory virus inhalation (45). Wearing a mask protects both you and others. Face masks are thus likely to play a crucial role in preventing disease spread (46). Face mask use could be a significant public health measure for reducing SARS-CoV-2 respiratory transmission, especially given estimates that just about half new infections are transmitted by patients who seem to have no symptoms (47,48).

The World Health Organization recommends using medical masks during routine care and respirators during aerosol-generating procedures and other high-risk situations (49). The recommendation to wear masks to protect against droplet infections is based on the assumption that droplets travel only short distances, typically 1-2 m. (50). Wearing a mask when people are physically close to each other and social distancing is impossible. The more people who wear

cloth face coverings in public places where they may be close together, the more the entire community is protected, similar to herd immunity with vaccines (51).

When physical distance can not be maintained, it is important to use face mask especially indoor area. Also, use the mask when the others of your family is infected or has possibility COVID-19 exposure from public places, traveling or related to the job area (52,53). Masks are seen to be useful in the protection of influenza and other infectious diseases, and using any form of conventional mask may lower the risk of exposure to viruses and infections (54). Some studies used an epidemiological population transmission model to explore the influence of mask use during influenza. The data suggested that wearing masks across the country could help to prevent the virus (55, 56).

During the COVID-19 pandemic, a retrospective study of 335 people from 124 families in Beijing discovered that using masks by primary cases and family contacts could effectively reduce COVID-19 transmission (57). Beside that a cohort study in Beijing discovered that using masks in index patients was independently associated with a lower risk of household infection (58). An investigation into the outbreak on the USS Theodore Roosevelt discovered that self-reported use of face coverings and masks was associated with a low infection risk (59). This evidence suggests that masks have a protective effect on the general population.

2.2.2 Hand Hygiene and Disinfection

COVID-19 virus spreads via respiratory droplets or contact. When contaminated hands come into contact with the mucosa of the mouth, nose, or eyes, contact transmission occurs. Contaminated hands can also transfer the virus from one surface to another, enabling effective indirect contact transmission (60). The virus can survive for a few hours depend on environmental around it (61), also this virus can exist up to 48 and 72 hours in metal and plastic (62). Handwashing with antimicrobial soaps or alcohol-based sanitizers is an effective way to prevent the spread of microbial diseases (63).

It has been recommended by World Health Organization that hand washing with soap is the most effective and costless strategy to prevent the transmission of the virus (64). Hand hygiene, along with other protective measures such as wearing a mask and avoiding crowds, contributed to a decrease in other respiratory diseases during the COVID-19 pandemic,

according to a recent study (65). Furthermore, a large body of peer-reviewed literature has established the importance of hand cleanliness in the prevention of many infectious diseases (66). Thus, not just during a pandemic, but also in limiting the transmission of other diseases, hand hygiene practices are crucial (64). Hand hygiene not only helps to reduce the burden of health-care-associated infections and the spread of antimicrobial resistance, but it is also an important IPC (Infection Prevention and Control) strategy for safe COVID-19 vaccination (67). ABHR (Alcohol-based handrub) is the given preference way for hand hygiene in health care because it will be remove microorganisms quickly with 20-30 seconds and also the skin accepts well (68). In addition, simple soap, which removes the oily surface membrane, is effective at inactivating contained viruses such as the COVID-virus. Furthermore, hand washing removes bacteria chemically (69). Not only hand washing with soap but also sanitizer with at least 60% alcohol can be used in terms of COVID-19 personal protective measure (70).

The most important strategy for the general public to employ is to frequently wash their hands and use portable hand sanitizer, as well as to avoid contact with their face and mouth after interacting with a potentially contaminated environment (71). In the context of coronavirus infection, after throat irritation, visiting a public place, interacting surfaces outside the home, caring for a sick person(s), and before and after eating it highly advised to handwashing with soap and water regarding to the World Health Organization and the Centers for Disease Control and Prevention (72,73). It highly preferred for regular surface disinfection because SARS-CoV-2 and virus cause respiratory infection will be persists and in the environment for a few hours. this virus could be remove by cleaning products with surfactant (74). It is recommended that high-touch surfaces such as bedside tables and door handles be disinfected on a daily basis with a basic household disinfectant comprising a mild detergent solution (that is, 1-part bleach to 99 parts water) (71).

2.2.3. Social Distancing

Social distancing is intended to reduce interactions between people in a larger community where individuals may be infectious but have not yet been identified and thus have not yet been isolated (75). It will be remove the SARS-CoV-2 to keep social distancing from contaminated respiratory droplets and aerosols, even though there is no symptoms, but it could be exist from people who did not see any symptoms (76, 77). It highly recommended by World Health Organization and Center for Disease Control and Prevention to give a 1.5 meter distance other people in order to resist being infected with the virus (78). The previous study shown that communities with a higher social distance are less likely to be contaminated with COVID-19 than communities with a lower social distance Social distancing is crucial to prevent presymptomatic stage in order to transmission of the SARS-CoV-2 (79).

Social distancing is particularly beneficial where community transmission is suspected. The example of social distancing to prevent the virus transmission are close the school and work from home, avoid crowded public places, discontinued public markets. Instead of go to public markets, it is recommended actively encouraging to online shop to minimize the contact with other people. (71, 80). Eat and shared meals, close physical interaction, were all associated with greater risk of infection outside the house (81, 82). One of the study approximated that social distancing lowered the average number of daily contacts up to 74% even though it is so hard to avoid other interventions (83). Since the largest risk of transmission has been identified among COVID-19 patients' household contacts (84), To avoid SARS-CoV-2 introduction and transmission, physical isolation, the use of the various public health policies outlined below, and persistent and accurate usage of face masks mask both in indoor and outdoor are required Physical barriers and visual reminders at the community level may urge people to keep their distance (85,86).

2.3 Health Behaviour

Genetics, social conditions, environmental exposures, behavioural patterns, and medical care are among the five broad types of factors or determinants that have an impact on health. Consistently, public health research shows that treating unhealthy habits offers the best chance to increase health and health quality, decrease premature death, and improve is by addressing health behaviour (87).

The concept health behaviour refers to the activities of people, groups, and organizations as well as the factors that influence, correlate with, and result in those actions, such as social change, the creation and implementation of policies, enhanced coping mechanisms, and better living quality (88). Conner and Norman define health behaviour as "any activity undertaken for the purpose of preventing or detecting disease or improving health and well-being" (89). This is close to Gochman's theoretical concept of health behaviour (though his concentrated on individual), it include not only visible, overt behaviours, but also mental activities and feeling states that may be reported and measured. He describe health behaviour as "those personal attributes such as beliefs, expectations, motives, values, perceptions, and other cognitive elements; personality characteristics, including affective and emotional states and traits; and overt behavior patterns, actions, and habits that relate to health maintenance, health restoration, and health improvement" (90,91). Gochman's definition is consistent with and embraces Kasl and Cobb's seminal articles' definitions of specific categories of overt health behavior. Kasl and Cobb distinguish three types of health behaviour (92, 93).

1. Preventive health behaviour: any action or behaviour carried out by a person who believes he or she is healthy in order to prevent or detect sickness in an asymptomatic stage
2. Illness behaviour: the person who believes he or she is ill and look for the well medicine for herself or himself.
3. Sick-role behaviour : any action performed by a person who believes he is ill in attempt to recover It requires obtaining medical treatment.

Actions are believed to have an effect at various levels of influence. For behavior and conditions related to health, there are five levels of effect (94, 95) :

1. Intrapersonal level: the traits of the individual that shape behaviour. These consist of knowledge, attitudes, and beliefs that have been acquired and conditioned during the course of exposure to the other levels of life. There may also be personality traits, biological characteristics, racial and socioeconomic factors, and environmental influences.
2. Interpersonal level: interactions and relationships that provide social identity, support and role definition. These include family, friends, co-workers, peers and social networks.
3. Organizational or institutional level: the norms, cultures, and expectations of the institutions where people work or attend school.
4. Community level: the norms and connections between associations, teams, and people.
5. Societal/public policy level: laws, regulations, and frameworks at the federal, state, and municipal levels that control or promote healthy behaviours, activities, and strategies for illness detection, prevention, and treatment.

Green and colleagues developed the PRECEDE framework in the 1970s (96). Recognizing the significance of environmental factors as predictors of health and health behaviour, PROCEED, was added to the framework in 1991 (97). A person's behaviour can be influenced by a variety of factors. Predisposing factors include individuals' knowledge, attitudes, beliefs, personal preferences, existing abilities, self-efficacy beliefs, age, and gender. Reinforcing variables are those that occur after a conduct and give a continued reward or incentive for the persistence or recurrence of the behaviour. Some examples include social support, peer influence, significant people, and vicarious reinforcement. As antecedents to behavioural or environmental change, enabling factors allow a motivation or environmental policy to be achieved. Enabling factors can either influence behaviour directly or indirectly through an environmental component. They include the programs, services, and resources needed to attain behavioural and environmental goals as well as in certain situations (98, 99,100).

3. MATERIALS and METHODS

3.1 Place and Time of Study

The study was conducted in Al-Kenaniyah junior and senior high school. The school was established in 6 January 1994. Al-Kenaniyah is private school where located in Kayu Putih district, East Jakarta, Indonesia. This school consist of primary school, junior high school and senior high school. Around 700 students are studying in Al-Kenaniyah. This class is divided in two major in high school, those are natural science and social science class. The study was conducted in May to June 2022.

3.2 Study Design

This study uses the quantitative analytical research design to analyse the relationship between the two variables, considering the measurements that will be taken regarding factors related to adolescent compliance in the prevention of COVID-19. In this study, cross-sectional design was conducted as a sample of adolescents.

3.3 Study Population

Population in this study are adolescent that currently student from 8th grade until 12th grade in Al-Kenaniyah junior and senior high school, East Jakarta, Indonesia. There are 184 students in junior high school and 165 students in senior high school. Total population are 349 students.

3.4 Sampling

There were no samples chosen. This study's purpose to approach all of the student that currently studying from 8th grade until 12th grade in Al-Kenaniyah junior and senior high school, during this study. A total 327 students who participated this study.

3.5 Inclusion and Exclusion

3.5.1 Inclusion Criteria

- Students aged 14-18 years old.
- Student in Al-Kenaniyah junior and senior high school.
- Attend school during the study.

3.5.2 Exclusion Criteria

- Student aged under more than 18 years old.
- Not study and student in Al-Kenaniyah junior and senior high school.
- Not attended during this study.

3.6 Data Collection

The type of data that researchers will use and collect is primary data, which comes from the original or first source. Data was collected use a semi-structured questionnaire. The survey questionnaire asked respondents about their sociodemographic (age, gender and education), knowledge and personal behaviour of adolescents to protective measures against COVID-19.

The questionnaires in multiple-choice format. The study's primary research question were divided in three main section. The first section addressed sociodemographic adolescents. In the sociodemographic characteristics section, respondents are interviewed and asked questions which including age, gender and educational background. The second part of the interviewed includes a structured questionnaire based on adolescent knowledge about COVID-19. The knowledge about COVID-19 measured with 11 statements, if adolescents understand how the coronavirus spreads, symptoms of the coronavirus, statements about wearing masks, washing hands and staying away from crowds in accordance with international recommendations and national health protocol. Respondents had to indicate whether these statements are true or false in each of the questions. A correct answer was given to one score, zero score for a wrong answer and zero score for preferring not to answer the questions.

The third section on the questionnaire was divided into two, regarding adolescent personal behaviour to protective measures against COVID-19 including wearing masks, washing hands, clean and disinfect frequently touched surfaces daily and avoid spending time in crowded places or in groups. Of the questions, they had to answer yes or no format. In the

last of questions will be asked about adolescent compliance and frequency with COVID-19 health protocols such as wearing masks, washing hands and stay away from the crowd. The respondents will answer, never, rarely, occasionally, frequently, always for this section.

The questionnaire took about ten minutes to complete for each respondent. The respondent consent form was included at the beginning of the questionnaire. This study did not collect any information that could be used to identify the respondents. All respondents were anonymous. After reading the consent form, respondents gave their informed agreement to either participate or reject to participate in this study.

3.7 Pre Test of Questionnaire

The pre-test of the questionnaire conducted on 25 adolescents to ensure ensure that the questions were properly understood. The received responses from respondents on how long it took them to fill out a questionnaire as well as there is suggestions for improvement. This questionnaire had not been validated and reability in any other research

3.7.1 Validity Test

The validity test is analyzed by comparing the calculated r value with the r table value. The calculated r information is calculated from the validity test results using statistical tests, which can be found in the corrected item-total correlation column. While the value of r table is calculated by examining the table r product moment at a significance level of 5% and the number of respondents with validity test are 25. Each question is compared to the calculated r value and the r table value, and the question is said to be valid if the calculated r value is higher than the r table value ($r \text{ Value} > r \text{ table}$).

Table 3.1 Adolescent Knowledge Variable Validity Test Results

Question	r Value	r Table	Result
KN.1	0.502	0.396	<i>Valid</i>
KN.2	0.671	0.396	<i>Valid</i>
KN.3	0.701	0.396	<i>Valid</i>
KN.4	0.826	0.396	<i>Valid</i>
KN.5	0.633	0.396	<i>Valid</i>
KN.6	0.534	0.396	<i>Valid</i>
KN.7	0.701	0.396	<i>Valid</i>
KN.8	0.841	0.396	<i>Valid</i>
KN.9	0.728	0.396	<i>Valid</i>
KN.10	0.817	0.396	<i>Valid</i>
KN.11	0.426	0.396	<i>Valid</i>

Table 3.2 Adolescents' Behavior Variable Validity Test Results

Question	r Value	r Table	Result
BH.1	0.730	0.396	<i>Valid</i>
BH.2	0.723	0.396	<i>Valid</i>
BH.3	0.866	0.396	<i>Valid</i>
BH.4	0.728	0.396	<i>Valid</i>
BH.5	0.865	0.396	<i>Valid</i>
BH.6	0.621	0.396	<i>Valid</i>
BH.7	0.728	0.396	<i>Valid</i>
BH.8	0.673	0.396	<i>Valid</i>
BH.9	0.721	0.396	<i>Valid</i>

Table 3.3 Adolescents' Health Compliance Variable Validity Test Results

Question	r Value	r Table	Result
HC.1	0.847	0.396	<i>Valid</i>
HC.2	0.866	0.396	<i>Valid</i>
HC.3	0.746	0.396	<i>Valid</i>
HC.4	0.788	0.396	<i>Valid</i>
HC.5	0.872	0.396	<i>Valid</i>
HC.6	0.865	0.396	<i>Valid</i>
HC.7	0.850	0.396	<i>Valid</i>
HC.8	0.863	0.396	<i>Valid</i>
HC.9	0.892	0.396	<i>Valid</i>

3.7.2 Reability Test

The reliability test is carried out by comparing the Cronbach's Alpha value in the statistical test, where if the Cronbach's Alpha value $>$ r table then it is reliable. The reliability test was tested on 25 respondents, so that the resulting r table value from the r product moment table was 0.396. Based on the statistical tests that have been carried out on the adolescent knowledge, behavior and health protocol compliance variable, thus the Cronbach's Alpha value for each variable is as follows:

***Cronbach's Alpha* for Adolescents' Knowledge, Behavior and Health Protocol Compliance**

Variable	<i>Cronbach's Alpha</i>	r Table	Result
Adolescents' Knowledge	0.870	0.396	<i>Reliable</i>
Adolescents' Behavior	0.889	0.396	<i>Reliable</i>
Adolescents' Health Protocol Compliance	0.950	0.396	<i>Reliable</i>

According to the table, the variables of knowledge, behaviour, and adolescent compliance with health protocols have a Cronbach's Alpha value greater than r (0.396), indicating that the questions used to describe the variables of knowledge, behaviour, and compliance are reliable and can be used for research.

3.8 Data Analysis

To analyze data, the Statistical Package for the Social Sciences (SPSS) version 26.0 was used. Respondent's completed questionnaires were reviewed for consistency and completeness. The researcher edited and coded the data before entering it into SPSS, and the data was presented in percentage, frequency, bar charts and tables. Data are analysed with univariate to describe both independent and dependent variable. After conducting univariate analysis, the result will reveal the characteristics or distribution of each variable, allowing for further bivariate analysis. Bivariate analysis was performed on two suspected related or correlated variables. This analyst is used to put the hypothesis to the test by determining the correlation between independent and dependent variables. The *Chi-Square* test was used in this study to determine the significance of correlation statistics between categorical variables. The significance level is set a *P-Value*. If the following results are obtained, the level of significance can be calculated:

1. ≤ 0.05 : there is a significant correlation between independent and dependent variables.
2. > 0.05 : there is no significant correlation between independent and dependent variables, and the Confidence Interval (CI) was set at 95%

3.9 Ethical Consideration

To begin the study approval was taken from Al-Kenaniyah Junior and Senior High School, East Jakarta, Indonesia, which was then reviewed and approved by the Yeditepe University Ethics Committee prior to data collection. The content of the informed consent letter was explained to each student before to its distribution. The informed consent form detailed the research. They were asked to sign it at the start of interview, and no student was forced to participate, only those who were interested were asked to participate in the study. The researcher kept their identities strictly confidential. Everyone who took part was assured that the information they provided would be kept private. The study's data was kept on file.

3.10 Operational Definition of Variables

No	Variable	Definition	Instrument	Categorized	Scale
	Dependent Variable				
1.	Health protocol compliance	Respondent compliance in implementing health protocol, including wearing a mask, washing hands and avoid the crowded.	Questionnaire B.2	1. No Compliance 2. Compliance	Ordinal
	Independent Variable				
1.	Age	The age of respondent.	Questionnaire A.1	1. 14-15 years old 2. 16-17 years old 3. 18 years old	Ordinal
2.	Gender	The gender of respondent.	Questionnaire A.2	1. Male 2. Female	Nominal
3.	Education	Currently of the level education by the respondent.	Questionnaire A.3	1. Junior high school 2. Senior high school	Ordinal
4.	Knowledge	Respondent knowledge about COVID-19 including how the coronavirus spreads, symptoms of the coronavirus, statements about wearing masks, washing hands and	Questionnaire A.4	1. Low 2. High	Ordinal

		staying away from crowds in accordance with international recommendations and national health protocol.			
5.	Behaviour	Respondent personal behaviour to protective measures against COVID-19 including wearing masks, washing hands, clean and disinfect frequently touched surfaces daily and avoid spending time in crowded places or in groups.	Questionnaire B.1	1. Low 2. High	Ordinal

4. RESULTS

4.1 Univariate Analysis

The results of univariate analysis describe the results of data processing based on univariate variables. This study included 327 students from Al-Kenaniyah Junior and Senior High School in East Jakarta, Indonesia, who participated in the study. Univariate results are presented as frequency tables and statistical values, with a narrative included to explain the appearance of a table.

4.1.1 Adolescents' Age

The distribution of variable in the sociodemographic characteristics form according to the age of adolescents is shown in Table 4.1:

Table 4.1.1 Distribution of Adolescents Sociodemographic by Age in Al-Kenaniyah Junior and Senior High School, East Jakarta, Indonesia 2022.

Age	N	%
14-15	182	55.7
16-17	117	35.8
18	28	8.6
Total	327	100

Following the table 4.1.1. shows most of adolescents in this study at the age of 14-15 years old (55.7%), (35.8%) of adolescents at the age 16-17 years old and 18 years old (8.6%).

4.1.2 Adolescents' Gender

The distribution of variable in the sociodemographic characteristics form according to the gender of adolescents is shown in Table 4.2:

Table 4.1.2 Distribution of Adolescents Sociodemographic by Gender in Al-Kenaniyah Junior and Senior High School, East Jakarta, Indonesia 2022.

Gender	N	%
Male	146	44.6
Female	181	55.4
Total	327	100

A total of 327 respondents, consisting of students in Al-Kenaniyah junior and senior high school, were included in the study and (55.4%) of these participants were female and (44.6%) were male.

4.1.3 Adolescents' Education

The distribution of variable in the sociodemographic characteristics form according to the education of adolescents is shown in Table 4.2:

Table 4.1.3 Distribution of Adolescents Sociodemographic by Education in Al-Kenaniyah Junior and Senior High School, East Jakarta, Indonesia 2022.

Education	N	%
Junior high school	158	48.3
Senior high school	169	51.7
Total	327	100

Table 4.1.3 presents adolescents sociodemographic characteristic by education. The level of education as a junior high school was rated (48.3%) and senior high school students (51.7%).

4.1.4 Adolescents' Knowledge

The knowledge about COVID-19 measured with 11 statements, if adolescents understand how the coronavirus spreads, symptoms of the coronavirus, statements about wearing masks, washing hands and staying away from crowds in accordance with international recommendations and national health protocol. The results of data processing as following:

Table 4.1.4.1 Distribution of Adolescents Knowledge in Al-Kenaniyah Junior and Senior High School, East Jakarta, Indonesia 2022.

	Result			
	True		False	
	n	%	n	%
COVID-19 virus is thought to spread mainly from person to person.	303	92.7	24	7.3
The virus spread through respiratory droplets produced when infected person coughs, sneezes or talks.	309	94.5	18	5.5
COVID-19 may be spread by people who are not showing symptoms.	213	65.1	114	34.9
Fever, cough, tiredness and loss of taste or smell are symptoms of COVID-19.	297	90.8	30	9.2
The virus spread between people who are in close contact with one another (about 6 feet).	198	60.6	129	39.4
Wearing properly fitted mask is one of the prevention COVID-19 transmission.	263	80.4	64	19.6
People should only wear a mask if they are infected with the virus.	279	85.3	48	14.7
People should avoid touching their eyes, nose and mouth with unwashed hands.	281	85.9	46	14.1
Washing your hands with soap or hand sanitizer is prevention COVID-19 transmission.	304	93.0	23	7.0

To help limit the spread of COVID-19, people must avoid going to crowded places in groups.	295	90.2	32	9.8
Stay at least 1 metre apart of others, even they do not appear to be sick.	289	88.4	38	11.6

According to table 4.1.4.1, the number of adolescents who correctly answered the statement “the virus spread through respiratory droplets produced when infected person coughs, sneezes or talks” as high as (94.5%). Total of 304 adolescents gave the right answer on the statement “Washing your hands with soap or hand sanitizer is prevention COVID-19 transmission” with the percentage (93.0%). In comparison, (92.7%) adolescents answered true on the statement “COVID-19 virus is thought to spread mainly from person to person”. As high as (90.8%). adolescents know well about the statement “Fever, cough, tiredness and loss of taste or smell are symptoms of COVID-19”. On the statement “To help limit the spread of COVID-19, people must avoid going to crowded places in groups”, the total of 295 adolescents who correctly answered as quite as (90.2%).

Furthermore, adolescents who answered the statement “The virus spread between people who are in close contact with one another (about 6 feet) incorrectly as many as (39.4%). On other statement “COVID-19 may be spread by people who are not showing symptoms” with the percentage (34.9%) adolescents answered false. Around 64 adolescents answered incorrectly on the statement “Wearing properly fitted mask is one of the prevention COVID-19 transmission” with (19.6%). About the mask statement “Wearing properly fitted mask is one of the prevention COVID-19 transmission”, adolescent did not know the answer correctly as quite as (14.7%). With the (14.1%) adolescents entirely incorrect on the statement “People should avoid touching their eyes, nose and mouth with unwashed hands”.

Each of statement related to COVID-19 knowledge, a correct answer was given to one score, zero score for a wrong answer and zero score for preferring not to answer the questions. Then total the scores for all of these questions (respondent responses). The following are indeed the total knowledge scores for COVID-19 in adolescents:

Table 4.1.4.2 Distribution of Mean, Median, Mod and Standard Deviation in Al-Kenaniyah Junior and Senior High School, East Jakarta, Indonesia 2022.

Mean	Median	Mod	Min	Max	SD	P value Kolmogorov Smirnov
9.27	10.00	11	3	11	1.809	0.000

The Table 4.1.4.2 presents that value of mean is 9.27, median is 10.00, mod 11 with the lowest score being 3 and the highest score being 11, standard deviation is 1.809. As shown in table, the Kolmogorov Smirnov test (< 0.05) revealed that the data above had normal distribution (P-Value 0.000).

The results of scoring questions about COVID-19 knowledge were then classified as high or low. If the respondent has a total score (> 10.00 median value), it is said "High," and if the respondent has a total score (≤ 10.00 median value), it is said "Low." The following are the outcomes of data processing:

Table 4.1.4.3 Distribution of Adolescents by Knowledge in Al-Kenaniyah Junior and Senior High School, East Jakarta, Indonesia 2022.

Knowledge	N	%
Low (≤ 10.00)	225	68.8
High (> 10.00)	102	31.2
Total	327	100

According to table 4.1.4.3, the majority of adolescents in this study appear to have low knowledge of COVID-19 (68.8%), while the remaining adolescents (31.2%) have high knowledge.

4.1.5 Adolescents' Behavior

The distribution of adolescents behaviour is shown in Table 4.5:

Table 4.1.5.1 Distribution of Adolescents Behavior in Al-Kenaniyah Junior and Senior High School, East Jakarta, Indonesia 2022.

	Result			
	Yes		No	
	n	%	N	%
Wear a properly fitted mask when physical distancing is not possible or when in poorly ventilated settings.	281	85.9	46	14.1
Wash your hand regularly soap and water at least 20 seconds.	272	83.2	55	16.8
Wash your hands especially after you have been in public place, blowing your nose, coughing or sneezing.	303	92.7	24	7.3
Avoid touching eyes, nose and mouth with unwashed hands.	289	88.4	37	11.3
Cover your mouth and nose with tissue when you cough or sneeze or use the inside of your elbow.	288	88.1	39	11.9
Limit contact with people who do not live in your household as much as possible.	232	70.9	95	29.1
Clean and disinfect frequently touched surfaces daily. This include table, phones, desk, keyboard.	245	74.5	82	25.1
Stay at least 1 metre apart of others.	272	83.2	55	16.8
Avoid spending time in crowded places in groups.	218	66.7	109	33.3

The Table 4.1.5.1 presents adolescents behaviour against COVID-19. With regard to wearing a mask, using the statement “Wear a properly fitted mask when physical distancing is not possible or when in poorly ventilated settings,” (85.9%) of adolescents answered to wear a properly fitted mask. In comparison, total of 46 adolescents (14.1%) answered no on that

statement regarding wear a properly fitted mask. On the other statement related to wash hand “Wash your hands especially after you have been in public place, blowing your nose, coughing or sneezing,” 303 adolescents (92.7%) reported to wash their hands as a preventive against COVID-19, (7.3%) adolescents answered no related to the behavior of washing hands. With the (88.4%) adolescents answered yes on the statement “Avoid touching eyes, nose and mouth with unwashed hands;’ while (11.9%) of adolescents answered no.

In part related to disinfectant, adolescents gave a yes response on the statement “Clean and disinfect frequently touched surfaces daily. This include table, phones, desk, keyboard,” with the total 245 adolescents (74.5%) and adolescents gave a no response were 82 adolescents (25.1%). The behavior specifically related to avoid and limit the contact in the crowded places, as high as (83.2%) adolescents clarified yes on the statement “stay at least 1 metre apart of others,” and adolescents clarified with the percentage (16.8%). For the statement “Limit contact with people who do not live in your household as much as possible,” (70.9%) adolescent were confident to limit the contact with people and (29.1%) adolescents who did not limit the contact with people.

Table 4.1.5.2 Distribution of Mean, Median, Mod and Standard Deviation Adolescents Behavior in Al-Kenaniyah Junior and Senior High School, East Jakarta, Indonesia 2022.

Mean	Median	Mod	Min	Max	SD	P value Kolmogorov Smirnov
7.34	8.00	9	0	9	1.746	0.000

The Table 4.1.5.2 presents that value of mean is 7.34, median is 8.00, mod 9 with the lowest score being 0 and the highest score being 9, standard deviation is 1.746. As shown in table, the Kolomogrov Smirnov test (< 0.05) revealed that the data above had normal distribution (P-Value 0.000).

The results of scoring adolescents behavior about to prevent COVID-19 were then classified as high or low. If the respondent has a total score (> 8.00 median value), it is said

"High," and if the respondent has a total score (≤ 8.00 median value), it is said "Low." The following are the outcomes of data processing:

Table 4.1.5.3 Distribution of Adolescents by Behaviour in Al-Kenaniyah Junior and Senior High School, East Jakarta, Indonesia 2022.

Behaviour	N	%
Low (≤ 8.00)	213	65.1
High (>8.00)	114	34.9
Total	327	100

As per table 4.1.5.3, the majority of adolescents in this study seem to to have low behavior (65.1%), whereas the remaining adolescents (34.9%) appear to have high behaviour in terms COVID-19 prevention.

4.1.6 Adolescents' Health Protocol Compliance

The distribution of adolescents behavior is shown in Table 4.1.10:

Table 4.1.6.1 Distribution of Adolescents Health Protocol Compliance in Al-Kenaniyah Junior and Senior High School, East Jakarta, Indonesia 2022.

Statement	Result									
	Never		Rarely		Occasionally		Frequently		Always	
	n	%	n	%	n	%	n	%	n	%
Wear a properly fitted mask when physical distancing is not possible or when in poorly ventilated settings.	10	3.1	39	11.9	110	33.6	97	29.7	71	21.7
Wash hand with soap and water at least 20 seconds.	9	2.8	53	16.2	134	41.0	80	24.5	51	15.6

Wash hands after have been in public place, blowing your nose, coughing or sneezing.	10	3.1	38	11.6	96	29.4	106	32.4	77	23.5
Avoid touching eyes, nose and mouth with unwashed hands.	16	4.9	47	14.4	121	37.0	84	25.7	59	18.0
Cover your mouth and nose with tissue when cough or sneeze or use the inside of your elbow.	11	3.4	36	11.0	86	26.3	109	33.3	85	26.0
Limit contact with people who do not live in your household as much as possible.	30	9.2	59	18.0	136	41.6	59	18.0	43	13.1
Clean and disinfect frequently touched surfaces daily.	19	5.8	88	26.9	130	39.8	65	19.9	25	7.6
Stay at least 1 metre apart of others.	17	5.2	66	20.2	147	45.0	70	21.4	27	8.3
Avoid spending time in crowded places in groups.	18	5.5	73	22.3	142	43.4	55	16.8	39	11.9

The frequency of wearing masks, hand hygiene, surface disinfection and avoiding crowded places were used to assess adolescents level of health protocol compliance against COVID-19. Adolescents reported how frequently they implemented these measures (1.”Never,” 2. “Rarely,” 3.” Occasionally,” 4.”Frequently.” 5.”Always”).

According to the findings, in the part of the statement “Wear a properly fitted mask when physical distancing is not possible or when in poorly ventilated settings”. 33.6% (n=110) of the adolescents respondent gave the answer occasionally to wear a mask and 3.1% (n=10) adolescents who never wear a mask. For the statement of “Wash hand with soap and water at least 20 seconds”, show that most of adolescents gave the answer occasionally (n=134) 41%,

while 9 adolescents (2.8%) gave the answer never for that statement. In regards to the other statement about hand washing "Wash your hands, especially after being in a public place, blowing your nose, coughing, or sneezing," 106 adolescents (32.4%) reported frequently washing their hands as a COVID-19 preventive measure, while 10 (3.1%) adolescents responded never to the behavior of washing hands. 121 Adolescents (37%) said occasionally with the statement "Avoid touching eyes, nose, and mouth with unwashed hands;" while 4.9% (n=16) of teenagers said never. However, in the statement "Cover your mouth and nose with tissue when cough or sneeze or use the inside of your elbow" 109 adolescents (33.3%) answered frequently, and 11 adolescents (3.4%) answered never.

Also for the statement "Limit contact with people who do not live in your household as much as possible," (41.6%) 136 of adolescents were comfortable in doing occasionally, while 9.2% of adolescents gave the answer never. Most adolescents said occasionally to the statement "Clean and disinfect frequently touched surfaces daily," which was related to disinfectant. This includes table, phones, desk, and keyboard," with a total of 130 adolescents (39.8%) and 19 adolescents who respond never (5.8%).

The behaviour specifically related to avoiding and limiting contact in crowded places, as many as (45%) of adolescents clarified occasionally on the statement "stay at least 1 metre apart from others," and adolescents clarified never with the percentage (5.2%). In terms of the statement "Avoid spending time in crowded places in groups", the majority of adolescents in this statement gave the answer occasionally (43.4%), while the remaining adolescents (5.5%) gave never to the answer .

Table 4.1.6.2 Distribution of Mean, Median, Mod and Standard Deviation Adolescents Health Protocol Compliance in Al-Kenaniyah Junior and Senior High School, East Jakarta, Indonesia 2022.

Mean	Median	Mod	Min	Max	SD	P value Kolmogorov Smirnov
29.75	30.00	27	9	45	6.749	0.200

According to the Table 4.1.6.2 presents that value of mean 29.75, median is 30.00, mod 27 with the lowest score being 9 and the highest score being 45, standard deviation is 6.749. As shown in table, the Kolmogorov Smirnov test (< 0.05) revealed that the data above had not normal distribution (P-Value 0.200).

The results of scoring adolescents health protocol compliance about to prevent COVID-19 were then classified as high or low. If the respondent has a total score (> 29.75 mean value), it is said "Compliance," and if the respondent has a total score (≤ 29.75 mean value), it is said "No Compliance." The following are the outcomes of data processing

Table 4.1.6.3 Distribution of Adolescents Health Protocol Compliance in Al-Kenaniyah Junior and Senior High School, East Jakarta, Indonesia 2022.

Health Protocol Compliance	N	%
No Compliance (≤ 29.75)	169	51.7
Compliance (> 29.75)	158	48.3
Total	327	100

A total of 327 respondents, consisting of students in Al-Kenaniyah junior and senior high school, were included in the study and (48.3%) of these respondents were compliance and (51.7%) were no compliance about COVID-19 health protocol.

Table 4.1.7 Recapitulation of Univariate Analysis in Al-Kenaniyah Junior and Senior High School, East Jakarta, Indonesia 2022.

Variable		n	%
Age	14-15 years old	182	55.7
	16-17 years old	117	35.8
	18 years old	28	8.6
Gender	Male	146	44.6
	Female	181	55.4
Education	Junior High School	158	48.3
	Senior High School	169	51.7
Knowledge	Low	225	68.8
	High	102	31.2
Behavior	Low	213	65.1
	High	114	34.9
Health Protocol Compliance	No Compliance	169	51.7
	Compliance	158	48.3

Table 4.1.7 represents a distribution of adolescents in Al-Kenaniyah Junior and Senior High School based on each variable, with the highest percentage consisting of 55.7% (n=182) adolescents aged 14-15 years old. Female adolescents outnumbered male in this study 55.4% (n=181). The level of education as a senior high school was rated 48.3% (n=169). As many as 68.8% (n=225) of adolescents do not know about COVID-19, and adolescent are also lacking in implementing behavior to prevent the spread of COVID-19 with the percentage 65.1% (n=213). Adolescents, on the other hand, are more disobedient to health protocols 51.7% (n=169).

4.2 Bivariate Analysis

Adolescent characteristics (adolescent age, adolescent gender, and adolescent education) as well as adolescent knowledge and behaviour were studied using bivariate analysis. The *Chi-Square* proportion difference test is used to determine whether or not there is a significant relationship between the dependent variable and the independent variable at the limit of significance = 0.05. There is a significant relationship between the dependent variable and the independent variable if P value is greater than > 0.05 , but there is no significant relationship between the dependent variable and the independent variable if P value is less than ≤ 0.05 .

4.2.1 Correlation between Age with Health Protocol Compliance

The following table describes the correlation between age and compliance to health protocols:

Table 4.2.1 Correlation between Age with Health Protocol Compliance in Al-Kenaniyah Junior and Senior High School, East Jakarta, Indonesia 2022.

Age	Health Protocol				Total		PValue
	No Compliance		Compliance				
	n	%	n	%	n	%	
14-15 years old	82	45.1	100	54.9	182	100	0.258
16-17 years old	59	50.4	58	49.6	117	100	
18 years old	17	60.7	11	39.3	28	100	

Table 4.2.1 shows that adolescents aged 18 years old do not comply with health protocols more (60.7%) than adolescents aged 16-17years old (50.4%) and 14-15 years old (45.1%). Adolescents aged 14-15 years old are more inclined to follow health protocols (54.9%) than adolescents aged 16-17 years (49.6%) and 18 years old (39.3%).). The *chi-square* test results revealed that there was no correlation between adolescent age and compliance to health protocols (PValue 0.258).

4.2.2 Correlation between Gender with Health Protocol Compliance

The following table describes the correlation between gender and compliance to health protocols:

Table 4.2.2 Correlation between Gender with Health Protocol Compliance in Al-Kenaniyah Junior and Senior High School, East Jakarta, Indonesia 2022.

Gender	Health Protocol				Total		PValue
	No Compliance		Compliance				
	n	%	n	%	n	%	
Male	85	58.2	61	41.8	146	100	0.002
Female	73	40.3	108	59.7	181	100	

As shown in the table 4.2.2 health protocol compliance among gender that adolescents female more comply (59.27%) than adolescents male (41.8%). The *chi-square* test results revealed that there was correlation between adolescent gender and compliance to health protocols (PValue 0.002).

4.2.3 Correlation between Education with Health Protocol Compliance

The following table describes the correlation between education and compliance to health protocols:

Table 4.2.3 Correlation between Education with Health Protocol Compliance in Al-Kenaniyah Junior and Senior High School, East Jakarta, Indonesia 2022.

Education	Health Protocol				Total		PValue
	No Compliance		Compliance				
	n	%	N	%	n	%	
Junior High School	77	48.7	81	51.3	158	100	0.912
Senior High School	81	47.9	88	52.1	169	100	

According to the Table 4.2.3 of the adolescents education, senior high school students are more likely (52.1%) than junior school students (51.3%) to follow health protocols. The *chi-square* test results revealed that there was no statistically significant correlation between adolescent education and health protocol compliance (PValue 0.912).

4.2.4 Correlation between Knowledge with Health Protocol Compliance

The correlation between knowledge and health protocol compliance is shown in Table 4.2.4:

Table 4.2.4 Correlation between Knowledge with Health Protocol Compliance in Al-Kenaniyah Junior and Senior High School, East Jakarta, Indonesia 2022.

Knowledge	Health Protocol				Total		PValue
	No Compliance		Compliance				
	n	%	N	%	n	%	
Low	123	54.7	102	45.3	225	100	0.001
High	35	34.3	67	65.7	102	100	

When the data were analysed, 54.7% of the adolescents with low knowledge with no compliance, while only 34.3% of the adolescents with high knowledge no comply to health protocol. Adolescents with a high knowledge adhere to health protocols (65.7%) any more than adolescents with a low level of knowledge (45.3%), and these results were statistically significant correlation between adolescents knowledge with health protocol compliance (PValue 0.001).

4.2.5 Correlation between Behavior with Health Protocol Compliance

The correlation between behaviour and health protocol compliance is shown in Table 4.2.5:

Table 4.2.5 Correlation between Behavior and Health Protocol Compliance in Al-Kenaniyah Junior and Senior High School, East Jakarta, Indonesia 2022.

Behavior	Health Protocol				Total		PValue
	No Compliance		Compliance				
	n	%	n	%	n	%	
Low	123	57.7	90	42.3	213	100	0.000
High	35	30.7	79	69.3	114	100	

In the Table 4.2.5 it was observed that 69.3% of adolescents with high behavior comply with health protocol, while 42.3% of adolescents who have low behavior. 57.7% of the adolescents with low behavior with no compliance, while only 30.7% of the adolescents with high behavior no comply to health protocol. The *chi-square* test results were statistically significant correlation between adolescents behavior with health protocol compliance (PValue 0.000).

4.2.6 Recapitulation of Bivariate Analysis

Based on the results of the relationship test using the *Chi-Square* test between the dependent variable and the independent variable, several significant relationships (Pvalue 0.05) were discovered, which are presented in one table based on the recapitulation results as follows:

Table 4.2.6 Recapitulation of Bivariate Analysis of Adolescents' Distributions Based on Dependent and Independent Variables in Al-Kenaniyah Junior and Senior High School, East Jakarta, Indonesia 2022.

Variable	<i>Pvalue</i>	Result
Age	0.258	No significant
Gender	0.002	Significant
Education	0.912	No significant
Knowlegde	0.001	Significant
Behavior	0.000	Significant

Table 4.2.6 shows that three of the five independent variables have a significant correlation with health protocols compliance, with gender (*Pvalue* 0.002), knowledge (*Pvalue* 0.001) and behaviour (*Pvalue* 0.000)

5. DISCUSSION and CONCLUSION

5.1 Adolescent Sociodemographic

5.1.1 Adolescents' Age

Adolescents are a critical communities since they are getting to be more capable for their possess wellbeing behaviours. Indeed in spite of the fact that more youthful not highly probable ill, and even they do not show symptoms, they can still transmitted the virus (101). Considering the significance of individual transmission in virus spread and the fact that teenagers interact in circles of friends, it become extremely crucial for this community to do behavioural adherence (102). Adolescents and young adults are widely regarded as the possibly slightest community in terms of adhere health protocol or regulations by the government (21). Adolescents are generally unprepared to reassess a disease's potential dangers, as a result, they continue to hold the strong believe that they cannot be infected (103). In contrast to the younger population, a research on May 2020 discovered that elderly deeply involved with the most protective health measure (104).

327 of adolescents took a part in the study. The univariate analysis of adolescents in this study belonged to the age group 14-15 years old (55.7%), 16-17 years old (35.6%), and 18 years old (8.6%). Adolescents aged 14-15 years old are more inclined to follow health protocols (54.9%) than adolescents aged 16-17 years (49.6%) and 18 years old (39.3%). Adolescents aged 18 years old do not comply with health protocols more (60.7%) than adolescents aged 16-17years old (50.4%) and 14-15 years old (45.1%). The *chi-square* test results revealed no correlation through adolescent age and compliance to health protocols (PValue 0.258). Another study shown the age of the students had no actual effect on their implementation of the COVID-19 personal measures (104).

Another study conducted by Levkovich found that the most age who do not compliance the regulation in the age of 20 and 30 with the percentage 32.7% and 23.3% are between. In some countries, including Spain, younger people adhere to norms less than older people (105). Similarly, the respondents over in the age more than 50 had highest adhere with health guidelines, second among those between the ages of 31 and 50, and lowest among those under the age of 30 (106). It's noteworthy to mention that the study's participants junior and high school students, with age around 14 years old and 18 years old. The respondents' ages did not differ significantly.

5.1.2 Adolescents' Gender

Gender and health implications have gained attention in some studies. According to some of the studies, men and women appear to differ significantly in the disease stages and health behaviour, morbidity and mortality and in the process steps through which disease develop (107). Women prefer to health-protective behaviours, while men lean toward health-harming behaviors. Women and men actively involve in gender stereotyped health behaviours various different. Women and men did not behave similarly (108,109). Men are more to take risk belief and health behaviour, while women more consistency about behaviour (110).

Based on this study included 327 participants, all of whom were students in Al-Kenaniyah junior and senior high school, with 55.4% being female and 44.6% being male. Health protocol compliance among gender that adolescents female more comply (59.27%) than adolescents male (41.8%). The *chi-square* test results demonstrated that correlation between adolescent gender and compliance to health protocols (PValue 0.002).

This study's finding is consistent with previous research, there is a correlation between gender and adolescent compliance with COVID-19 transmission prevention protocols and female adolescents are more compliant than male adolescents (23). Similarly the result of another study, in comparison to female adolescents, male adolescents take part in risky behaviour and no adhere with the COVID-19 health protocols (27). During the COVID-19 pandemic, gender differences in health protective measures and health-related quality of life were statistically significant (<0.05) (19), similarly to the previous study that gender is statistically significant associated with high compliance behavior against COVID-19 (111). Previous research on age

and gender patterns of risk-taking behavior supported those findings that woman are more compliant than men to protective behavior during COVID-19 pandemic (112), and this result was similarly with another study that men implemented COVID-19 measures more gradually over time than women (113).

5.1.3 Adolescents' Education

Higher levels of education have been linked to improved health, this association may be seen in some countries, and it holds true for different levels of education and different health indicators. Health behaviors are one way in which increased knowledge might enhance health. (114,115). Across many ways, education could improve healthy behaviour. Because they learnt about these effects in school or because it is simpler for them to acquire and assess such material, people with higher levels of education may be more knowledgeable about negative health effects (116). However, there is no guarantee that education has a causal impact on behaviour according to the correlation between education and health behaviour. Better health may result from education in a number of ways. Education increases knowledge of healthy lifestyle choices, resulting in better time and relating to products decisions that benefit health (117). Third factors, such as cognitive capacity or time preferences, that have an impact on both education and health behaviour could also account for this correlation (115).

According to the result in this study, offers sociodemographic information about adolescents by level of education junior high school students' education level was evaluated 48.3% (n=158), as well as that of senior high school students 51.7% (n=169). Adolescents in junior high school disobeyed the health protocol more frequently 48.7% (n=77) high school students 47.9% (n=81) did. As a result of the close proximity of the compliance percentage with the health protocol, it is challenging to find to compare these results. The bivariate analysis result show that senior high school students are more inclined (52.1%) than junior high school student (51.3%) to adhere to health protocol. The findings that there is correlation adolescent education and adherence to the health protocol (PValue 0.912). This study result is relates with the previous study that shown education is not associated with compliance with the COVID-19

public health behaviours in France (118). According to a study, no significant relationship between education and adolescent adherence to COVID-19 prevention protocols (27).

5.2 Adolescents' Knowledge

By raising awareness of the risks of contracting COVID-19, knowledge and awareness of COVID-19 information might be increase motivation to comply. Further to that, such information may enhance capabilities by supporting compliance strategies (118). Good knowledge is necessary for individuals to engage in better health behaviour practice during pandemics and outbreaks. A SARS study found that a good knowledge score was associated with better adherence to precautionary practices (119).

In this study, knowledge about COVID-19 measured with 11 statements, if adolescents understand how the coronavirus spreads, symptoms of the coronavirus, statements about wearing masks, hand hygiene behaviours (e.g., washing hands regularly, using hand disinfectant, coughing into an elbow or cloth, not touching face, washing hands after coughing or sneezing, disinfecting mobile phone) and social distancing behaviours (e.g., staying at home, adhering to social distancing) and staying away from crowds in accordance with international recommendations and national health protocol. The statement was answered incorrectly by the majority of respondents are “The virus spread between people who are in close contact with one another (about 6 feet)” with the percentage 39.4% (n=129) and other statement “COVID-19 may be spread by people who are not showing symptoms”, with the percentage 34.9% (n=114). The statement was answered correctly by the majority of respondents is “The virus spread through respiratory droplets produced when infected person coughs, sneezes or talks” with the percentage 94.5% (n=309). 304 respondents (93%) also correctly in the statement “Washing your hands with soap or hand sanitizer is prevention COVID-19 transmission”.

According to this study, the majority of adolescents in this study appear have low knowledge of COVID-19 and preventive measure behaviour (68.8%), while the remaining adolescents (31.2%) have high knowledge. The result of bivariate analysis, 54.7% of the adolescents with low knowledge with no compliance, while only 34.3% of the adolescents with high knowledge no comply to health protocol. Adolescents with a high knowledge adhere to health protocols (65.7%) any more than adolescents with a low level of knowledge (45.3%), and

these results were statistically significant correlation between adolescents knowledge with health protocol compliance (PValue 0.001).

A few studies already found that knowledge of COVID-19 is associated with compliance with preventive behaviour, even so, the association might be explained by individual who are more able to agree looking for out all the COVID-19 information (120). According to the previous study, the more they had good about COVID-19 knowledge, the lower they take a negative behaviour. The more they have good knowledge about COVID-19, it is related to positive behaviour, indicated that health education programs actively encourage to positive behaviour (27). This is related to the previous study that the more of good knowledge and look more information correlation with the high level of compliance behaviour (121). Some of study found that adolescents' positive behavioural changes will result from knowledge and awareness of certain health risks, it was discovered that adequate knowledge, along with attitudes and risk perception, was one of the determining variables for compliance with the preventive measures (122,123).

5.3 Adolescents' Behaviour

Health behaviour refers to the activities of people, groups, and organizations as well as the factors that influence, correlate with, and result in those actions, such as social change, the creation and implementation of policies, improved coping mechanisms, and increased quality of life (88). Adolescents behave both physically and mentally more different than adults according to previous pandemic study (124). The aim of study on adolescent behaviour is to ensure that capable to give what adolescents need either this time or in the future. Beside that, some study finding can help with the higher of preventive measure and compliance for adolescents (125).

Study regarding adolescent behaviour measured with 9 statement individual responsibility is indicated by behaviours in response to COVID-19. These behaviours are classified as preventive behaviours, which include wearing masks, into hand hygiene measures (e.g., washing hands in regular, using hand disinfectant, coughing into an elbow or cloth, not touching face, washing hands after coughing or sneezing, disinfecting mobile phone) and social distancing behaviours. According to the findings of this study, the majority of adolescents

accomplish hand washing activities, 303 adolescents (92.7%) reported to wash their hands as a preventive against COVID-19 in the statement. In order to wearing mask behavior, (85.9%) of adolescents answered to wear a properly fitted mask, whereas teenagers are the least obedient in terms of social distancing in order to avoid spending time in crowded places in groups with only 66.7%.

As shown by this study, in terms of COVID-19 health behavior prevention, the majority of adolescents in this study appear to have low behavior (65.1%), while the remaining adolescents (34.9%) appear to have high behavior. It was observed that 69.3% of adolescents with high behaviour comply with health protocol, while 42.3% of adolescents who have low behaviour. 57.7% of the adolescents with low behaviour with no compliance, while only 30.7% of the adolescents with high behaviour no comply to health protocol. The PValue test results there is correlation with adolescents behaviour with health protocol compliance (0.000). In another study conducted in Oslo for secondary school, it shown that the students have high compliance with the government rules. Most of the student compliance with hand washing with the percentage 84% and the lowest part is for physical distancing with the percentage 50% (126). Similar, according to personal protective measure recommended by World Health Organization, the lowest compliance are social distancing and avoid to touch eyes nose and mouth (127).

5.4 COVID-19 Health Protocol Compliance

It is quite difficult for adolescents to implement social distancing, because at this age is a time for collective and social comparison activities (22).). In contrast to the younger population, a research on May 2020 discovered that elderly deeply involved with the most protective health measure (103). But first, let's take a gander at the compliance rates that have been reported so far. Norwegian adults changed their behaviour to prefer the spread of the virus as many as 92% practice for hand washing according to the study on March 2020 (128). In the previous study found that hand washing is the highest behaviour with 96% while 30-70% for social distancing in Hong Kong. Adolescents is the lowest to comply the regulations and for gender part, it found that women is high compliance compared to men (129). Similarly, hygiene

more better than social distancing for 737 young adults in Zurich before the pandemic comes (21).

In this study adolescents' who adhere with guidelines was assessed use a single statement "Wear a properly fitted mask when physical distancing is not possible or when in poorly ventilated settings". Adolescents reported how frequently they implemented these measures (1."Never," 2. "Rarely," 3." Occasionally," 4."Frequently." 5."Always"). In the part of the statement "Wear a properly fitted mask when physical distancing is not possible or when in poorly ventilated settings". 33.6% (n=110) of the adolescents respondent gave the answer occasionally to wear a mask and 3.1% (n=10) adolescents who never wear a mask. For the statement of "Wash hand with soap and water at least 20 seconds", show that most of adolescents gave the answer occasionaly (n=134) 41%, while 9 adolescents (2.8%) gave the answer never for that statement. In terms of the statement "Avoid spending time in crowded places in groups", the majority of adolescents in this statement gave the answer occasionaly (43.4%), while the remaining adolescents (5.5%) gave never to the answer . A total of 327 students from Al-Kenaniyah junior and senior high school participated in the study, with (48.3%) in compliance and (51.7%) not in compliance with the COVID-19 health protocol.

5.5 Limitation, Strength and Weaknesses of the Study

The strength of the study are listed as follows:

After the Indonesian government begins school activities on September 14, 2021, the intensity of youth gatherings will increase. This study reveals how adolescents' health behaviour to continue to take preventive measures against COVID-19 disease as long as this new regulation is made regarding adolescent health behaviour and evaluate whether adolescents comply with health protocols.

The limitation and weaknesses of the study are listed as follows:

This study's respondents ranged in age from 14 to 18 years old. Respondents' age did not differ significantly because the age difference between each participant was not too pretty terrific and could not represent the age limit set for adolescents, namely 12-24 years. Similarly, for the education variable, there was not a lot of variation at the level of education according to the respondents education for this result study.

5.6 Recommendations

Parents and teachers in school must be role models for adolescents' and constantly remind them of the importance of taking precautions to prevent virus transmission, because adolescents' at this age usually follow for what people around them do, therefore parents and teachers in school must be role model for them. Also, adolescents using social media frequently everyday especially at this time of pandemic, it is an appeal to take precautions to avoid COVID-19 and follow health protocols via social media, because information shared on social media is easier to spread and more accessible to adolescents.

5.7 Conclusion

This study is describe for adolescents preventive measure according to COVID-19 throughout the pandemic, some conclusions may have been drawn based on the description of the results and discussion of the variables studied. This study included 327 students from Al-Kenaniyah junior and senior high school in East Jakarta, Indonesia, who participated in the study. In order to sociodemographic independent variable, univariate results are presented that most of adolescents in this study at the age of 14-15 years old, then 16-17 years old and at least 18 years old. According to the age variable, this study included Al-Kenaniyah junior and senior high school students, and the participants were more female and male. Adolescent sociodemographic characteristics based on education when compared to junior high school students, high school students participated in this study more than any other. In the part of knowledge of preventive behaviour, the majority of adolescents in this study appear to have low knowledge of COVID-19 preventive behaviour, while the remaining adolescents have high knowledge about COVID-19 preventive behaviour. Also, the majority of adolescents in this study seem to have low behavior, whereas the remaining adolescents appear to have high behaviour in terms COVID-19 prevention. Similarly, 327 students from Al-Kenaniyah junior and senior high school took part in the study, with the least number of students following health protocols and the majority of adolescents not following COVID-19 health protocols.

According to sociodemographic independent variable, bivariate analysis shows that adolescents aged 14-15 years old are more inclined to follow health protocol than adolescents aged 16-17 years and 18 years old. Adolescents aged 18 years old do not comply with health

protocols more than adolescents aged 16-17 years old and 14-15 years old. The *chi-square* test results revealed that there was no correlation between adolescent age and compliance to health protocols (PValue 0.258). Health protocol compliance among gender that adolescents female more comply than adolescents male. Statistically, results revealed that there was correlation between adolescent gender and compliance to health protocols (PValue 0.002). In the part of education, senior high school students are more likely than junior school students to follow health protocols. The *chi-square* test results indicate that there was no statistically significant correlation between adolescent education and health protocol compliance (PValue 0.912). When the data were analysed, most of the adolescents with low knowledge with no compliance, while adolescents with high knowledge no comply to health protocol. Adolescents with a high knowledge adhere to health protocols any more than adolescents with a low level of knowledge, and these results were statistically significant correlation between adolescents knowledge with health protocol compliance (PValue 0.001). According to behaviour, the majority of adolescents with high behavior follow health protocols and the *chi-square* test results indicated a statistically significant relationship between adolescent behavior and health protocol adherence (PValue 0.000).

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7. APPENDICES

7.1 Ethical Approval



YEDİTEPE UNIVERSITY
NON-INTERVENTIONAL CLINICAL RESEARCH ETHICS BOARD

Version No 2.0
Feb.13, 2022
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DECISION FORM

June 28, 2022

ETHICAL BOARD CONTACT INFORMATION	Name	Yeditepe University Non-Interventional Clinical Research Ethics Board
	Address	Yeditepe Üniversitesi Kayışdağı Kampüsü, Tıp-Mühendislik Binası, Sağlık Bilimleri Enstitüsü, İnönü Mah. Kayışdağı Cad. 326A, 26 Ağustos Yerleşimi 34755 Ataşehir, İstanbul
	Website	http://goetik.yeditepe.edu.tr/
	Phone	+90 216 578 00 00
	E-mail	goetik@yeditepe.edu.tr

EVALUATED DOCUMENTS	Application file original signatures, CD and online application	☒
	Title of research and the names of the researchers	☒
	Letter of application	☒
	Application Form-Nature of the Research;	☒
	• Type	☒
	• Significance and distinctive value	☒
	• Aims and objectives	☒
	• Method	☒
	• Management of the research	☒
	• Widespread impact	☒
	• Pertinence of the budget and reason (if applicable)	☒
	• Timeframe and convenience	☒
	• References	☒
	Informed consent form (uniquely prepared for the research)	☒
	Letter of Undertaking-1	☒
	A commitment to undertake the responsibility of obtaining institutions permission from where the data collection will be made	☒
	Letter of Undertaking-2	☒
	A commitment to read the latest version of the World Medical Association Declaration of Helsinki and all relevant guidelines of the Ministry of Health	☒
	Letter of Undertaking-3	☒
	A commitment on whether there are previous ethical board applications	☒
	Letter of Undertaking-4	☒
	A commitment that no action will be taken during the research that is not included in the research budget and that will bring additional burden to the volunteer or the Social Security Institution	☒
	Letter of Undertaking-5	☒
	A commitment to reading the circular on treatment approaches and scientific research in COVID-19 patients	☒
	Letter of Undertaking-6	☒
	A commitment to reading the document of Research Application Permissions that is published by Ministry of Education	☒
	'Resume Forms' filled separately by all the researchers and signed.	☒
	Additional documents (Scale permissions used, if any, etc.)	☒

DECISION DETAILS	Application Number	202204Y0238
	Meeting Date	May 13, 2022
	Meeting Place	Online (Google Meet)
	Decision No.	7

Research Title Correlation Between Knowledge and Behavior with COVID_19 Health Protocol Compliance for Adolescents in Al-Kenaniyah, Indonesia 2022

Researchers Siti Fariha TARMIZI, Dr. Öğr. Üyesi Hale ARIK TAŞYIKAN



APPLICATION NUMBER: 202204Y0238

June 28, 2022

DECISION

☒ APPROVED	☐ REJECTED ☐ OUT OF SCOPE (THE SCOPE OF THE STUDY WAS NOT WITHIN LIMITS OF THIS ETHICS BOARD) ☐ AGAINST SCIENTIFIC AND/OR ETHICAL RULES ☐ THERE ARE MORE THAN TWO (2) SUBMISSIONS WITH THE SAME PRINCIPAL INVESTIGATOR ☐ THE ELECTRONIC SUBMISSION IS NOT PERFORMED VIA AN INSTITUTIONAL EMAIL ACCOUNT ☐ ASKED REVISIONS ARE NOT PERFORMED APPROPRIATELY AND/OR ON TIME
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On behalf of Yeditepe University Non-Interventional Clinical Research Ethics Board
Prof. Dr. Didem ÖZDEMİR ÖZENEN
Chair

Research Title	Correlation Between Knowledge and Behavior with COVID_19 Health Protocol Compliance for Adolescents in Al-Kenaniyah, Indonesia 2022
Researchers	Siti Fariha TARMIZI, Dr. Öğr. Üyesi Hale ARIK TAŞYIKAN

7.2. Permission Letter



YAYASAN PENDIDIKAN ISLAM AL-KENANIYAH MADRASAH ALIYAH AL-KENANIYAH

Jalan Perintis Kemerdekaan Pulonangka Barat 1/14
JAKARTA TIMUR - Telp. 4750960

Jakarta, 15 January 2022

Siti Fariha Tarmizi
Master student at Yeditepe University
Istanbul, Turkey

Approval to Conduct Research

It is my understanding that you intend to conduct a research study on the "Correlation between Knowledge and Behaviour with COVID-19 Health Protocol Compliance for Adolescents in Al-Kenaniyah, Indonesia 2022."

I want to let you know that our school supports this efforts and will provide any assistance necessary for the successful implementation of this research. If you have any question, I can be reached

Sincerely,

Muhammad Suta, S.Pd.I
(Head Principal)

7.3. Informant Consent

Informed Consent

Study Title : Correlation Between Knowledge and Behavior with COVID-19 Health Protocol Compliance for Adolescents in Al-Kenaniyah Junior and Senior High School, East Jakarta, Indonesia 2022.

The study is conducted by Siti Fariha Tarmizi, a master degree student at Yeditepe University, Istanbul, Turkey. Hereby I am conducting an interview to get related information for this research. This consent form will inform you about the research project, what you will need to do, and the risks and benefits of the research. Please read this form carefully. It is important that you ask questions and fully understand the research in order to make an informed decision.

The overall objective of this study is to investigate whether there is correlation between preventive COVID-19 knowledge and behavior with health protocol compliance for adolescents. Participation in this study typically takes 5-10 minutes and is strictly anonymous. Participants will be interviewed by the researcher. The study Participants will complete a detailed interview comprising of three sections. The first part questions on personal characteristics such as age, gender and educational background. The second part include adolescent knowledge about COVID-19 disease. The final part includes question related adolescent behavior preventive against COVID-19 disease and health protocol compliance.

Your participation is entirely voluntary, and all information collected in this survey will be keep strictly confidential. The information gathered will only be used for the following study purpose. You have the right to refuse answer any questions/items or to avoid participating at any time for any reason. Your honest and sincere cooperation in responding to this questionnaire will be highly appreciated. If you have any queries regarding the survey questions, do contact me via e-mail.

Thank you for giving your valuable time to complete the following survey questionnaires.

Researcher

Respondent

Siti Fariha Tarmizi

7.4 Questionnaire

Charasteristic of Adolescents

1. How old are you? / Berapakah umur anda?
 1. 14-15 years old / 14-15 tahun
 2. 16-17 years old / 16-17 tahun
 3. 18 years old / 18 tahun
2. What is yor gender?
 1. Male / Laki-laki
 2. Female / Perempuan
3. What grade are you in? / Kelas berapa anda saat ini?
 1. Junior High School/ MTS - Sekolah Menengah Pertama
 2. Senior High School / MA – Sekolah Menengah Akhir

Adolescents' Knowledge about COVID-19 / Pengetahuan Remaja mengenai COVID-19

Statement/ Pernyataan	True/ Benar	False/ Salah
COVID-19 virus is thought to spread mainly from person to person. (Virus COVID-19 diperkirakan menyebar terutama dari orang ke orang).		
The virus spread through respiratory droplets produced when an infected person coughs, sneezes or talks. (Virus menyebar melalui tetesan pernapasan yang dihasilkan ketika orang yang terinfeksi batuk, bersin, atau berbicara).		
COVID-19 may be spread by people who are not showing symptomp. (COVID-19 dapat disebarkan oleh orang yang tidak menunjukkan gejala).		
Fever, cough, tiredness and loss of taste or smell are symptoms of COVID-19. (Demam, batuk, kelelahan, dan kehilangan rasa atau penciuman adalah gejala COVID-19).		
The virus spread between people who are in close contact with one another (within about 6 feet). (Virus menyebar di antara orang-orang yang melakukan kontak dekat satu sama lain, dalam jarak sekitar 6 kaki).		
Wearing properly fitted mask is one of the prevention COVID-19 transmission.		

(Mengenakan masker yang benar adalah salah satu pencegahan penularan COVID-19).		
People should only wear a mask if they are infected with the virus. (Orang-orang hanya boleh memakai masker jika mereka terinfeksi virus).		
People should avoid touching their eyes, nose and mouth with unwashed hands. (Orang-orang harus menghindari menyentuh mata, hidung, dan mulut mereka dengan tangan yang tidak dicuci).		
Washing your hands with soap or hand sanitizer is prevention COVID-19 transmission. (Mencuci tangan dengan sabun atau hand sanitizer merupakan pencegahan penularan COVID-19).		
To help limit the spread of COVID-19, people must avoid going to crowded places or in groups. (Untuk membantu membatasi penyebaran COVID-19, masyarakat harus menghindari pergi ke tempat ramai atau berkelompok).		
Stay at least 1 metre apart from others, even if they don't appear to be sick. (Jaga jarak setidaknya 1 meter dari yang lain, bahkan jika mereka tidak tampak sakit).		

Adolescents' Behavior for COVID-19 / Perilaku Remaja terhadap COVID-19

Statement/ Pernyataan	Yes/ Iya	No/ Tidak
Wear a properly fitted mask when physical distancing is not possible or when in poorly ventilated settings. (Mengenakan masker yang dipasang dengan benar ketika jarak fisik tidak memungkinkan atau ketika dalam pengaturan yang berventilasi buruk).		
Wash your hand regularly soap and water at least 20 seconds. (Rajin mencuci tangan dengan sabun dan air minimal 20 detik).		
Wash your hands especially after you have been in public place, blowing your nose, coughing or sneezing. (Cuci tangan anda terutama setelah berada di tempat umum, membersihkan hidung, batuk atau bersin).		
Avoid touching eyes, nose and mouth with unwashed hands. (Menghindari menyentuh mata, hidung, dan mulut dengan tangan yang belum dicuci).		
Cover your mouth and nose with tissue when you cough or sneeze or use the inside of your elbow. (Menutup mulut dan hidung dengan tisu saat batuk atau bersin atau menggunakan siku dalam).		
Limit contact with people who do not live in your household as much as possible. (Membatasi kontak dengan orang-orang yang tidak tinggal di rumah anda).		
Clean and disinfect frequently touched surfaces daily. This include table, phones, desk, keyboard. (Membersihkan dan disinfeksi benda yang sering disentuh setiap hari. Benda tersebut termasuk meja, telepon, meja, keyboard).		
Stay at least 1 metre apart of others. (Menjaga jarak setidaknya 1 meter dari yang lain).		
Avoid spending time in crowded places or in groups. (Menghindari menghabiskan waktu di tempat ramai atau secara berkelompok).		

Adolescents' Compliance COVID-19 Health Protocol / Kepatuhan Remaja terhadap Protokol Kesehatan

COVID-19

	1	2	3	4	5
Wear a properly fitted mask when physical distancing is not possible or when in poorly ventilated settings. (Mengenakan masker yang dipasang dengan benar ketika jarak fisik tidak memungkinkan atau ketika dalam pengaturan yang berventilasi buruk).					
Wash your hand regularly soap and water at least 20 seconds. (Rajin mencuci tangan dengan sabun dan air minimal 20 detik).					
Wash your hands especially after you have been in public place, blowing your nose, coughing or sneezing. (Cuci tangan anda terutama setelah berada di tempat umum, membersihkan hidung, batuk atau bersin).					
Avoid touching eyes, nose and mouth with unwashed hands. (Menghindari menyentuh mata, hidung, dan mulut dengan tangan yang belum dicuci).					
Cover your mouth and nose with tissue when you cough or sneeze or use the inside of your elbow. (Menutup mulut dan hidung dengan tisu saat batuk atau bersin atau menggunakan siku dalam).					
Limit contact with people who do not live in your household as much as possible. (Membatasi kontak dengan orang-orang yang tidak tinggal di rumah anda).					
Clean and disinfect frequently touched surfaces daily. This include table, phones, desk, keyboard. (Membersihkan dan disinfeksi benda yang sering disentuh setiap hari. Benda tersebut termasuk meja, telepon, meja, keyboard).					
Stay at least 1 metre apart of others. (Menjaga jarak setidaknya 1 meter dari yang lain).					
Avoid spending time in crowded places or in groups. (Menghindari menghabiskan waktu di tempat ramai atau secara berkelompok).					

1. Never 2. Rarely 3. Occasionally 4. Frequently 5. Always

1. Tidak pernah 2. Jarang 3. Kadang-kadang 4. Sering 5. Selalu