
Knowledge, Attitudes and Practices Towards Coronavirus Disease 2019 (COVID-19) Among Senior High School Students*

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ABSTRACT

Background: Adolescents are more likely to engage in risky health behaviors and possibly to risky practices related to COVID-19. They belong to a significant part of the population and their compliance with infection control measure is essential against the emerging COVID-19 disease.

Objective: This study aims to determine the level of knowledge, attitudes and practices of the senior high school towards COVID-19.

Methods: An online cross-sectional questionnaire using Google forms was used.

Results: A total of 119 senior high school students of FEU-NRMF Senior High Program, with a mean age of 17 years old (31.1%), most were in the 11th grade (52.9%), completed the questionnaire. Majority of information regarding COVID-19 were from social media (70.6%) followed by television (21%) and only 0.8% received information regarding COVID-19 from school. Majority of students were knowledgeable about the mode of transmission, clinical manifestations, treatment and prevention and control of COVID-19. Majority of them have positive attitudes towards the protocols implemented by the Philippine government to decrease spread of the disease (88%). However, majority have a negative attitude with regards to the successful control of COVID-19. Majority of them were compliant with the minimum health protocols set by the Philippine government (98%) which was significantly projected by their good knowledge and positive attitude towards COVID-19. The study emphasizes the use of social media as a powerful tool and as essential in engaging with the adolescent age group and should be utilized for proper dissemination of information.

Conclusion: This study revealed that majority of the senior high school students have good knowledge with regards to COVID-19 that is reflected in their positive attitudes and compliance to health protocols. This study also intensified the need to incorporate teaching relevant and timely topics in school. This research can be utilized in the different senior high school programs in the Philippines prior to the start of limited face to face classes.

Key words: Adolescents, COVID-19, Knowledge, Attitudes and Practices (KAP), Senior High School

The coronavirus disease (COVID-19) has become a global health concern. The first report and subsequent outbreak from a cluster of novel human pneumonia cases in Wuhan City, China, was detected late December 2019. Reported symptoms were fever, malaise, dry cough, and dyspnea, and diagnosed as a case of viral pneumonia² (Huang C, 2020).The

World Health Organization (WHO) briefly labeled the new virus 2019 novel corona- virus (2019-nCoV) on January 12, 2020 and then officially named this infectious disease coronavirus disease 2019 (COVID-19) on February 12, 2020. Eventually, the WHO declared COVID-19 a pandemic on March 11, 2020.¹ As of April 2021, based from the John Hopkins Coronavirus Resource Center, there was a total of 138,835,210 confirmed COVID-19 cases all over the world, accounting to 2,984,236 deaths worldwide, and the Philippines being the 27th country with the greatest number of COVID-19 confirmed cases. Thus, leading to implementing the second lockdown in the

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country. Nevertheless, there has been a rise in the day-to-day number of cases of newly infected individuals, as it reaches the record breaking 15, 310 new cases in a day last April 2, 2021.

Since COVID-19 was declared a pandemic, measures were implemented to prevent person-person transmission, including enhanced community quarantine, the total and absolute lockdown as declared by the Philippine government on March 12, 2020, closing of schools and colleges which led to online teaching methods, staying and working from home, (CNN, 2020), terminating all social gathering, implementing social distancing, wearing of masks and strict hand washing practices (DOH, 2020). Moreover, global efforts emphasizing special precautions to protect vulnerable populations such as senior citizens, health care workers and children were recommended (Rothan & Byrareddy, 2020). As of February 18, 2021, at least seven different vaccines were rolled out worldwide (WHO, 2021). In the Philippines, frontline workers in the health facilities, senior citizens, those who are above 60 years old and persons with comorbidities are among the priority to be given the COVID-19 vaccines (DOH, 2021).

Although, vaccines are already being given to those in the priority list, adolescents are at the end of the said list. In a study by Zhong, et al. (2020)² adolescents are more likely to engage in risky health behaviors and possibly to risky practices related to COVID-19, therefore they can be a source of possible infection. Evidence shows that SARS-CoV and MERS-Cov are less common and severe among children. However, it is also likely that the actual number of cases in children has not been reported, as children are usually asymptomatic or have mild symptoms, are usually at home and have less exposure to the sources of infection transmission and are often less tested.^{3,4} Children usually present with less severe signs and recovery time is faster compared to adults, except for infants and younger children who lean towards more severe illness of coronavirus infection (Curtis, 2020).

Dardas, et al. (2020)⁵ determined the knowledge, attitude and practices of 1,054 Jordanian adolescents, aged 12-18 years old, towards COVID-19. The demographics showed mostly females took the survey (71%), residing in the central region of the country (72%), had a family income of 1,000 JD (1,410 USD) (68%), had very good to excellent GPA (65%), and television as their main source of information

regarding COVID-19 (78%) followed by social media (68%). Overall, the Jordanian adolescents revealed a good base knowledge regarding COVID-19, irrespective of demographics. Majority revealed to be practicing effective health protective behaviors to prevent the spread of COVID-19, which was markedly projected by their knowledge and attitudes toward these measures. However, there was a proportionately small, yet significant, percentage of adolescents who showed poor knowledge on COVID-19, had negative attitudes toward protective measures, and reported being engaged in risky practices related to infection spread. This study however did not specify the definition of a good knowledge and positive attitude and practices. Among all the studies done with regards to the knowledge, attitudes and practices towards COVID-19, very few studies were done on the adolescent age group around the globe and currently none in the Philippines.

The knowledge, attitudes, and practices toward COVID-19 pandemic have a great influence and role in the society to recognize and alter the different measures imposed by the government.⁶ The lack of ample local data in the understanding of the adolescents' knowledge, attitudes and practices towards COVID-19 remains a challenge. As of April 2021, according to the United Nations data, the Philippines has a population of 110,727,033 and roughly 28% of which are adolescents (UNPF, 2021). They belong to a significant part of the population; hence this study aims to disclose and evaluate the level of knowledge, attitudes and practices of the senior high school towards COVID-19. Assessing and providing data of the adolescents' association with the different factors would be very helpful in improving information dissemination, strategies and practices against the emerging disease.

Review of Related Literature

Since the declaration of a global pandemic by the WHO last March 2020, COVID-19 is still daunting the world with increasing cases and rapid transmission. Although there are updates in treatment protocols for the disease, the strongest and most effective weapon the society has against this virus is the prevention of its spread. Early screening, diagnosis, isolation and treatment of individuals were necessary in controlling the spread of the virus. Use of personal protective equipment, social distancing, avoiding crowded areas, quarantine, cleaning and disinfection, closure of

schools and workplace and increasing testing capacity were recognized as COVID-19 control measures in a study by Guner, et al. (2020).⁷

A study in Canada was done to determine the optimum distance to prevent person to person transmission of the virus and to evaluate the use of face masks and eye protection to prevent transmission of the virus. In the study, transmission of virus was decreased with physical distancing of one meter or more; protection was increased as the distance is lengthened. There is also a substantial reduction in the risk of infection with the use of face masks, and a stronger association with N95 and respirators compared with that of surgical masks. Eye protection also was correlated with less infection.⁸

A lot of studies have investigated the psychological needs of children and adolescents during epidemics, and early data collected in COVID-19 affected areas in China during the outbreak (Jiao, et al., 2020). Children and adolescents are less vulnerable than older adults to COVID-19. It is reported that children and adolescents have been psychologically and socially affected, and have significant behavioral disturbances in some Chinese communities (Golberstein, et al., 2020 and Jiao, et al., 2020). Existing mental health problems can worsen due to COVID-19 pandemic. Thus can lead to more cases among children and adolescents due to the remarkable combination of public health crisis, social isolation and economic recession (Golberstein, et al., 2019).

Lau, et al. (2020), conducted a cross-sectional study in the Philippines to assess the knowledge, attitudes and practices of COVID-19 among income-poor households in the Philippines during earlier stages of the pandemic. In the study, there were 2,224 respondents, 94% of which have heard of COVID-19; in which television (85.5%) and radio (56.1%) were the main source of information. Main transmission routes identified were coughing and sneezing (89.5%) and least commonly identified was indirect hand contact (72.6%). 82.2% of respondents performed handwashing as a form of preventive measure, however, social distancing and crowd avoidance were only identified by 32.4% and 40.6%, respectively. It was emphasized in the study the need for targeted health education as a response strategy to COVID-19 in low-income settings.

The knowledge, attitudes and practices of employed people in the National Capital Region, were studied by Bautista, et al. (2020).⁹ In the study, the population consisted mostly of women (57%)

with college degrees (85%), and were permanently employed (28%). About 92% of the respondents revealed to have high knowledge regarding the Coronavirus disease while 8% had moderate knowledge. It was also noted that the majority of respondents had positive attitudes, and followed strict measures in defeating COVID-19.

In a study by Danladi, et al. (2020), they determined the knowledge, attitude and practices towards COVID-19 of the residents in north-central Nigeria conducted during their national lockdown. Among 589 respondents, the majority were between 18-39 years old, male, had college degrees and reside in urban areas. They exhibited good knowledge (99.5%) of COVID-19, in which information was gathered through social media (55.7%) and television (27.5%). Majority of the respondents (79.5%) exhibited positive attitudes towards the adherence of preventive measures such as practicing social distancing/self-isolation (92.7%), improved personal hygiene (96.4%), and using face masks (82.3%). However, 52.1% perceived that the government is not doing enough to control COVID-19 in Nigeria.

Al-hanawi, et al. (2020), demonstrated in their study that the majority of Saudi Arabia residents were knowledgeable, had optimistic attitudes and good practices towards COVID-19. However, the results showed that men have less knowledge, less optimistic attitude and less good practice towards COVID-19 than women. The study also revealed that older adults are likely to have better knowledge and practices than younger people. They suggested that targeted health education interventions should be directed to vulnerable populations, especially men. This study also suggests the need to direct health education intervention to the younger people, where the adolescents belong.

Erfani, et al. (2020)¹⁰ directed a web-based cross sectional study, which revealed a high level of knowledge (85-90%) is attributed to high disclosure to information, and high educational attainment (75.1%) of the respondents. It stated that improving knowledge would boost people's positive attitude and practices toward coronavirus disease. It was also established that a low level of attitude is linked with sociodemographic factors such as being young, male, single, with lower educational attainment and living in crowded households.

The knowledge, attitudes and practices of Bangladesh youths toward COVID-19 was assessed

in a study by Banik R, et al. (2020). There were 707 participants in the study, mostly students (60.3%), aged 24-29 years (61.5%), having a bachelor's degree (57%), having family income 25,000-50,000 BDT (40.5%) and living in urban areas (64.4%). Information on COVID-19 was mostly gathered through social media (70.4%). The study showed that 61.2% had good knowledge with 78.9% having positive attitudes toward COVID-19 and only 51.6% had good practices. Most of the participants (86.8%) were confident that COVID-19 will be successfully controlled and Bangladesh was handling the COVID-19 health crisis well (84.2%). Participants who always washed their hands with soap or hand-sanitizer (75.2%) and only 70.6% wore a mask when they went out. The study showed the factors associated with adequate knowledge were being female, having a master's degree and above, and living in an urban area. Having adequate knowledge of COVID-19 had higher likelihood of positive attitudes and good practices. They recommend that there is a need for tailored education programs for COVID-19 to improve the level of public knowledge, attitudes and practices.

The objective of the study was to determine the knowledge, attitudes and practices among senior high school students towards COVID-19.

MATERIALS AND METHODS

Research Design

This is cross-sectional, descriptive study using a questionnaire assessing knowledge, attitude and practices towards Coronavirus Disease 2019 (COVID-19) and providing information that includes mean age, sex, school grade, place of residency, and source of COVID-19 information.

Study Population

The study was conducted among senior high school students of FEU-NRMF.

Sampling Methodology

Convenience sampling method was used in the study. Members of the sampling population who were conveniently available to participate in the study were included. This sampling methodology was used to prevent breach of the data privacy law.

Inclusion Criteria

Participants were enrolled in the senior high school program of FEU-NRMF during the time of the COVID-19 pandemic (March 2020 until present).

Exclusion Criteria

Senior high school students with authorized withdrawal requests.

Study Procedure

Eligible senior high school students at FEU-NRMF were determined. A letter was sent to the data privacy officer for approval of release of data. Once approved, the letter was sent to the head of the senior high school program including the informed consents of the study. He then forwarded the letter and informed consents to the adviser of each class. The advisers announced the study to their respective classes and distributed the informed consents. They were instructed to review the informed consent with their parents or guardian. If they agree to participate in the study, the parents or guardian signed the informed consent and the participant whose age is 15 to 17 years old co-signed it and emailed it back to the researcher. While participants who are 18 years old and above, signed the informed consent and emailed it back to the researcher. The first 119 students who sent back their consent form were included in the study. Once informed consent was secured, a link to the online questionnaire was emailed to them.

The data collection used self-administered, validated questionnaires. The questionnaire was adapted from the study of Dardas, et al. (2020)⁵ which was based on a study developed by Zhong, et al. (2020)² was modified based on the WHO guidelines on COVID-19 and was validated. The questionnaire was converted to an online questionnaire using Google Sheet. The participants were assigned a number code to maintain confidentiality and anonymity. Questionnaires were printed after submission and were stored and sealed in an envelope to avoid tampering of the data collected. After answering the online questionnaire, a flyer regarding COVID-19 was given to the participants which can broaden their knowledge about the subject.

The questionnaire is composed of 35 questions and was accomplished in 3 to 5 minutes. There are 15

questions related to knowledge, five questions were about clinical presentation of COVID-19, next five questions were about transmission routes and last five questions were about prevention and control. These questions were answerable by true or false with an additional “I don’t know” option. Attitudes toward COVID-19 were determined using six questions that were answerable by “agree”, “don’t agree” and with an additional “I don’t know” option. Practices toward COVID-19 were measured using 14 questions that were answerable by always, sometimes and never basis.

Variables

Variables in the study were the level of knowledge, attitudes and practices. Knowledge was established as an understanding of a specific subject. Attitude was their belief toward a specific subject. Practice was defined as the ways they exhibit their knowledge and attitude through actions.

Sample Size

The sample size was calculated based on the population of correct knowledge on the question “Unlike common cold, stuffy nose, runny nose, and sneezing are less common in persons infected with the coronavirus COVID-19” assuming to be 55% (Dardas, et al., 2020), with maximum allowable error of 7.5% and reliability of 90%, minimum sample size is 119.

Data Management and Analysis

The collected data was managed and encoded using Microsoft excel. Determination of knowledge, attitude and practices was done using frequency percentage.

Ethical Consideration

This study was conducted in accordance with the ethical guidelines set forth in the Declaration of Helsinki. The researcher does not have any conflict of interest. The target population in this study belonged to the vulnerable age group, hence an informed consent was taken for them to participate. The parents or guardian of the participants was required to sign the informed consent and the participant co-signed it prior to the data collection. If a signed informed consent is not emailed back to the researcher, the

participant was not given a link to the questionnaire. The participation in the study was voluntary. There was no compensation in the study and it took 3 to 5 minutes of the participant’s time. The student’s profile was maintained to be confidential and anonymous. The information collected was held private. There was minimal risk to the respondents of the study and this was a breach in confidentiality. However, a number/code was assigned to each student instead of the actual name that prevented breach in confidentiality. Only the researcher knew what number was assigned to each student. The data were stored in a password-protected file stored only in the laptop of the researcher to which the researcher had access. The research protocol was submitted to the Institutional Ethics Review Committee of FEU-NRMF (FEU-IERC) for review and approval prior to conduct of the study. A copy of the results was emailed to the participants.

RESULTS AND DISCUSSION

A total of 119 senior high school students participated in the study. Majority were females (80.7%); with a mean age of 17 years old (31.1%); most were in the 11th grade (52.9%); and with place of residency in NCR (79.8%). Majority of them said that information regarding COVID-19 were from social media (70.6%) followed by television (21%) (Table 1).

Majority of students were knowledgeable about the mode of transmissions, clinical manifestations, treatment and prevention and control of COVID-19 (Table 2), compared with the study done by Dardas, et al. (2020)⁵ in Jordan where the participants revealed low knowledge in the transmission of COVID-19 in asymptomatic carriers and the need of following preventive measures among children and adults. However, in this study, students gave varied answers to the question “Unlike the common cold, stuffy nose, runny nose, and sneezing are less common in persons infected with the coronavirus COVID-19” of which 53.8% answered incorrect and 13.4% answered “I don’t know.” It is very difficult to differentiate the common colds, allergies and COVID-19 symptoms. It is important to note that the questions used in the study were created and validated during the early stages of COVID-19 by Dardas, et al. (2020)⁵, where there was little information regarding COVID-19. This study was conducted after the 3rd surge of COVID-19 cases in the Philippines and there is more information

Table 1. Sociodemographic characteristics of senior high school students SY 2020-2021 in FEU- NRMF

Characteristics	n (%)
Sex	
Female	96 (80.7)
Male	23 (19.3)
Age in years	
Mean age	17 (31.1)
Place of residency	
ARMM	-
CAR	1 (0.8)
NCR	95 (79.8)
Region I	2 (1.7)
Region II	2 (1.7)
Region III	5 (4.1)
Region IV	13 (10.9)
Region V	-
Region VI	-
Region VII	-
Region VIII	1 (0.8)
Region IX	-
Region X	-
Region XI	-
Region XII	-
Region XIII	-
Overseas	-
Grade	
11th	63 (52.9)
12th	56 (47.1)
Source of information about coronavirus COVID-19	
Television	25 (21)
Newspaper	-
Radio	2 (1.7)
Social Media	84 (70.6)
Family	7 (5.9)
Friends	-
School	1 (0.8)

regarding the disease. Students are more familiar with the information gained since the pandemic started.

It is worth noting that the majority of the students in this study received information regarding COVID-19 from social media (70.6%) followed by television (21.0%); which was also seen in the study by Danladi, et al. (2020)⁵ in Nigeria. Similar to other studies,¹¹ it showed that social media plays an important part in adolescents' information related to COVID-19. This study recognizes social media as a powerful tool and essential in engaging with the

adolescent age group. It is a tool that may be utilized for proper dissemination of information and educating them regarding proper preventive measures. In this study, only 0.8% received information regarding COVID-19 from school.

This study explored the attitudes of senior high school students with regards to their contentment with the Philippine government's actions and strategies in dealing with the pandemic. Majority of the students have positive attitudes with regards to the decision of the Philippine government to close borders (88.2%); close schools and universities, use of online teaching and education (82.4%); closing all public and private institutions (68.1%); and to stay at home except in extreme circumstances (81.5%) to protect people in the Philippines from COVID-19. Students are confident that the Philippines can win the battle against COVID-19 (44.5%). However, with regards to the successful control of COVID-9 infection, students have a negative attitude (38.7%), which can be associated with continuous increase in the number of cases, occurrence of the 3rd surge in the Philippines and implementation again of stricter quarantine rules (Table 3).

Adolescents in the Philippines comprise 28% of the population based from the United Nations data in April 2021, hence their behavior and practices towards COVID-19 can greatly affect the population. This study was conducted after the 3rd surge of COVID-19 cases in the country and just when the government is piloting limited face to face classes in chosen schools. Unlike in the study conducted by Dardas, et al. (2020)⁵, students in this study were compliant with the minimum health standard protocols set by the Philippine government. Majority of them perform handwashing with soap and water for 20 seconds regularly and thoroughly (69.7%) and wearing of mask when leaving home and change it if it becomes contaminated (98.3), compared to the 40% Jordanian adolescent in the study by Dardas, et al. (2020)⁵ who answered "sometimes" to "never" in the questions regarding hand washing and wearing of face mask when leaving home. However, compared to the early pandemic when Dardas, et al. (2020) conducted their study, there are a lot of information already that frequent hand washing and use of facemask can decrease the probability of contacting COVID-19.^{7,8} Students in this study also practiced proper cough and sneezing etiquette (85.7%); proper disposal of used materials (95.8%); avoiding contact with anyone with symptoms similar to cold or flu and maintaining

Table 2. Knowledge of senior high school students of FEU-NRMF SY 2020-2021 towards COVID-19.

Statement	Correct % (n)	Incorrect % (n)	I don't Know % (n)
The main symptoms of coronavirus (COVID-19) are high temperature/fever, fatigue, dry cough and muscle pain/myalgia.	97.5 (116)	1.7 (2)	0.8 (1)
Complications of coronavirus (COVID-19) include pneumonia, acute pneumonia syndrome, kidney failure and even death.	89.9 (107)	5.0 (6)	5.0 (6)
Unlike the common cold, stuffy nose, runny nose, and sneezing are less common in persons infected with the coronavirus COVID-19.	32.8 (39)	53.8 (64)	13.4 (16)
There is currently no effective cure for coronavirus COVID-19, but early symptomatic and supportive treatment can help most patients recover from the infection.	85.7 (102)	10.9 (13)	3.4 (4)
Not all persons with coronavirus COVID-19 will develop severe cases. Only those who are elderly, and have chronic illnesses, are more likely to be severe cases.	72.3 (86)	26.1 (31)	1.7 (2)
Eating or contacting wild animal meat will result in infection by the coronavirus COVID-19.	61.3 (73)	10.1 (12)	28.6 (34)
The coronavirus COVID-19 spread via respiratory droplets of infected individuals through coughing and sneezing.	98.3 (117)	1.7 (2)	-
Persons with coronavirus COVID-19 cannot transmit the virus to others when they don't have fever.	93.3 (111)	1.7 (2)	5.0 (6)
Coronavirus COVID-19 is transmitted indirectly by touching surfaces and devices contaminated with the secretions of the patient and then by touching the mouth, nose, or eyes.	95.0 (113)	3.4 (4)	1.7 (2)
Coronavirus COVID-19 is transmitted through contact with patients with the disease.	94.1 (112)	5.9 (7)	-
Ordinary people can wear general medical masks to prevent the infection by the coronavirus COVID-19.	95.0 (113)	1.7 (2)	3.4 (4)
It is not necessary for children and young adults to take measures to prevent the infection by the coronavirus COVID-19 virus.	95.0 (113)	3.4 (4)	1.7 (2)
To prevent the infection by coronavirus COVID-19, individuals should avoid going to crowded places such as malls, markets, parties, and avoid using public transportation.	99.2 (118)	0.8 (1)	-
Isolation and treatment of people who are infected with the coronavirus COVID-19 are effective ways to reduce the spread of the virus.	98.3 (117)	0.8 (1)	0.8 (1)
People who have contact with someone infected with the coronavirus COVID-19 should be immediately isolated in a proper place. In general, the observation period is 14 days at least.	100.0 (119)	-	-

social distancing (94.1); proper food handling (96.6%) and proper disinfection of used supplies from outside (77.3%), used clothes (69.7%) and shoes (83.2%); not going to crowded places and gatherings (71.4%); and adhering to instructions approved by the Philippine government in terms of not leaving home (80.7%); all of which are control measures of COVID-19 according to Guner, et al. 2020⁷ and Chu, et al. 2020.⁸ Although there is no proof that intake of Vitamin C may protect one from COVID-19 (Shoemaker, 2020),

55.5% of students in this study eat healthy foods rich in Vitamin C (Table 4).

As with any other studies, this one has its limitations. Participants in the study were only senior high school students of the FEU-NRMF Senior High Program, although not representative of all adolescents in the Philippines, the results provide valuable insights into their knowledge, attitude and practices towards the emerging COVID-19 disease. Also this study was conducted prior to the roll-out of

Table 3. Attitudes of senior high school students of FEU-NRMF SY 2020-2021 towards COVID-19

Statement	Positive % (n)	Negative % (n)	I don't know % (n)
Do you agree with the Philippine Government's arrangements to close the borders to protect people in the Philippines from coronavirus COVID-19?	88.2 (105)	8.4 (10)	3.4 (4)
Do you agree with the Philippine Government's decision to close schools and universities and use online teaching and education to protect people in the Philippines from coronavirus COVID-19?	82.4 (98)	10.9 (13)	6.7 (8)
Do you agree with the Philippine Government's decision related to the closing of all public and private institutions to protect against coronavirus COVID-19?	68.1 (81)	24.4 (29)	7.6 (9)
Do you agree to only allow people/citizens to not to leave home except in extreme circumstances for the purpose of protection against coronavirus COVID-19?	81.5 (97)	11.8 (14)	6.7 (8)
Do you agree that coronavirus COVID-19 will finally be successfully controlled?	31.1 (37)	38.7 (46)	30.3 (36)
Do you have confidence that the Philippines can win the battle against the coronavirus COVID-19?	44.5 (53)	26.9 (32)	28.6 (34)

Table 4. Practices of senior high school students of FEU-NRMF SY 2020-2021 towards COVID-19

Statement	Always % (n)	Sometimes % (n)	Never % (n)
I clean my hands with soap and water for 20 seconds regularly and thoroughly.	69.7 (83)	30.3 (36)	-
I cover my mouth and nose with a tissue or and if tissue is not available, I bend my elbow when I cough or sneeze.	85.7 (102)	12.6 (15)	1.7 (2)
I dispose of the used tissue immediately and discard safely in the trash can.	95.8 (114)	4.2 (5)	-
I avoid contact with anyone with symptoms similar to cold or flu, and keep at least 1 meter between us.	94.1 (112)	5.9 (7)	-
I avoid touching my eyes, nose and/or mouth after touching surfaces without making sure they are clean.	67.2 (80)	31.9 (38)	0.8 (1)
I do eat healthy foods rich in Vitamin C.	55.5 (66)	45.5 (53)	-
I wash fruits, vegetables, and all foods before eating them, as well as when purchasing them.	96.6 (115)	3.4 (4)	-
I dispose of the bags that were used in purchasing the food and supplies from outside, and I handle it in a way that prevents the spreading of the virus.	77.3 (92)	21.0 (25)	1.7 (2)
I go to crowded places and gatherings.	1.7 (2)	26.9 (32)	71.4 (85)
I wear a mask when leaving home and change it if it becomes contaminated.	98.3 (117)	1.7 (2)	-
I wear gloves when leaving home and change them in the event of contamination.	5.0 (6)	22.7 (27)	72.3 (86)
When I return from outside, I take off my clothes that I have worn and put them away from other clothes to be washed alone.	69.7 (83)	26.9 (32)	3.4 (4)
I adhere to the instructions approved by the Philippine government in terms of not leaving home during the past period and currently.	80.7 (96)	19.3 (23)	-
When I return from outside, I remove my shoes outside the house to protect the house from contamination.	83.2 (99)	12.6 (15)	4.2 (5)

COVID-19 vaccines for adolescents aged 12-17 years old.

SUMMARY, CONCLUSION AND RECOMMENDATIONS

This study showed that the majority of senior high school students have good knowledge in terms of the transmission, clinical manifestations, prevention and control of COVID-19. Most of the information regarding COVID-19 was gathered through social media. Majority have positive attitudes towards the government's policies to help protect the people of the country and to follow the minimum health standards in the prevention and control of COVID-19.

The researcher recommends the conduct of further cross-sectional studies with higher sample size in other schools prior to starting limited face to face classes. The researcher also recommends modification of the questions appropriate to the level to grade school students, in which the study can also be relevant.

The research recommends that the FEU-NRMF senior high program, incorporate teaching relevant and timely topics in their science curriculum, such as COVID-19. If not possible, a Facebook page where in class advisers can upload different validated information can be watched or read by the students. A general assembly and discussion of relevant topics may also be done.

The researcher also recommends another study to be done to determine possible predictors and association of the age, sex, grade level, place of residency with the knowledge, attitudes and practices towards COVID-19 of the students.

The researcher also recommends that every pediatrician to educate patients, parents and guardians in every clinic visit with regards to information related to COVID-19. Pediatricians who are active in social media can also post valid information related to COVID-19.

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