



# COVID-19 Prevention Practices among the Students of the College of Health and Natural Sciences, Kalinga State University

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**Abstract**— This study focused on the CoViD 19 prevention practices of the students of the College of Health and Natural Sciences. Specifically, it aimed to undergo study on the sources of information on the CoViD 19 prevention practices among the students of the College of Health and Natural sciences; level of knowledge of the students on the CoViD 19 prevention practices; attitudes of the students towards CoViD 19 health – seeking behavior; correlation of the knowledge of students on the CoViD 19 prevention practices and their attitude towards CoViD 19 health – seeking behavior; practice of the students on the CoViD 19 preventive measures; factors that may affect the frequency of practice of the students on the CoViD 19 preventive measures. It was concluded that the students get information from television, social media, and from their classmates and friends. They have good knowledge on the preventive measures against CoViD 19. They also have positive attitude towards health seeking behavior. While, their knowledge and attitude have very low correlation. These students always practice the preventive measures against CoViD 19. But, sometimes, they forget, not mindful of the health protocols and they are not used to the guidelines.

**Keywords**— CoViD – 19 Prevention Practices, CHNS, Knowledge, Attitudes

## I. INTRODUCTION

### Background of the Study

The coronavirus disease-19 (COVID-19) pandemic has caused enormous stress among the Philippines and the whole world. This pandemic has had several impacts on global economy, political activities and human health in general due to lockdown strategies. Different evidences had suggested that new strategies like strengthening implementation of preventive measures should be established rather than the lockdown strategy as this strategy encouraged economic crises. Amidst the current pandemic, the DOH has issued several guidelines and also started online courses and training sessions to raise awareness and preparedness regarding prevention and control of COVID-19 among health care workers. In addition to the DOH, other health institutions and other agencies concerned also published several

recommendations for health care workers aimed to reduce the occupational spread of infection among health care workers. During the COVID-19 pandemic community health workers have played a major role by assisting COVID-19 surveillance data, contact tracing and ensuring that the community is implementing DOH preventive measures.

Coronavirus disease 2019 (COVID-19) is an emerging infectious disease caused by severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2). The novel coronavirus was first identified in December 2019 in Wuhan China, then spread globally within weeks and resulted in an ongoing pandemic.

The full spectrum of COVID-19 infection ranges from subclinical self-limiting respiratory tract illness to severe progressive pneumonia with multi-organ failure and death. As evidenced from studies and reports, more than

80% of cases remained asymptomatic and 15% of cases appeared as mild cases with common symptoms like fever, cough, fatigue, and loss of smell and taste. Severe disease onset that needs intensive care might result in death due to massive alveolar damage and progressive respiratory failure.

The virus transmits through direct and indirect contacts. Person-to-person transmissions primarily occur during close contact, droplets produced through coughing, sneezing, and talking. Indirect transmission occurs through touching contaminated surfaces or objects and then touching the face. It is more contagious during the first few days after the onset of symptoms, but asymptomatic cases can also spread the disease.

Recommended prevention measures was designed based on overcoming the mode of transmissions including frequent hand washing, maintaining physical distance, quarantine, covering the mouth and nose during coughs, and avoiding contamination of face with unwashed hands. In addition, use of mask is recommended particularly for suspected individuals and their caregivers. There is limited evidence against the community wide use of masks in healthy individuals. However, most of these preventive measures are recommended and were not researched well.

To the extent of our search, there is no systematic review on the preventive aspects and effectiveness of COVID-19 infection through contact tracing, screening, quarantine, and isolation. The findings were inconclusive; in some studies, certain preventive mechanisms were shown to have minimal effects, while in others different preventive mechanisms have better effect than expected. On the other hand, some studies have reported that integration of interventions is more effective than specific interventions.

( <https://tropmedhealth.biomedcentral.com/articles/> )

It's been many months since COVID-19 upended our lives. We've adjusted to wearing masks, social distancing, constantly our washing hands, and working and learning remotely. But what do we really know about how to prevent COVID-19 infection?

Scientists, doctors, and public health officials are still trying to fully understand how the virus spreads, what to do to prevent it, and the best ways to treat it. New findings sometimes lead to advice that conflicts with what we've been told previously—and it can be a challenge to keep track of it all. Fortunately, there is plenty of solid advice we can still follow.

“It can be really exhausting to be constantly vigilant and to take precautions, like wearing a mask and

### **Conceptual Framework**

physically distancing, which may be physically and emotionally uncomfortable,” says Jaimie Meyer, MD, MS, a Yale Medicine infectious disease expert. “But sustaining these types of behaviors is really key to curbing this pandemic, especially before a vaccine is available.” ( [www.yalemedicine.org](http://www.yalemedicine.org) . )

As the COVID – 19 pandemic continues, we are told that we can play a role in preventing its spread. There is a lot of information out there about how we should be protecting ourselves and others from COVID 19.

Though headlines have sometimes sent conflicting messages, health researchers agree that protective measures currently in place, such as stay-at-home orders, as well as the five key preventive practices, will continue to help “flatten the curve” ( [www.yalemedicine.org](http://www.yalemedicine.org) . )

So far, the best actions to take to slow the transmission of COVID 19 includes: social distancing; stay at home; Avoid touching your face; wash your hands frequently with soap; wear a cloth mask; regularly clean frequently touched surfaces at home. Liao emphasized the importance of one of the best preventive measures against the novel coronavirus: wash your hands, especially before cooking and eating. “ Which you should be doing all the time ( ( [www.yalemedicine.org](http://www.yalemedicine.org) . )

Taking these prevention strategies seriously is extremely important to stop the transmission of this virus.

Practicing good hygiene, following these guidelines, and encouraging your friends and family to do the same will go a long way in preventing the transmission of SARS-CoV-2 ( <http://www.healthline.com> . )

The College of Health and Natural Sciences has two ( 2 ) programs; BS Midwifery and BS Biology. The presence of these health - related programs made the college received its Certificate of Authority to conduct limited face to face. This certificate gives an authority for the college to conduct limited face to face classes. But, in the conduct of this classes, they need to follow strictly the guidelines and health protocols. These health protocols are recommended by the concerned authorities in order to prevent the transmission of the virus.

A timely understanding of the prevention practices towards COVID-19 is very crucial to combat the pandemic. Despite this, no study has been conducted among the students in the province. The study aimed to determine the status of implementation of preventive measures of the student at Kalinga State University towards COVID-19 and its associated factors

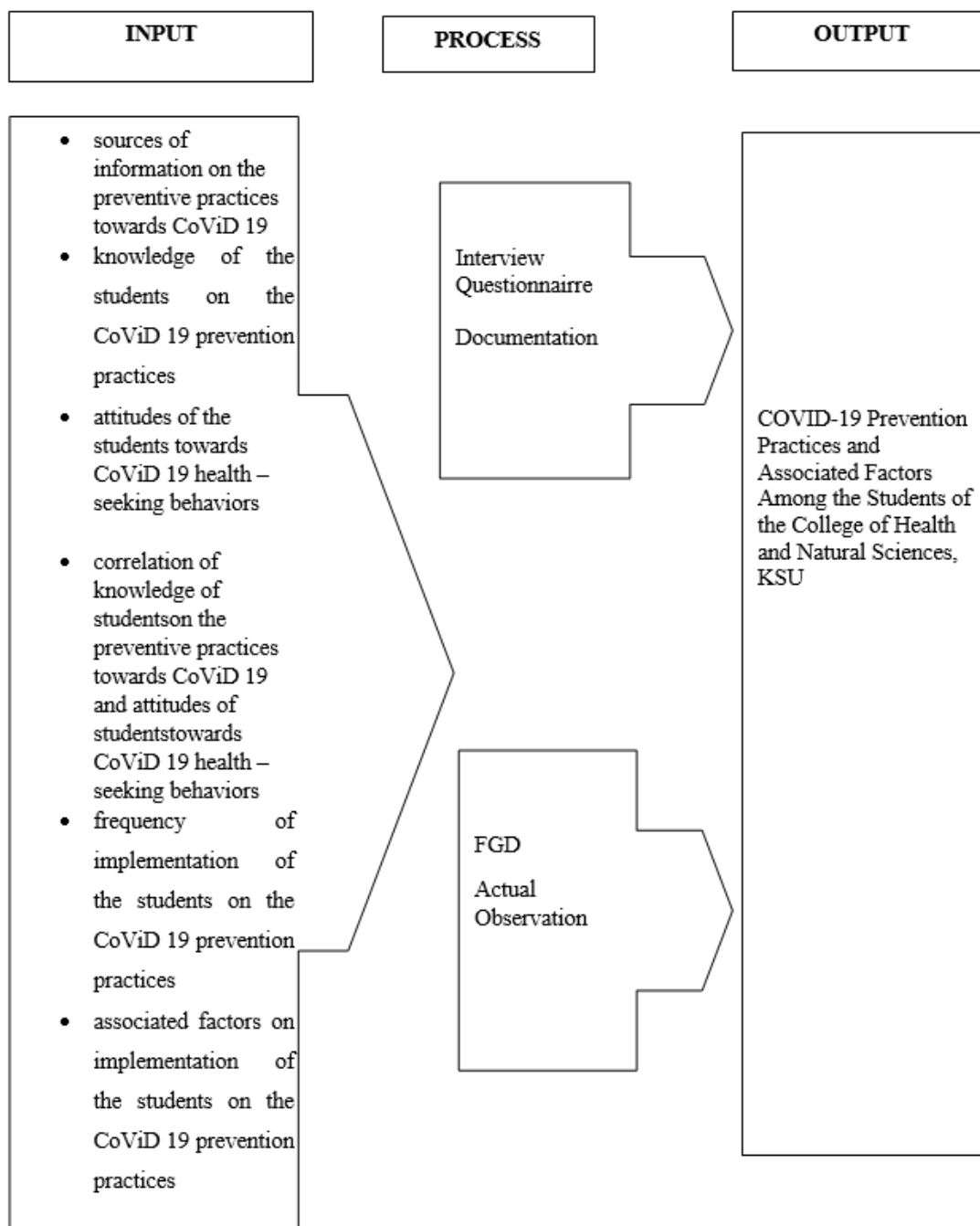


Fig. 1. Conceptual Paradigm

**Statement of the Problem**

This study focused on the CoViD 19 prevention practices of the students of the College of Health and Natural Sciences.

**Objectives of the Study**

Specifically, it aimed to undergo study on the following objectives:

1. To identify the sources of information on the CoViD 19 prevention practices among the students of the College of Health and Natural sciences.
2. To assess the level of knowledge of the students on the CoViD 19 prevention practices .
3. To evaluate the attitudes of the students towards CoViD 19 health – seeking behavior.
4. To test for the correlation of the knowledge of students on the CoViD 19 prevention practices and their attitude towards CoViD 19 health – seeking behavior.

5. To determine the frequency of practice of the students on the CoViD 19 preventivemeasures.

6. To identify some factors that may affect thefrequency of practice of the students on the CoViD 19 preventive measures.

### Significance of the study

An assessment on the magnitude of the COVID - 19 preventive practices of the students is very important. As the disease was exponentially increasing from day to day basis; stakeholders like the Department of Health, Local Government Unit, Commission on Higher Education, and other concerned agencies should give special attention to improve the knowledge and change the attitude towards prevention measures of the community including the students. Improving frontline community health workers' prevention status is basic to save other communities as a whole because their roles were totally within the community.

This study may help by providing data on the status of the frequency of implementation, level of knowledge, and attitudes of students towards COVID 19 preventive practices. That the government and non-governmental organizations working around the COVID 19 preventive measures may know what to consider and to be included in their strategic plans and mitigation strategies to address specific concerns and issues.

This study may also help to support the existing local and national COVID-19 prevention program with tangible evidence. We aimed to answer issues related to implementation and effectiveness in the preventivemeasures towards COVID 19.

### Scope and Delimitation of the study

This study was confined to a short period of time for practical reasons. This study focused on the status of the CoViD 19 preventive practices of the students of the College of Health and Natural Sciences, Kalinga State University, for AY 2022- 2023.

## II. REVIEW OF RELATED LITERATURE

The study of Gebremedhin, T.; et. Al concluded that the magnitude of preventive practices of frontline health workers in the zone is encountered as low. A poor preventivepractice was reported among unmarried, poorly knowledgeable, untrained, and participants who have a negative attitude towards prevention measure recommendations. As the disease was exponentially increasing from day- to- day basis; stakeholders like the regional health bureau and the zone health department as well as specific district health offices should give special

attention to improve their knowledge and change the attitude towards prevention measures. Improving frontline community health workers' prevention status is basic to save other communities as a whole because their roles were totally within the community. Jimmazon health department and other stakeholders should give training for those who have not taken it yet and assess their status regularly.

Severe Acute Respiratory Syndrome Coronavirus 2 (COVID 19) has plagued the world with about 7,8 million confirmed cases and over 430,000 deaths as of June 13<sup>th</sup> 2020. The knowledge, attitude, and practices (KAP) people hold towards this new disease could play a major role in the way they accept measures put in place to curb its spread and their willingness to seek and adhere to care. We sought to understand if: a) demographic variables of Cameroonian residents could influence KAP and symptomatology, and b) KAP could influence the risk of having COVID19. A cross-sectional KAP/symptomatology ( Ngwewondo, A. et.al. ) <https://journals.plos.org/plosntds>

Based from the study of Rana, et.al., The knowledge level of the general people regarding prevention of COVID-19 was alarmingly low in Bangladesh. The government of Bangladesh, health policy makers and donor agencies should consider the findings and take immediate steps for improving knowledge of the public about prevention of the disease.

Although there is mathematical rationality behind implementation of social distancing measures including lockdown, this study also emphasised the importance of other associated measures like increasing tests and increasing the number of hospital and ICU beds. The later components are particularly important during the social mixing period to be observed after lifting of lockdown, Arista et. Al.

Girum, et.al. concluded in their study that Quarantine, contact tracing, screening, and isolation are effective measures of COVID-19 prevention, particularly whenever integrated together. In order to be more effective, quarantine should be implemented early and covers larger community. Controlling population travel will enhance the effectiveness of quarantine. Screening, contact tracing, and isolation are effective particularly in areas where contact tracing is easily attainable. Although screening is the effective measure recommended by the WHO, since the disease is asymptomatic, it may miss a larger share of the population. Therefore, this should be integrated with other preventive measures. In order to control the COVID-19 epidemic, the health care system should consider high level of contact tracing, early initiation of nationwide quarantine measures, increasing

coverage of screening service, and preparing effective isolation centers.

### III. METHODOLOGY

#### Locale of the study

This study was conducted at the College of Health and Natural sciences, Kalinga State University.

#### Research Design

The findings were derived from a quantitative and qualitative exploration on the COVID 19 Preventive practices among the students of the College of Health and Natural Sciences.

#### Research Participants

The respondents of this study were the students from the College of Health and Natural Sciences who will be randomly selected. Thirty percent ( 30% ) of the total number ( 439 ) of enrollees for AY 2022 – 2023 were chosen as respondents.

#### Instrumentation

Structured questionnaire was used to gather information/ data.

Indicators of the questionnaire on Knowledge and attitudes were lifted from the published study of Ngwewondo, A. et.al entitled, “Knowledge, Attitudes, Practices of/Towards COVID 19 Preventive Measures and Symptoms: A Cross-sectional Study During the Exponential Rise of the Outbreak in Cameroon” which was retrieved from the website: ( <https://journals.plos.org/plosntds> )

For the preventive measures, the questionnaire was based on the study of Masud, Rana, et. Al. “Knowledge of Prevention of COVID-19 Among the General People in Bangladesh: A Cross-sectional Study in Rajshahi District”;

( <https://journals.plos.org/plosone> )

Slight revisions were made to suit to the present study.

Guide questionnaire was prepared to facilitate interview with the respondents.

#### Data gathering

This study was conducted using survey method to gather the relevant information. A brief description of these two research tools follows: Participant Observation is collecting data through participant observation allows the researcher to be a part of the setting being studied. The

For the frequency of practice on the COVID 19 Preventive Measures of the students:

researcher is able to learn firsthand the actions and patterns of behaviors of the participants and allows for the development of a trust relationship between the participants and the researcher. The goal of participant observation as Erickson (1973) tells us, is to make the strange familiar and the familiar strange. This new understanding will provide new ways of thinking about that aspect of social interaction that one is researching. In this method, the researcher consciously observes the setting, the participants, and the events, acts, and gestures that occur.

#### Data analysis

The analysis and the interpretation of the data collected used quantitative and qualitative method. In qualitative research, the process of analysis and interpretation is always ongoing. The informants’ consensus was also used to investigate relevant data needed in the study. Responses of all selected informants were summarized to make general statements about the data/ information gathered.

Measures of Variables: The knowledge tool contains 12 yes/no items with the overall score ranging between 0–12. An individual who will have a score less than the mean score will be categorized as with poor knowledge and one who scores as mean or above will be categorized as having good knowledge. For attitude variable, an individual who scores less than the mean score will be categorized as having negative attitude and one who scores mean and above will be categorized as having positive attitude.

For frequency of CoViD – 19 preventive practice questions we used 3- Point- Likert scale questions ( sometimes, often, and always).

#### TREATMENT OF DATA

The data gathered from the retrieved questionnaire were classified, tallied, tabulated, analyzed and interpreted.

For the knowledge and attitudes of the students on the preventive practices:

SCORE	DESCRIPTION
7 - 12	GOOD KNOWLEDGE POSITIVE ATTITUDE
6	KNOWLEDGEABLE NEUTRAL
1 - 5	POOR KNOWLEDGE NEGATIVE ATTITUDE

SCALE	STATISTICAL LIMIT	DESCRIPTIVE EQUIVALENT	SYMBOL
3	2.34 – 3.0	ALWAYS	A
2	1.67 – 2.33	OFTEN	O
1	1.0 – 1.66	SOMETIMES	S

The test for Correlation Coefficient was used to analyze the relationship of the knowledge of the students on the preventive practices against covid – 19 and their attitude towards COVID 19 health – seeking behavior.

A correlation is a statistical measure of the relationship between two variables. The measure is best used in variables that demonstrate a linear relationship between each other. The fit of the data can be visually represented in a scatterplot. Using a scatterplot, we can generally assess the relationship between the variables and determine whether they are correlated or not.

The correlation coefficient is a value that indicates the strength of the relationship between variables. The coefficient can take any values from -1 to 1. The interpretations of the values are:

#### Scale of correlation coefficient

$$0 < r \leq 0.19$$

$$0.2 \leq r \leq 0.39$$

$$0.4 \leq r \leq 0.59$$

$$0.6 \leq r \leq 0.79$$

$$0.8 \leq r \leq 1.0$$

( <https://www.scribbr.com/statistics/pearson-correlation-coefficient/> )

#### IV. RESULTS AND DISCUSSIONS

This part presents the findings of this study.

Table 1. Sources of Information on CoViD 19 Preventive Practices

Source of Information	Frequency
Television	133
Radio	71
Health educator	61
Internet and social media	132
Classmates, friends	105
Health care workers	90
Neighbors	88
Instructors	77
Newspaper	52

Based from the survey, most of the sources of the students of the College of Health and Natural Sciences on the information on the CoViD 19 preventive practices are from television, Internet and social media, and from their classmates and friends.

It is also shown in the table that all the identified sources of information are also considered by the students as sources of information.

Table 2. Knowledge of the students on the COVID 19 Preventive Practices ( N = 131 ).

SCORES	FREQUENCY	%	DESCRIPTION
7 - 12	122	93%	Good knowledge
6	5	3.82	Knowledgeable
1 - 5	4	3.05	Poor knowledge

The table shows the summary of the scores of the respondents on their knowledge on the CoViD 19 preventive practices. 93% of the respondents have “good knowledge” since their scores fall on the 7 – 12 bracket.

The basis of the scoring is their positive or “YES” response.

The 3.82% of the respondents are “knowledgeable”. Only 3.05% have “poor knowledge” on the CoViD 19 preventive practices.

Table 3. Attitude towards COVID 19 health – seeking behavior ( N = 131 )

SCORES	FREQUENCY	%	DESCRIPTION
7 - 12	121	92%	Positive attitude
6	6	4.6%	Neutral
1 - 5	4	3.05%	Negative attitude

The result of the survey shows that majority 92% of the respondents have “Positive attitude towards CoViD 19 health- seeking behavior. This means that from the 12 items, they scored above the mean which ranges from 7 – 12. The positive or “Yes” response was counted in the scoring.

From the 131 respondents, 6 or 4.6% have neutral attitude. They scored exactly on the mean range which is 6.

Only 4 or 3,05 of the respondents have negative attitude towards CoViD 19 health – seeking behavior. They responded more on the negative or ”NO” on the indicators.

The findings show that the students internalized the significance of keeping themselves safe, healthy, and free from diseases and virus.

Table 4. Correlation of knowledge and attitude scores of the respondents

		Knowledge	Attitude
Knowledge	Pearson Correlation	1	.089
	Sig. (2-tailed)		.314
	N	131	131

The table shows that the computed value of the Pearson r Correlation Coefficient is .089. Based from the Score of Correlation Coefficient, the computed value is interpreted as “ Very Low Correlation”.

This means that the knowledge of the students on the preventive practices against CoViD 19 has a very low correlation with their attitudes towards health seeking behavior.

This doesn’t prove that the higher the level of knowledge, the more positive the attitude; or; the lower the level of knowledge, the more negative attitude.

Therefore, based from this study, knowledge of the students on preventive measures against the virus has very low correlation with their attitude as to health seeking behavior.

Table 5. Frequency of Practice on the COVID 19 Preventive Measures of the Students of CHNS( N = 131 )

COVID 19 Prevention Practices	Sometimes ( 1 )	Often ( 2 )	Always ( 3 )	WM	Description
1. How often do you wash or disinfect your hands?	24 ( 0.18 )	48 ( 0.73 )	58 ( 1.33 )	2.24	Often
2. How often do you avoid touching your face and eyes with unwashed hands?	60 ( 0.46 )	35 ( 0.53 )	35 ( 0.80 )	1.79	Often
3. How often do you use a face mask?	19 ( 0.15 )	39 ( 0.60 )	72 ( 1.65 )	2.40	Always
4. How often do you use a face mask, paper tissue, or elbow when sneezing, coughing, or having a runny nose?	42 ( 0.33 )	37 ( 0.56 )	51 ( 1.17 )	2.06	Often

5. How often do you throw your used face masks and tissue papers in separate bags and then in a bin?	23 ( 0.17 )	36 ( 0.55 )	71 ( 1.63 )	2.35	Always
6. How often do you disinfect surfaces of personal objects and places?	56 ( 0.43 )	53 ( 0.81 )	21 ( 0.48 )	1.72	Often
7. How often do you shake hands with others?	114 ( 0.87 )	13 ( 0.20 )	3 ( 0.02 )	1.09	Sometimes
8. How often do you stay in a close area/classroom and chat as a group without keeping distance ?	102 ( 0.78 )	21 ( 0.32 )	7 ( 0.16 )	1.26	Sometimes
9. How often do you hug others?	117 ( 0.89 )	13 ( 0.20 )	0 ( 0 )	1.09	Sometimes
10. How often do you keep at least a 2 meters distance from others?	64 ( 0.49 )	42 ( 0.64 )	24 ( 0.55 )	1.68	Often
11. How often do you eat together in a close area like canteen, food house?	92 ( 0.70 )	28 ( 0.43 )	10 ( 0.23 )	1.36	Sometimes
12. How often do you follow the signages?	41 ( 0.31 )	36 ( 0.55 )	53 ( 1.21 )	2.07	Often
TAWM				<b>1.76</b>	<b>Often</b>

The table show that the students of the college of Health and Natural Sciences “often” practice the CoViD 19 preventive measures as evidenced by the computed Total Average Weighted Mean of 1.76.

The frequency of the practice may be due to the associated factors identified by the respondents. They are not used to do routine, they forget to follow health protocols, and they are not also mindful sometimes on the guidelines that they need to follow.

It is good to note that the students are mindful is using their face mask. The result of the survey shows that they always use their face mask. This is also observed during classes. Almost 100% of the students in one class are wearing their face mask during the whole duration of the class period. This is because they are reminded if they

see their seatmate and their teacher wearing face mask in the classroom.

Students oftentimes wash their hands and disinfect their area and personal belongings because they do not have enough supply of disinfectant, and sometimes, supply of water is not enough.

CoViD 19 signages are oftentimes followed by the students since they don’t mind reading or internalizing the meaning of the signage. They know it, but they refuse to internalize and follow the signage. Like for example, “EXIT HERE”, exit as a word is very easy to understand but they still go contrary to the meaning.

So, the respondents often practice the CoViD 19 preventive measures, This findings is affected by their mind set.

Table 5. Factors Associated with Preventive Practices Towards COVID-19

Associated Factors	Frequency
1. Water supply is not always available in school.	30
2. Usually when going to public places	10
3. I put them at their designated bins; Place it in my bag	8
4. only at my room;	5
5. No alcohol to use	20
6. We have laboratory classes, so we have to stay in the room for our	50



face -to- face class.	
7. Forgot, not used to it	80
8. I hate going into crowded place	3
9. Prefer eating alone	3
10. Not mindful of the signages/ absence of mind	80

The significant factors identified by the respondents that affect the frequency of their practice on the CoViD 19 preventive practices are listed on the table above.

Based from the survey, their frequency of practice is affected because they sometimes forget the health protocols and guidelines. They are not also used to the guidelines, and they are not mindful of the signages. Sometimes, they don't have disinfectants or alcohol to use to disinfect their rooms and personal objects. Oftentimes also, water supply is not available to wash their hands.

#### SUMMARY

Based from the results of this study:

1. The top three ( 3 ) sources of information of the students of the College of Health and Natural Sciences on the preventive practices against CoViD – 19 are from television, internet and social media, and from their classmates and friends.
2. The students of the College of Health and Natural Sciences have “good knowledge” on the preventive practices against CoViD – 19.
3. The students of the College of Health and Natural Sciences have “positive attitude” towards CoViD 19 health seeking behavior.
4. The knowledge of the students on the preventive practices against CoViD 19 and their attitudes towards CoViD 19 health seeking behavior have “very low correlation”.
5. The students of the College of Health and Natural Sciences “always” practice the preventive measures against CoViD – 19.
6. The associated factors that affect the practice of the students of the College of Health and Natural Sciences on the preventive measures against CoViD 19 are: not used to it, not mindful of the signages, forgot, and no disinfectant/ alcohol to use.

#### V. CONCLUSIONS

The students get information from television, social media, and from their classmates and friends. They have good knowledge on the preventive measures against CoViD 19. They also have positive attitude towards health

seeking behavior. While, their knowledge and attitude have very low correlation.

These students always practice the preventive measures against CoViD 19. But, sometimes, they forget, not mindful of the health protocols and they are not used to the guidelines.

#### VI. RECOMMENDATIONS

From the above findings, the following are recommended:

1. Reorientation of students on the preventive practices against covid – 19 should done during the first month of classes until such time that the students come to internalize the importance of following the guidelines strictly.
2. Prepare and distribute flyers that contains the guidelines on health protocol. Utilize the first 5 minutes of the class hour to remind them to read and internalize
3. The College officers may prepare a schedule for them to stay at the Triage of the college to monitor the entry and exit of students. They should see to it that health protocols are strictly followed. For every violation, there should be an appropriate sanction.
4. There should be continuous enough Water supply of the school.

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