Knowledge, Attitude and Practice towards Prevention COVID-19 Outbreak among University of Hargeisa Students

Yoonis Dayr Mohamed[1], Mohamed AbdikadirJama[2].

[1, 2] Hargeisa Research Institute. Hargeisa, Somaliland.

Abstract

BACKGROUND: *Coronavirus disease 2019 (COVID -19) is a global public health problem and has evolved to become a pandemic crisis around the world, which is caused by the severe acute respiratory syndrome, coronavirus 2 (SARS-CoV-2). In response to this serious situation, COVID-19 was declared as a public health emergency of international concern by the World Health Organization (WHO) on January 30 and called for collaborative efforts of all countries to prevent the rapid spread of COVID-19.Somaliland reported the territory's first two cases of coronavirus on Tuesday Mar 31, 2020. Health officials in the capital, Hargeisa, said samples taken from two individuals — a local man who visited Britain and a Chinese man — had tested positive for COVID-19.*

METHOD: *A cross-sectional online survey was conducted from May to July 2020 among 270 Participants University of Hargeisa students using the Google form platform. Considering the Knowledge, Attitude, and Practice towards Prevention COVID-19 pandemic situation, we collect data using popular social media networks (i.e., Facebook, WhatsApp). P value analyses were used to explore the collected data on KAPand sociodemographic factors.*

RESULT: *The level of knowledge, attitude and Practice towards Prevention COVID-19 Outbreak among university of Hargeisa students was good All students they have adequate knowledge that 100% they heard a disease termed Coronavirus, also 97.8% they respond that the cause of Coronavirus is virus and 90.4% of respond that Direct transmission during coughing, Touching surfaces contaminated with the virus, Consuming milk and meat of infected animals All of the above are cause of disease and 98.9% respond that High temperature, Cough sore throat blocked nose and Difficulty of breathing All of above are the symptoms of Coronavirus. Respondents were in a positive attitude and the survey revealed that 91.9% of participants agree that the Coronavirus disease is dangerous, and 94.4% had more frequent practices such as washing hands often, Avoiding touching the eyes, nose and mouth, throwing the tissues in the trash after use, using masking to cover my nose in crowded places, All of the above regarding COVID-19 prevention, but65% of students respond that the government institutions does not able to control the pandemic that is why needed public health educational interventions, and awareness programs. The p value is constant because all students they have adequate knowledge of coronavirus as its pandemic disease.*

Conclusion: *students have adequate knowledge, attitude and Practice (KAP) towards Prevention COVID-19 Outbreak Thus, there is a need for public health educational interventions and also government awareness programs such as order rules and guidelines to control and prevent of coronavirus.*

Keyword: *COVID-19, knowledge; attitude; practice; cross-sectional study;*

I. Introduction

Coronaviruses (CoV) are a large family of viruses that cause illness ranging from the common cold to more severe diseases such as Middle East Respiratory Syndrome (MERS-CoV), Severe Acute Respiratory Syndrome (SARS-CoV) and Covid-19[1].

Coronavirus disease (COVID-19) is a new strain that was discovered at the end of 2019, a novel coronavirus was identified as the cause of a cluster of pneumonia cases in Wuhan, a city in the Hubei Province of China. It rapidly spread, resulting in an epidemic throughout China, followed by an increasing number of cases in other countries throughout the world. In February 2020, the World Health Organization designated the disease COVID-19, which stands for coronavirus disease 2019. The virus that causes COVID-19 is designated severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2); previously, it was referred to as 2019-nCoV[2, 3].

Since the first reports of cases from Wuhan, a city in the Hubei Province of China, at the end of 2019, more than 80,000 COVID-19 cases have been reported in China; these include all laboratory-confirmed cases as well as clinically diagnosed cases in the Hubei Province. A joint World Health Organization (WHO)-China fact-

finding mission estimated that the epidemic in China peaked between late January and early February 2020 [4]. The majority of reports have been from Hubei and surrounding provinces, but numerous cases have been reported in other provinces and municipalities throughout China [1-3].

Increasing numbers of cases have also been reported in other countries across all continents except Antarctica, and the rate of new cases outside of China has outpaced the rate in China. These cases initially occurred mainly among travelers from China and those who have had contact with travelers from China. However, ongoing local transmission has driven smaller outbreaks in some locations outside of China, including South Korea, Italy, Iran, and Japan, and infections elsewhere have been identified in travelers from those countries[3].

Somaliland reported the territory's first two cases of coronavirus on Tuesday Mar 31, 2020. Health officials in the capital, Hargeisa, said samples taken from two individuals — a local man who visited Britain and a Chinese man — had tested positive for COVID-19[4].

Globally, 28 September 2020, there have been reported 33,034,598 confirmed cases of COVID-19, including 996,342 deaths, reported to WHO[5]

Knowledge of mode of disease transmission is important for developing effective control measures.

The transmission of CoV 19 is defined as sporadic between family members; often occur in health care settings, and requiring close and prolonged contact, also Person-to-person spread of similar to severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) is thought to occur mainly via respiratory droplets, resembling the spread of influenza. With droplet transmission, virus released in the respiratory secretions when a person with infection coughs, sneezes, or talks can infect another person if it makes direct contact with the mucous membranes; infection can also occur if a person touches an infected surface and then touches his or her eyes, nose, or mouth. Droplets typically do not travel more than six feet (about two meters) and do not linger in the air[3, 6].

Coronaviruses are zoonotic, meaning they are transmitted between animals and people. Detailed investigations found that SARS-CoV was transmitted from civet cats to humans and MERS-CoV from dromedary camels to humans. Several known coronaviruses are circulating in animals that have not yet infected humans[3, 6].

Common signs of infection include respiratory symptoms, fever, and cough, shortness of breath and breathing difficulties. In more severe cases, infection can cause pneumonia, severe acute respiratory syndrome, kidney failure and even death. Incubation period — the incubation period for COVID-19 is thought to be within 14 days following exposure, with most cases occurring approximately four to five days after exposure[3, 7].

Also there is no specific treatment for illness person a lot of you can do management such as:

Home care — Home management is appropriate for patients with mild infection who can be adequately isolated in the outpatient setting. Management of such patients should focus on prevention of transmission to others and monitoring for clinical deterioration, which should prompt hospitalization[3, 7].

Outpatients with COVID-19 should stay at home and try to separate themselves from other people and animals in the household. They should wear a facemask when in the same room (or vehicle) as other people and when presenting to health care settings. Disinfection of frequently touched surfaces is also important, as discussed elsewhere [3, 7, 8].

The main goal of the present work was to measure the level of knowledge, attitude and practice about Coronavirus, to identify socio demographic variables associated with satisfactory level of knowledge attitude and practice about Coronavirus, and to explore awareness and health behaviors related to the prevention of Coronavirus.

II. Methods And Materials
STUDY SETTING

The population of Somaliland has been estimated at approximately 3.5 million residents. The capital and the largest city is Hargeisa, has a population of a little over a million residents. The annual population growth rate is 2.7%. Life expectancy at birth is 51.8. The population density has been estimated at 25 persons per square km in 2014. The approximately 3.5 million populations are served by 25 hospitals, 91 health centers, and 164 health posts[9].

The University of Hargeisa (UOH) is largest public university in the country located in the capital. The institution was founded in 2000. It has over 4000 students, and operates on a four to seven year system. The university consists of 12 faculties namely Faculty of Economics and Political Science, Faculty of Information and Communication Technology (ICT), Faculty of Law and Legal Clinic, Faculty of Engineering, Faculty of Business and Public Administration, Faculty of Arabic Language and Islamic Studies, Faculty of Applied Science, Faculty of Mathematics and Statistics with Management, Faculty of Education, Faculty of Health Science, Faculty of Agriculture and Veterinary, and Faculty of Social Science[10].

STUDY DESIGN

A cross sectional study design was online based survey was conducted on 270 university level students, in period from May to July 2020, with A standardized, confidential, Internet questionnaire (an electronic questionnaire) was used for a randomly selected students.

QUESTIONNAIRE DESIGN

The questionnaire was designed in English and reviewed for consistency semi-structured questionnaire was designed for the Google survey tool (Google Forms), and the generated link was shared to public on social media (i.e., Facebook, WhatsApp).

The questionnaire included socio demographic characteristics of the participants, questions related to Knowledge about Coronavirus, and followed by questions related to attitude and prevention practice toward CoV- 19**.**

ETHICAL CONSIDERATIONS

Ethical approval for this study was obtained students from university of Hargeisa. In addition, online respond was obtained from each and every respondent. Privacy and confidentiality were strictly maintained.

DATA ANALYSIS

The recorded data were analyzed using Statistical Package for Social Sciences software (SPSS) (version 23). Descriptive statistics (frequency with percentage, cross tab) were used to summarize the study and outcome variables. Pearson's Chi-square test was used to test the differences and odds ratios were used for observing and quantifying the association between categorical outcomes. The 95% confidence intervals were calculated for odds ratios. The p value ≤ 0.05 was considered significant.

III. Result

A total of 270 university of Hargeisa students were recruited in this cross sectional study design. Different independent variables have been measured to find-out outcome. **Table 1** Shows the frequency of socio-demographic variables of the study population. Study found 41.1% of respondents were in the age 18-24 years, while 44.8% age group 25-31 years and 32-38 years were 10.0%, 39 years and above were 4.1%. 57.0% of respondents were male students and 43.0% were female students. Regarding marital status majority of students 86.3% were single. According educational level most of Students94.8% were undergraduate level while 5.2% were graduate level. According their field of study (Medical orNon-Medicall), students were majoring in health science 91(33.7%) were Health Science students. Faculty with largest number of students was the faculty of health Science. Table 1 shows the baseline characteristics of the respond

Characteristics	Frequency (n=270)	Percentage (%)
Age of the Respondents (Year)		
18-24	111	41.1
25-31	121	44.8
32-38	27	10.0
39 above	11	4.1
Gender		
Male	154	57.0
Female	116	43.0
Marital Status		
Single	233	86.3
Married	37	13.7
Educational Level		
Graduate	14	5.2
Undergraduate	256	94.8
Field of study		
Economics	29	10.7
Law	21	7.8
Engineering	21	7.8
Business and Public Administration Islamic studies	22	8.1
Mathematics, Statistics with Management	12	4.4
Health Science	9	3.3
Education	91	33.7
Agriculture, Veterinary and Animal Science	5	1.9
Social science	13	4.8

Applied Science	12	4.4
ICT	21	7.8
	14	5.2

Table 1 Socio demographic variables

Table 2 Shows the distribution of students respondents based on knowledge related variables. The majority of the respondents had good knowledge100% they heard coronavirus disease. And most of students97.8% they know the cause of corona his virus and his name suggested.

Regarding transmission of disease 90.4 % students replied that direct transmission during coughing, touching surfaces contaminated with the virus, through consuming milk and meat of infected animals and direct contact with an infected patient all of above are transmitted. Also the symptoms of disease 98.9% of students respond High temp, Cough, sore throat, blocked nose and Difficulty of breathing all of above are symptoms of coronavirus disease. And 60.4 of students respond that coronavirus is treatable and 39.6 respond corona is not treatable.

Majority of student 95.6% respond that think the early diagnosis improves the treatment. Also 98.5% they say that the isolation of the suspected cases at emergency department is important. Most of student 99.6 they respond there is no vaccination available for Coronavirus. 68.9% of students think that the Coronavirus can be treated at home while 31.1% they do not think that the Coronavirus can be treated at home. Most of students respond 91.9% think that health education can help to prevent the disease.

Characteristics	Frequency (n=270)	Percentage (%)
Have you ever heard of a disease termed as Coronavirus?		
Yes	270	100.0
No	0	0
Which of the following is the cause of Coronavirus?		
Bacteria	6	2.2
Virus	264	97.8
Fungus	0	0
Immunodeficiency	0	0
I don't know	0	0
Which of the following is (are) the mode(s) of transmission of Coronavirus?		
Direct transmission during coughing	11	4.1
Touching surfaces contaminated with the virus	3	1.1
Consuming milk and meat of infected animals	2	0.7
All of the above	244	90.4
unsure	10	3.7
Which of the following is (are) symptom(s) of Coronavirus?		
High temp.	0	0
Cough, sore throat, blocked nose	0	0
Difficulty of breathing	0	0
All of above	267	98.9
I do know	3	1.1
Is Coronavirus curable/ treatable?		
Yes	163	60.4
No	107	39.6
Do you think the early diagnosis improves the treatment?		
Yes	258	95.6
No	12	4.4
Do you think the isolation of the suspected cases at emergency department is important?		
Yes	266	98.5
No	4	1.5
Is vaccination available for Coronavirus?		
Yes	1	0.4
No	269	99.6
Do you think that the Coronavirus can be treated at home?		
Yes	186	68.9
No	84	31.1

Do you think that health education can help to prevent the disease?		
Yes	248	91.9
No	22	8.1

Table 2 knowledge related variables

Table 3 Shows the attitude towards presumption of corona virus 91.9% of respondents think that the Coronavirus disease is dangerous. And 71.1% they feel fear if they become positive of corona virus. While most of students when they feel illness they talk physician 49.6% and some of them talk with their parents 38.5%. Also most of students 86.3 afraid to go to common places in order to avoid infection.

97.8 % of students they believe if they take precautions the Coronavirus infection are prevented.
According to the vaccination 71.9 they will take vaccine in order to prevent disease. Also 58.1 that the protective measures sufficient for prevention of coronavirus.

Characteristics	Frequency (n=270)	Percentage (%)
Do you think that the Coronavirus disease is dangerous?		
Yes	248	91.9
No	22	8.1
What would be your reaction if you found that you have Coronavirus?		
Fear	192	71.1
Shame	11	4.1
Surprise	19	7.0
Sadness	48	17.8
Who would you talk to about your illness?		
physician	134	49.6
spouse	9	3.3
parents	104	38.5
other relatives	13	4.8
friends	6	2.2
no one	4	1.5
Are you afraid to go to common places in order to avoid infection?		
Yes	233	86.3
No	37	13.7
If you take precautions, can the Coronavirus infection be prevented?		
Yes	264	97.8
No	6	2.2
If there is a vaccine, would you take it?		
Yes	194	71.9
No	76	28.1
	76	
Are the protective measures sufficient for prevention?		
	157	58.1
Yes	113	41.9
No		

Table 3 Attitude towards prevention of corona

Table 4 Shows the practice towards prevention of corona most of students 94.4% respond that such as washing hands, often Avoid touching the eyes, nose and mouth, throw the tissues in the trash after use and use masking to cover my nose in crowded places all of the above are methods of prevention. And 63.0% they have not ever participated in health education program related to Coronavirus.

 Also most of students 65.9% they say government institutions able to control the pandemic 42.6% they will take vaccination if its present cause of free.

Characteristics	Frequency (n=270)	Percentage (%)
Which of the following precautions do you take to prevent Coronavirus infection?		
I wash hands often	10	3.7
I Avoid touching the eyes, nose and mouth	1	0.4
I throw the tissues in the trash after use	3	1.1
I use masking to cover my nose in crowded places	1	0.4
All of the above	255	94.4
Have you ever participated in health education program related to Coronavirus?		
Yes	100	37.0
No	170	63.0
Does the government institutions able to control the pandemic?		
Yes	92	34.1
No	178	65.9
Which of the following is the reason for getting vaccination (if present)?		
required for my job	60	22.2
my family doctor advised me to do it	65	24.1
Because of my age	30	11.1
it is free	115	42.6

Table 4 practice variable towards prevention of corona

IV. Discussion

This study was conducted aiming at measuring the level of knowledge, attitude, and practice of COVID-19 regarding the disease among university of Hargeisa students.

In the scope of perception towards COVID-19, the majority of the student's participants have adequate knowledge and they reported some of the commonest symptoms cause and transmission of COVID-19 related. A very similar study in Nigeria about Knowledge, Attitudes and Practices towards COVID-19 an Epidemiological Survey in North-Central Nigeria has found Respondents had good knowledge (99.5%) of COVID-19 [11].

In this study, all of the respondents were in a positive attitude and the survey revealed that 91.9% of participants agree that the Coronavirus disease is dangerous, This is comparable two studies conducted on regular students in in Riyadh, Saudi Arabia, were the rate was 95% presented a high attitude therefore and Nigeria were The majority of the respondents (79.5%) had positive attitudes, [11, 12].

Regarding prevention of covid-19, 94.4% had more frequent practices such as washing hands often, Avoiding touching the eyes, nose and mouth, throwing the tissues in the trash after use, using masking to cover my nose in crowded places, all of the above for prevention very similar two studies conducted in Riyadh, Saudi Arabia (81%) and Medical Students from Jordan (80.0%) of study participants adopted social isolation strategies, regular hand washing, and enhanced personal hygiene measures as their first line of defense against the virus[12, 13]. Also (65%) of students respond that the government institutions does not able to control the pandemic that is why needed public health educational interventions, and awareness programs to prevent Covid – 19 outbreak

V. Conclusion

Our findings indicate that after the lockdown and during the rapid rise period of the COVID-19 outbreak sostudents have adequate knowledge, attitude and Practice (KAP) towards Prevention COVID-19 Outbreak. Thus government institutions to control the Covid -19 outbreak,public awareness must be improved to be prepared for pandemic situations. A comprehensive public health education program is important to increase awareness and to reach sufficient knowledge.

Our findings suggest the need for effective and tailored health education programs aimed at improving COVID-19 knowledge, thereby leading to more favorable attitudes and to implementation and maintenance of safe practices.

VI. Recommendation

Students have adequate knowledge, attitude and Practice towards Prevention COVID-19 Outbreak Thus, there is a need for government must order rules and guidelines for control and prevent of coronavirus of their population, Such as WHO rules precautions to reduce your chances of being infected or spreading COVID-19 by taking some simple precautions:

- Governments should encourage the general public to wear a fabric mask if there is widespread community transmission, and especially where physical distancing cannot be maintained. Why? Masks are a key tool in a comprehensive approach to the fight against COVID-19.
- Regularly and thoroughly clean your hands with an alcohol-based hand rub or wash them with soap and water. Why? Washing your hands with soap and water or using alcohol-based hand rub kills viruses that may be on your hands.
- Maintain at least 1 meter (3 feet) distance between yourself and others. Why? When someone coughs, sneezes, or speaks they spray small liquid droplets from their nose or mouth which may contain virus. If you are too close, you can breathe in the droplets, including the COVID-19 virus if the person has the disease.
- Avoid touching eyes, nose and mouth. Why? Hands touch many surfaces and can pick up viruses. Once contaminated, hands can transfer the virus to your eyes, nose or mouth. From there, the virus can enter your body and infect you.
- Make sure you, and the people around you, follow good respiratory hygiene. This means covering your mouth and nose with your bent elbow or tissue when you cough or sneeze. Then dispose of the used tissue immediately and wash your hands. Why? Droplets spread virus. By following good respiratory hygiene, you protect the people around you from viruses such as cold, flu and COVID-19.
- Stay home and self-isolate even with minor symptoms such as cough, headache, mild fever, until you recover. Have someone bring you supplies. If you need to leave your house, wear a mask to avoid infecting others. Why? Avoiding contact with others will protect them from possible COVID-19 and other viruses.
- If you have a fever, cough and difficulty breathing, seek medical attention, but call by telephone in advance if possible and follow the directions of your local health authority. Why? National and local authorities will have the most up to date information on the situation in your area. Calling in advance will allow your health care provider to quickly direct you to the right health facility. This will also protect you and help prevent spread of viruses and other infections.
- Keep up to date on the latest information from trusted sources, such as WHO or your local and national health authorities. Why? Local and national authorities are best placed to advise on what people in your area should be doing to protect themselves.[11]

Reference

[1]. WHO, *Q&A on coronaviruses (COVID-19).* World Health Organisation, 17 April 2020.
[2]. Jun She, J.J., Ling Ye, Lijuan Hu, Chunxue Bai, and Yuanlin Songcorresponding author, *2019 novel coronavirus of pneumonia in Wuhan, China: emerging attack and management strategies.*Clinical and Transltional Medicine. , 2020 Feb 20.
[3]. Kenneth McIntosh, M., *Coronaviruses.* Coronavirus disease 2019 (COVID-19) - UpToDate, Mar 13, 2020.
[4]. Maruf, H., *Somaliland Reports First COVID-19 Cases.* Voice of America, March 31, 2020.
[5]. WHO, *Global Situation.* WHO Coronavirus Disease (COVID-19) Dashboard28 September 2020,.
[6]. WHO, *Transmission of SARS-CoV-2: implications for infection prevention precautions.* World Health Organization, 9 July 2020
[7]. staff, M.C., *coronavirus disease 2019 (COVID-19).* Myo Clinic, 2020,.
[8]. WHO, *Q&A: Infection prevention and control for health care workers caring for patients with suspected or confirmed COVID-19.* World Health Organisation, 31 March 2020 |.
[9]. Development, M.o.N.P.a., *Somaliland in figures.* . Annual report, Hargeisa: Republic of Somaliland., 2016.
[10]. University of Hargiesa, S.
[11]. WHO, *Coronavirus disease (COVID-19) advice for the public.* World Health Organisation, 4 June 2020.