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Research Article

# Knowledge, Attitude and Practice of Healthcare Workers towards Novel Corona Virus (COVID-19) in Jugal Hospital, Harari Regional State, Ethiopia

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## Abstract

**Introduction:** CoVs belong to the subfamily Corona virinae in the family of Corona viridae of the order Nido virales and this sub family includes four genera: Alpha corona virus, Beta corona virus, Gamma corona virus and Delta corona virus. The genome of CoVs is a single-stranded positive-sense RNA (+ssRNA) (~30 kb) with 5′-cap structure and 3′-poly-A tail.

**Methodology:** Cross sectional quantitative study was conducted from February to March 2020 at Jugal hospital, Harar, Ethiopia, which is found 525 km to East of Addis Ababa. Ethical clearance was obtained from Harar Health Science College institutional review board (IRB) (Ref.no.HHSC-09/2020). Before the staring of the field work. Consent was obtained from both administrative body and respondent. SPSS version 20 was used for data analysis.

**Result:** Majority of the staffs had a good Knowledge about COVID-19, almost all 201 (97.10%) answered they are not ready to give care for a patient who is positive for COVID-19 and only 7 (3.38%) of the participants answered that there is enough soap and water to wash hand, hand sanitizers and PPE materials.

**Conclusion:** The finding of this study showed that, majority of respondents have adequate knowledge, attitude and practice about COVID-19. Nevertheless, greater than 95% of respondents said that they are not ready to give care for a patient who is positive for COVID-19, there is no enough soap and water to wash hand, hand sanitizers and personal protective equipment materials like mask, glove and they are afraid that one of their family members can get infection.

***Keywords:*** *COVID-19; Knowledge; Attitude; Practice; Health Care Workers*

## Introduction

Corona virus disease 2019 (abbreviated "COVID- 19") is an emerging respiratory disease that is caused by a novel corona virus and was first detected in December 2019 in Wuhan, China. The disease is highly infectious and its main clinical symptoms include fever, dry cough, fatigue, myalgia, and dyspnea [1,2].

CoVs belong to the subfamily Corona virinae in the family of Corona viridae of the order Nido virales, and this sub family includes four genera: Alpha corona virus, Beta corona virus, Gamma corona virus and Delta corona virus. The genome of CoVs is a single-stranded positive-sense RNA (+ssRNA) (~30 kb) with 5′-cap structure and 3′-poly-A tail [3].

Originally the disease is classified under zoonotic diseases; the pathogen can be transmitted from animal to human and human to human [4]. It is transmission from human to human is through droplet, feco-oral, and direct contact and has an incubation period of 2 - 14

days [5]. It causes illness ranging from simplest of common cold to severe acute respiratory syndrome (SARS) [6].

The World Health Organization (WHO) declared COVID-19 a public health emergency of international concern on 30 January 2020 (PHEIC) [7].

The ongoing COVID-19 epidemic has spread very quickly, and by April 04, 2020, the virus had reached 205 countries altogether, resulting in 1,141,425 laboratory-confirmed infections and 61,239 total deaths, 236,528 recovered, 842,882 active case in which 803,215 (95%) in Mild Condition and 39,667 (5%) Serious or Critical Condition, whereas in Ethiopia, total case 38, recovered 4, active case 34 in which 1 case is in Serious or Critical Condition [8]. There is a concern about possible increased numbers of human infections and deaths.

By the end of January, the WHO and Centers for Disease Control and Prevention (CDC) had published recommendations for the prevention and control of COVID- 19 for HCWs [9,10].

Health care providers in hospitals are at risk of infection through occupational exposure to suspected cases. They are also expected to participate in health education activities on the infection, particularly if they have relevant information which can be given to patients, and through them, to their families and members of the community. It is important therefore that they have adequate and correct knowledge, attitudes and practices (KAP) towards CoV.

## Aim of the Study

The aim of this study therefore was to evaluate KAP towards CoV among health care providers in Jugal hospitals in Harari region.

## Methodology

### Study setting and participants

The institutional cross sectional quantitative study was conducted from February to March 2020 at Jugal hospital, Harar, Ethiopia, which is found 525 km to East of Addis Ababa. The hospital has a total of 220 health professionals. The study was conducted among all health professionals in Jugal hospital. Ethical clearance was obtained from Harar Health Science College institutional review board (IRB) (Ref.no.HHSC-09/2020). before the staring of the field work. Consent was obtained from both administrative body and respondent.

### Data collection tool

Data were collected using a self-administered questionnaire. Construction, the questionnaire included: 16 questions on knowledge, 14 questions on attitudes and 9 questions on practices.

### Data analysis procedure

For data processing and analysis, SPSS version 20 was used. Data was checked for completeness and consistency; Coded data was entered into computer programs after the required cleaning was done descriptive analyses was performed.

## Result

### Socio-demographic characteristics of the participants

Among a total of 220 Health care workers 207 of whom completed the study questionnaire and participated in the study which makes response rate of 94%, 120 (57.97%) of the participants were female, around half of the participants 101 (48.79%) were age group of 25 - 34 years, regarding occupation more than half 118 (57%) were nurses and regarding Attending training/seminar about Novel Corona virus only 5 (2.42%) participated (See table 1).

| Variable | Option | Frequency | Percent |
|---|---|---|---|
| Sex | Male | 87 | 42.03 |
| | Female | 120 | 57.97 |
| Age | < 25 | 34 | 16.43 |
| | 25 - 34 | 101 | 48.79 |
| | 35 - 44 | 42 | 20.29 |
| | 45 - 54 | 27 | 13.04 |
| | 55+ | 3 | 1.45 |
| Occupation | Doctors | 18 | 8.70 |
| | Pharmacists and druggist | 18 | 8.70 |
| | Midwifery | 15 | 7.25 |
| | Nurse | 118 | 57.00 |
| | Lab-technicians | 17 | 8.2 |
| | X-ray technicians | 9 | 4.35 |
| | Anesthetist | 7 | 3.38 |
| | Others | 5 | 2.42 |
| Do you Attended training/seminar about Novel Corona virus | Yes | 202 | 97.58 |
| | No | 5 | 2.42 |

***Table 1:*** *Socio demographic characteristics of study participants.*

## Knowledge about COVID-19

All 207 (100%) of participants answered that they heard about COVID-19, all of them agreed that Sick patients should share their recent travel history with healthcare providers, Regarding knowledge about the origin of the disease, the disease is originated from bats were answered by 51 (24.64%) No and I do not know by 9 (4.35%), regarding sign and symptoms of a disease 207 (100%) of them answered Headache, fever, cough, sore throat, and flu are symptoms of COVID-19, regarding Mode of transmission only 57 (27.54%) answers COVID-19 is transmitted through air, contact and fecal-oral routes, regarding management of the disease 192 (92.75%) answers Supportive care is the current treatment for COVID-19 (See table 2).

## Attitude towards COVID-19

Regarding staffs attitude towards Covid-19, All 207 (100%) of them answered Yes for It is important to report a suspected case to health authorities, Corona virus infection is preventable, Schools and work places should be closed during a corona virus epidemic and People who have contact with someone infected with the COVID-19 virus should be immediately isolated in a proper place.

But the main issue which needs very attention is almost all 201 (97.10%) answered they are not ready to give care for a patient who is positive for COVID-19 (See table 3).

## COVID 19 prevention practices

Regarding COVID 19 prevention practice, all of the participants 207 (100%) reported that they wash their hands using soap and water continuously, cover their nose and mouth with a tissue while sneezing or coughing and Avoid touching their eyes, nose or mouth.

| | Yes | No | I do not know |
|---|---|---|---|
| Do you heard about covid-19 | 207 (100.00%) | 0 (0.00%) | 0 (0.00%) |
| COVID-19 symptoms appear in 2-14 days | 201 (97.10%) | 6 (2.90%) | 0 (0.00%) |
| COVID-19 is fatal | 193 (93.24%) | 7 (3.38%) | 7 (3.38%) |
| Flu vaccinated is sufficient for preventing COVID-19 | 14 (6.76%) | 197 (95.17%) | 0 (0.00%) |
| During the outbreak, eating well-cooked and safely handled meat is safe | 191 (92.27%) | 7 (3.38%) | 9 (4.35%) |
| Sick patients should share their recent travel history with healthcare providers | 207 (100.00%) | 0 (0.00%) | 0 (0.00%) |
| Disinfect equipment's and working area in wet souk at least once a day | 207 (100.00%) | 0 (0.00%) | 0 (0.00%) |
| COVID-19 is thought to be originated from bats | 147 (71.01%) | 51 (24.64%) | 9 (4.35%) |
| COVID-19 is transmitted through air, contact, fecal-oral routes | 57 (27.54%) | 133 (64.25%) | 17 (8.21%) |
| Headache, fever, cough, sore throat, and flu are symptoms of COVID-19 | 207 (100.00%) | 0 (0.00%) | 0 (0.00%) |
| COVID-19 leads to pneumonia, respiratory failure, and death | 207 (100.00%) | 0 (0.00%) | 0 (0.00%) |
| Supportive care is the current treatment for COVID-19 | 192 (92.75%) | 6 (2.90%) | 9 (4.35%) |
| Hand hygiene, covering nose and mouth while coughing, and avoiding sick contacts can help in the prevention of COVID-19 transmission. | 207 (100.00%) | 0 (0.00%) | 0 (0.00%) |
| Not all persons with COVID-2019 will develop to severe case. | 147 (71.01%) | 33 (15.94%) | 27 (13.04%) |
| Persons with COVID-19 cannot transmitted the virus to others when a fever is not present | 101 (48.79%) | 99 (47.83%) | 7 (3.38%) |
| It is not necessary for children and young adults to take measures to prevent the infection by the COVID 19 virus. | 198 (95.65%) | 9 (4.35%) | 7 (3.38%) |

***Table 2:*** *Knowledge about Novel coronavirus (COVID-19) among jugal hospital Healthcare workers', Harari regional state, Harar, Ethiopia 2020.*

But an interesting issue is only 7 (3.38%) of the participants answered that there is enough soap and water to wash hand, hand sanitizers and Personal Protective Equipment materials like mask, glove apron etc. (See table 4).

## Discussion

This study revealed that 100% of the respondents were heard about COVID-19, this finding is more than study done in UAE which was (97.8%) [11].

This study revealed that 100% of the respondents responds that maintaining hand hygiene, covering the nose and mouth while coughing could help to prevent COVID-19 transmission which is higher than study done in UAE which was (85.6%) [11].

In this study all of the participants 100% of them agreed that that COVID-19 could lead to pneumonia, respiratory failure, and death which is high compared to the study done in UAE which was (84%) [11].

In this study all of the participants 100% of them agreed that sick patients should share their recent travel history which is high compared to the study done in UAE which was (92.7%) [11].

In this study all of the participants 100% of them felt that washing hands with soap and water could help to prevent COVID-19 which is high compared to the study done in UAE which was (87%) [11].

| | Yes | No | I do not know |
|---|---|---|---|
| It is important to report a suspected case to health authorities | 207 (100.00%) | 0 (0.00%) | 0 (0.00%) |
| It is important to use a face mask during working hours | 207 (100.00%) | 0 (0.00%) | 0 (0.00%) |
| Corona virus infection can be treated at home | 0 (0.00%) | 207 (100.00%) | 0 (0.00%) |
| Corona virus infection is preventable | 207 (100.00%) | 0 (0.00%) | 0 (0.00%) |
| You are afraid that one of your family members can get infection | 191 (92.27%) | 7 (3.38%) | 9 (4.35%) |
| You are afraid to go to public places in case you might get infected | 147 (71.01%) | 33 (15.94%) | 27 (13.04%) |
| Schools and work places should be closed during a corona virus epidemic | 207 (100.00%) | 0 (0.00%) | 0 (0.00%) |
| Government institutions have the capability to control an epidemic | 147 (71.01%) | 51 (24.64%) | 9 (4.35%) |
| Health education has nothing to do with disease prevention | 57 (27.54%) | 133 (64.25%) | 17 (8.21% |
| Handling corona virus-infected patient does not threaten medical and paramedical staff | 207 (100.00%) | 0 (0.00%) | 0 (0.00%) |
| To prevent the infection by COVID-19, individuals should avoid going to crowded places such as train stations and avoid taking public transportations. | 207 (100.00%) | 0 (0.00%) | 0 (0.00%) |
| Isolation and treatment of people who are infected with the COVID-19 virus are effective ways to reduce the spread of the virus. | 192 (92.75%) | 6 (2.90%) | 9 (4.35%) |
| People who have contact with someone infected with the COVID-19 virus should be immediately isolated in a proper place. In general, the observation period is 14 days. | 207 (100.00%) | 0 (0.00%) | 0 (0.00%) |
| Are you ready to give care for a patient who is positive for COVID-19? | 6 (2.90%) | 201 (97.10%) | 0 (0.00%) |

***Table 3:*** *Attitude about Novel coronavirus (COVID-19) among jugal hospital Healthcare workers', Harari regional state, Harar, Ethiopia 2020.*

| Practice questions | Yes | No | I do not know |
|---|---|---|---|
| I use soap and water to wash my hands continuously | 207 (100.00%) | 0 (0.00%) | 0 (0.00%) |
| I cover my nose and mouth with a tissue while sneezing or coughing | 207 (100.00%) | 0 (0.00%) | 0 (0.00%) |
| I throw the used tissue in the trash | 207 (100.00%) | 0 (0.00%) | 0 (0.00%) |
| Avoidtouchingmy eyes,nose or mouth as much as I can | 207 (100.00%) | 0 (0.00%) | 0 (0.00%) |
| I use face mask in crowds | 191 (92.27%) | 7 (3.38%) | 9 (4.35%) |
| I have healthy eating and lifestyle habits | 147 (71.01%) | 9 (4.35%) | 51 (24.64%) |
| I have educated clients about the disease | 74 (27.5435.75%) | 133 (64.25%) | 0 (0.00%) |
| Do you think that there is enough soap and water to wash hand, hand sanitizers PPE materials | 7 (3.38%) | 191 (92.27%) | 9 (4.35%) |

***Table 4:*** *Practice about Novel coronavirus (COVID-19) among jugal hospital Healthcare workers', Harari regional state, Harar, Ethiopia 2020.*

This study revealed that 95.17% of the respondents respond that that flu vaccination is not sufficient to prevent COVID-19, which is high compared to the study done in UAE which was (90.7%) [11].

This study revealed that 92.75% of the respondents respond that supportive care is the only treatment option that is currently available which is high compared to the study done in UAE which was (83.2%) [11].

This study revealed that 92.75% of the respondents knew that symptoms appear in 2 - 14 days which is high compared to the study done in UAE which was (84.3%) [11], for all of the above disparity could partly be attributed to the difference in the study time, the UAE study was done in beginning month of corona virus epidemic whereas this study done in late months after getting a lot of information regarding the diseases.

In this study, only (2.42%) Attending training/seminar about Novel Corona virus which is very low compared to study done in UAE shows 44.1% [10] of them had the opportunity to attend lectures/discussions about COVID-19.This disparity could partly be attributed to the difference in socio economic status of the country to give lecture using video conferences and like.

## Limitations of the Study

This study was conducted using a cross-sectional study design, the study was subjected to recall bias because it was self-reported and it was depend on the honest answer and recall ability of the participants. Since the disease is new there is no as such a lot researches done in the topic, for discussion only one research was obtained. Despite these limitations, the findings provide valuable information about the knowledge, attitude and practice of the staffs.

## Conclusion

The finding of this study showed that, majority of respondents have adequate knowledge, attitude and practice about COVID-19.

Nevertheless, greater than 95% of respondents said that they are not ready to give care for a patient who is positive for COVID-19, there is no enough soap and water to wash hand, hand sanitizers and Personal Protective Equipment materials like mask, glove and they are afraid that one of their family members can get infection

## Recommendation

- For the hospital
- The hospital must fulfill necessary materials like PPE, hand washing materials.
- Preparing seminar/lecture for all of the staffs.
- For Harari regional health bureau
- It must prepare shelter to staffs specially who assigned in corona center.
- For Regional covid-19 combating team
- Close follow-up for the hospital and checking materials and equipment continuously.

## Conflict of Interests

The author would like to declare that no conflict of interests in this study.

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