

Original Research

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: Coronavirus (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.

Method: 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. Data were collected using a self-administered questionnaire. Data were analyzed using a descriptive statistic using SPSS version 20.

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 personal protective equipment materials.

Conclusion: The findings of this study showed that majority of the 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 ([Nishiura et al., 2020](#)).

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 ([Snijder et al., 2006](#)). Originally, the

disease is classified under zoonotic diseases; the pathogen can be transmitted from animal to human and human to human (Bai et al., 2020). It is transmission from human to human is through droplet, feco-oral, and direct contact and has an incubation period of 2-14 days (World Health Organization, 2020b). It causes illness ranging from simplest of common cold to severe acute respiratory syndrome (SARS) (Yin & Wunderink, 2018).

The World Health Organization (WHO) declared COVID-19 a public health emergency of international concern On 30 January 2020, (PHEIC) (Eurosurveillance Editorial Team, 2020). 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 (World Health Organization, 2020c).

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 (Centers for Disease Control and Prevention, 2020; World Health Organization, 2020a).

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.

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

METHOD

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.

Instruments

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

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.

Ethical Consideration

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 starting of the field work, consent was obtained from both administrative body and respondent.

RESULTS

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**).

Table 1 Socio Demographic Characteristics of Study Participants

Variable	Option	Frequency	Percentage
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 & 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 attend training/seminar about Novel Corona virus	Yes	202	97.58
	No	5	2.42

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%). In regards to sign and symptoms of a

disease, 207(100%) of them answered headache, fever, cough, sore throat, and flu are symptoms of COVID-19. In mode of transmission, only 57(27.54%) answers COVID-19 is transmitted through air, contact and fecal-oral routes. In the management of the disease, 192(92.75%) answers that supportive care is the current treatment for COVID-19 (See **Table 2**).

Table 2 Knowledge about Novel Corona Virus (COVID-19) Among Healthcare Workers at Jugal hospital, Harari Regional State, Harar, Ethiopia, 2020

	Yes	No	I do not know
Do you hear 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%)	19 7(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%)

Attitude towards COVID-19

In regards to 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 & 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**).

Table 3 Attitude about Novel Corona Virus (COVID-19) among Healthcare Workers at Jugal hospital, Harari Regional State, Harar, Ethiopia, 2020

	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 & 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%)

COVID 19 Prevention Practices

In regards to 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. 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**).

Table 4 Practice about Novel corona virus (COVID-19) Among Healthcare Workers at Jugal Hospital, 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%)
Avoid touching my 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%)

Table 4 (Cont.)

I have healthy eating and lifestyle habits	147 (71.01%)	9 (4.35%)	51 (24.64%)
I have educated clients about the disease	74 (27.54%)	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%)

DISCUSSION

This study revealed that all respondents heard about COVID-19. This finding is more than study done in UAE which was (97.8%) ([Bhagavathula, Aldhaleei, Rahmani, Mahabadi, & Bandari, 2020](#)). In addition, all respondents responds that maintaining hand hygiene and 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%) ([Bhagavathula et al., 2020](#)).

In this study, all of the participants 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%) ([Bhagavathula et al., 2020](#)). Also, all participants agreed that sick patients should share their recent travel history which is high compared to the study done in UAE which was (92.7%) ([Bhagavathula et al., 2020](#)).

All of the participants 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%). ([Bhagavathula et al., 2020](#)). 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%) ([Bhagavathula et al., 2020](#)).

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%) ([Bhagavathula et al., 2020](#)). Additionally, 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%) ([Bhagavathula et al., 2020](#)). This 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%) attend training/seminar about Novel Corona virus which is very low compared to study done in UAE which shows 44.1% of them had the opportunity to attend lectures/discussions about COVID-19 ([Bhagavathula et al., 2020](#)). 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

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 dependent on the honest answer and recall ability of the participants. Since the disease is new, there are no many 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. The reason behind this is that there is no enough soap and water to wash hand, hand sanitizers and personal protective equipment materials like mask, glove and due to this they are afraid that one of their family members can get infection. The hospital must fulfill necessary personal protective equipment, hand washing materials and prepare seminar/lecture for all of the staffs and the Regional Health Bureau must prepare temporary residence to staffs specially who assigned in corona center not to contaminate their family members.

Declaration of Conflict of Interests

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

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References

- Bai, Y., Yao, L., Wei, T., Tian, F., Jin, D.-Y., Chen, L., & Wang, M. (2020). Presumed asymptomatic carrier transmission of COVID-19. *JAMA*, 323(14), 1406-1407.
- Bhagavathula, A. S., Aldhaleei, W. A., Rahmani, J., Mahabadi, M. A., & Bandari, D. K. (2020). Novel coronavirus (COVID-19) knowledge and perceptions: A survey on healthcare workers. *MedRxiv*. 20033381
- Centers for Disease Control and Prevention. (2020). *Update and interim guidelines on outbreak of 2019 Novel corona virus (2019-nCoV)*. Retrieved from <https://emergency.cdc.gov/han/han00427.asp>
- Eurosurveillance Editorial Team. (2020). Note from the editors: World Health Organization declares novel coronavirus (2019-nCoV) sixth public health emergency of international concern. *Eurosurveillance*, 25(5), 200131e.

- Nishiura, H., Jung, S.-m., Linton, N. M., Kinoshita, R., Yang, Y., Hayashi, K., . . . Akhmetzhanov, A. R. (2020). The extent of transmission of novel coronavirus in Wuhan, China, 2020. *Journal of Clinical Medicine*, 9(2), 330.
- Snijder, E. J., Van Der Meer, Y., Zevenhoven-Dobbe, J., Onderwater, J. J., Van Der Meulen, J., Koerten, H. K., & Mommaas, A. M. (2006). Ultrastructure and origin of membrane vesicles associated with the severe acute respiratory syndrome coronavirus replication complex. *Journal of Virology*, 80(12), 5927-5940.
- World Health Organization. (2020a). *Coronavirus disease 2019 (COVID-19): Situation report*. Geneva: World Health Organization.
- World Health Organization. (2020b). *Infection prevention and control during health care when novel coronavirus (nCoV) infection is suspected: Interim guidance*. Geneva: World Health Organization.
- World Health Organization. (2020c). *Novel Coronavirus (2019-nCoV): Situation report*. Geneva: World Health Organization.
- Yin, Y., & Wunderink, R. G. (2018). MERS, SARS and other coronaviruses as causes of pneumonia. *Respirology*, 23(2), 130-137.

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