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COVID-19 Special Issue

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Original Article

Knowledge, Attitude and Practices of the Nurses about COVID-19 Management: A study on TMSS Medical College and Rafatullah Community Hospital, Bogura, Bangladesh

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Abstract

Background: The name of the disease caused by Corona virus or SARS-CoV-2 is popularly known as COVID-19 all over the world and is a rapidly outbound pandemic disease that is most ever contagious in the history of the world. Since healthcare workers especially the nurses are one of the frontline fighters, they have now become the main concerns of all countries affected by the virus and Bangladesh is not the exception. Maintaining the health of the healthcare workers especially the Nurses who are working in the hospitals require sufficient knowledge and awareness, pursued by the proper behaviors to control the prevention and transmission of diseases. The purpose of the study was to assess the state of knowledge, attitude and practicing skills of the nurses those whom are engaged in caring COVID patients in COVID-19 dedicated wards. **Materials and Methods:** A cross-sectional type of descriptive study was conducted at TMSS Medical College and Rafatullah Community Hospital (TMC & RCH), Bogura a tertiary level Hospital in Bangladesh. The study was carried out from August 2020 to October 2020. A structured questionnaire was developed by the researcher to collect the data from the respondents about the knowledge, attitude and practices towards nursing care in COVID-19 isolated wards. Purposive sampling technique was carried out to collect the data from about 124 nurses. Statistical package like-SPSS was initiated to analyze the data set. **Results:** There were 124 respondents to conduct the study of which 79% are female and young aged. Majority of the respondents are unmarried and their length of service is less than a year but most of them (98.4%) have diploma as their professional qualification. The study found that the respondents have sufficient knowledge about the symptoms of COVID-19 pandemic and how does it spread among the communities. The respondents have also good knowledge over the various preventive methods like- avoid large events and mass gatherings, avoid close contact with the others, stay at home, wash hands often with soap, Covering face with a cloth face mask, etc. But they can't apply some of the preventive methods like- avoid physical distance and avoid the patients with sign and symptoms of COVID-19 in their day-to-day working life for the job responsibilities. **Conclusions:** Most of the respondents are well known about the symptoms of COVID-19 and how does it spread among the societies. They also bear a very much positive attitude towards the prevention and control of COVID-19 pandemic. Finally, most of the respondents are practicing well all the preventive measures as per the guidelines of WHO and the Government of Bangladesh, while they are doing their job.

Keywords: COVID-19, Knowledge, Attitude, Practice, Nurses

Introduction

Day-to-day the World is becoming a global village and with increased globalization and population encroachment into new places has led to exposure of humans to unknown pathogen which ultimately causes new diseases called emerging or outbound diseases. Emerging and re-emerging diseases always have

exerted new threats to human health and well being.¹ Nowadays, the disease caused by Corona-virus is also such a threat to human being that is commonly known as COVID-19 throughout the world. The Corona-virus Disease 2019 or (COVID-19) pestilence began first in Wuhan, China in December, 2019 and spread globally

within very short time and continuing its burnout in all spheres of human life and well being.² The novel Corona-virus caused COVID-19 is highly contagious that can spread via cough or respiratory droplets, contact with bodily fluids, or from contaminated surfaces of any objects.³ Corona-virus infection manifests the acute respiratory illness with fever, cough, fatigue or lassitude and myalgia as common symptoms at the beginning of illness, though the other symptoms of COVID-19 may be dry cough and difficulty in breathing. But Muscle pain, diarrhea, sputum production, and sore throat are fewer common symptoms. In some cases, the other health problems may arise as mild symptoms, some progress to pneumonia and multi-organ failure.⁴

Corona-virus disease or COVID-19 is the most contagious disease ever in the world history, that is why the healthcare workers those whom are the front liners especially the nurses remain worried to work in the COVID isolated wards where the COVID patients are admitted. As a result, the nurses need to be aware of and cautious while caring the COVID patients and they need to be well understood about the symptoms and mode of spread of the virus to take controlling actions against it. Therefore, it is quite logical at the present situation to assess the knowledge, attitude and practicing skills regarding care of COVID-19 patients and the management of dedicated COVID-19 wards in the hospitals of Bangladesh.⁵ Assessment of the knowledge, awareness, and practices (KAP) of the healthcare workers to combat the pandemic could help to shape future policies and guidelines to be implemented in respective settings.⁶ Studies have described the effects of such pandemic related information that can have impacts on such specific groups' like- medical health workers.⁷

Since, COVID-19 is a highly infectious disease, especially among aged and immune compromised people; special care is required for such individuals. The study was conducted to assess the level of knowledge, attitude, and practices (KAP) towards COVID-19 pandemic and associated risk factors among the healthcare workers in Kigali, Rwanda.⁸ The Knowledge about any disease either COVID-19 or the other reduces the possibility of huge infection among the societies by improving patient's caring practices.⁹ As there is no vaccine and no specific proven treatment

for COVID-19 patients yet, prevention is the most important measure that can be taken right now. For this, the people need to be educated, or to make them knowledgeable about the disease, its mode of spread, and ways of prevention.¹⁰

If it is possible to know the causes and transmission sources of a disease, then it is possible to make the people more aware about the communicable diseases, and to take the preventive measures to slow transmission. So nothing but the knowledge about the disease is the first tool to any health education activity that is implemented.¹¹ So, the awareness is a must among the healthcare workers and should be created by anyway like-conducting several educational campaigns, journal, magazines, regular social programs and so on and finally it will help the healthcare workers to provide the proper care to the COVID-19 patients and improve their quality of life.¹²

A cross-sectional survey was conducted from the last 4th February to 8th February, 2020, including a total of 1357 Healthcare Workers across ten hospitals in Henan, China.¹³ Of those surveyed, 89% of HCWs were found to have sufficient knowledge of COVID-19 though more than 85% scared of self-infection with the COVID-virus, and among them 89.7% followed required practices regarding COVID-19 pandemic.¹⁴ An online survey was also conducted using a pre-tested questionnaire among 1,837 respondents across Bangladesh in late March, 2020. Finally, 1589 responses were included in a statistical analysis to calculate KAP scores of those who have completed their questionnaire. The overall score of KAP analysis was poor, with only 33% of the respondents demonstrating good knowledge, whereas 52.4% and 44.8% of the issues showed good attitudes and practices, respectively.¹⁵ Another self-administered validated (Cronbach's alpha=0.077) questionnaire was used to assess the knowledge, attitude and practices among the healthcare workers (HCWs) in Pakistan regarding corona-virus or COVID-19 disease. Results showed that Healthcare Workers have good knowledge (93.2%, N=386), a positive attitude [mean 8.43 (standard deviation 1.78)] and good practice (88.7%, N=367) towards COVID-19 pandemic. Healthcare Workers realized that limited infection control material (50.7%, N=210) and poor knowledge regarding the transmission (40.6%, N=168) were the prime barriers to control the infection.¹⁶

Another important cross-sectional web-based survey study was conducted by Pal et al. (2020) in the Central, North, South, and West zones of India among the young adults aged 18–30 years. It consisted the questions regarding the knowledge, attitude, and practices towards COVID-19. Results were as follows among the 212 participants: (mean age = 25.1 ± 4.3 years). The score about the knowledge questionnaire was 83% (mean total knowledge score = 12.4 ± 1.9). The average score of knowledge was (74%) with (mean $\pm$ 1SD). Higher education, urban residency was closely related with better knowledge scores. 98% of the respondents were confident about self-protection. 51% of respondents had left home at the time of lockdown to collect their health-related necessary commodities from the pharmacy.¹⁷

Since there is no vaccine or specific antiviral treatment for COVID-19 it can be cured by the treatment of properly identifying symptoms, isolation, supportive care and several experimental measures by following doctors' suggestions. So, by considering the healthcare issues for the COVID patients it is urgent to investigate the knowledge, attitude, and practicing skills of nurses to prevent any unwanted shortage in providing further healthcare workers to the patients in COVID-19 isolated hospitals in Bangladesh and this sort of study will be helpful to ensure the safety of nursing staff during COVID-19 outbreaks as well as in the future.

Materials and Methods

Type of study: Descriptive cross-sectional study.

Place of study: TMSS Medical College and Rafatullah Community Hospital (TMC & RCH), Bogura, Bangladesh.

Study population: Staff Nurses working in the COVID-19 ward of TMC & RCH, Bogura, Bangladesh (about 300).

Duration of study: The study was conducted from 01 August 2020 to 31 October 2020.

Place of data collection: TMSS Medical College and Rafatullah Community Hospital, Bogura.

Sample size: A total number of 124 nurses working in the COVID-19 ward in TMC & RCH were taken as the samples for this study.

Sampling technique: Non probability convenient sampling technique was applied for the study.

Data collection instrument: A semi-structured questionnaire.

Inclusion criteria: The Nurses who are working in the COVID-19 positive wards of TMSS Medical College and Rafatullah Community Hospital (TMC & RCH), Bogura and was present in the Hospital during the data collection period.

Exclusion criteria: Nurses those who were not agreed to participate in this study and physically sick.

Data collection tools and techniques: Data were collected using a pre-designed and pre-tested questionnaire with face-to-face interview technique. Before the interview, a verbal informed consent was obtained from the participants. All the respondents were assured that the information collected would be confidential throughout the study.

Data management and analysis: The collected data were first checked for its completeness and consistency. The data then, entered on the computer programs Statistical Package for Social Sciences (SPSS) version 25 for analysis. The descriptive statistics; frequency, percentage, mean and standard deviation was used to describe the collected data. Findings was presented in the form of tables and charts.

Results

A total of 124 respondents completed the survey questionnaire. The socio demographic information of the respondents (Table-I) showed that the majority of the population belonged to an age group of 20-25 years. The Mean and SD for age of the respondents is 23.25 and ± 1.64 respectively. Among the 124 respondents 98 (79%) were female while 26 (21%) were male and most of them were unmarried 84 (67.7%) and only 40 (32.3%) were married. Among the 124 respondents 122 (98.4%) have Diploma in Nursing Science and Midwifery as their highest professional qualification while only 2 (1.6%) have the B.Sc. in Nursing. Most of the respondents [52 (41.9%)] are newly appointed and their length of service is less than 1-year and the mean value of the respondent's length of service is 2.09 years with SD of ± 1.08 .

Table-I: Socio-demographic characteristics of the respondents (n=124)

Characteristics	Frequency	Percent
Age		
20-25 Years	96	77.4
26-30 Years	28	22.6
Mean $\pm$ SD	23.25 $\pm$ 1.64	
Sex		
Male	26	21.0
Female	98	79.0
Marital Status		
Married	40	32.3
Unmarried	84	67.7
Highest Professional Qualification		
Diploma in Nursing Science and Midwifery	122	98.4
B.Sc. in Nursing	2	1.6
Length of service		
1 Year	52	41.9
2 Years	25	20.2
3 Years	32	25.8
4 Years	15	12.1
Mean $\pm$ SD	2.09 $\pm$ 1.08	

Table-II shows the knowledge about the symptoms of COVID-19 disease among the respondents. Some of the common symptoms of COVID-19 reported were as follows: cough 104 (83.9%), fever 121(97.6%), sore throat 29 (23.4%), runny nose 94 (75.8%), and diarrhea 52 (41.9%) among the 124 (100%) respondents (see table for details).

Table-II: Knowledge of the respondents about the Symptoms of COVID-19

Symptoms	Yes		No		Total	
	n	%	n	%	n	%
Cough	104	83.9	20	16.1	124	100
Fever	121	97.6	3	2.4	124	100
Sore throat	29	23.4	95	76.6	124	100
Runny nose	94	75.8	30	24.2	124	100
Diarrhea	52	41.9	72	58.1	124	100

Table-III shows the level of knowledge among the respondents regarding spread out of COVID-19 disease in the society. Some of the ways of how the COVID-19 virus spreads cited by the majority of respondents were recorded as follows: 115 (92.7%) respondents agreed that the close contact of respiratory droplets is responsible for spread-out the virus; 90 (72.6%) respondents agree with that from person-to-person within close contact of each

other (Maximum 3 feet) is responsible for spread-out the virus; 69 (55.6%) respondents agree with that by touching a surface or object on which the virus is attached is also responsible for spread-out the virus; 122 (98.4%) respondents agree with that the Patients with chronic disease are at higher risk for COVID-19 (see table-III for details).

Table-III: Knowledge of the nurses towards how COVID-19 spreads

Sl.	Statements	Yes		No		Total	
		n	%	n	%	n	%
1	COVID-19 spread through the close contact of respiratory droplets	115	92.7	9	7.3	124	100
2	COVID-19 spreads from person-to-person within close contact of each other (Minimum 3 feet)	90	72.6	34	27.4	124	100
3	COVID-19 can be contracted by touching a surface or object, on which the virus is attached	69	55.6	55	44.4	124	100
4	Patients with chronic disease are at higher risk for COVID-19	122	98.4	1	.8	124	100

Table-IV shows the level of knowledge about the preventive measures among the respondents regarding spread out of COVID-19 disease in the society. Some of the precautionary acts that can be taken by the healthcare workers or nurses to prevent the mass spread-out of COVID-19 in the society were recorded as per their responses as follows: 62 (50%) of the respondents assure that if it is possible to avoid large events and mass gatherings then the prevention of COVID-19 is possible; 99 (79.8%) of the respondents agree that if it is possible to avoid close contact with the others then the prevention of COVID-19 is also possible; 90 (72.6%) of the respondents belief that if they stay at their home then the spread-out can be reduced; 106 (85.5%) of the respondents agreed with the statement that if they wash their hands often with soap then the prevention will be more effective and they 100 (80.6%) also agreed with Covering their face with a cloth face mask to prevent the COVID-19 virus in our society (see table-IV for details).

Table-IV: Knowledge about the preventive methods of COVID-19

Sl.	Statements	Yes		No		Total	
		n	%	n	%	n	%
1	Avoid large events and mass gatherings	62	50.0	62	50.0	124	100
2	Avoid close contact	99	79.8	25	20.2	124	100
3	Stay home	90	72.6	34	27.4	124	100
4	Wash hands often with soap	106	85.5	18	14.5	124	100
5	Cover face with a cloth face mask	100	80.6	24	19.4	124	100

Table-V shows the attitudinal level of the respondents those they responses when they were asked about the several statements regarding COVID-19 pandemic in our country as well as in the world. The extent of their consent regarding each statement was measured by using a five point Likert-Scaling method as followed: most of the respondents agree (26.6% agree and 53.2% strongly agree) with that the transmission of COVID-19 can be prevented while only 17.7% oppose with it; among the respondents 41.1% are agree and 26.6% strongly agree with that the COVID-19 pandemic will eventually be successfully controlled, whereas only 13.7% disagree with the statement; about the statement of 'COVID-19 is a cause for serious illness and death' is little bit less confident

though 52.4 % of the respondents are agree with it; more than fifty percent (22.6% agree and 37.1% strongly agree) of the respondents give their consent in favor of maintaining physical distance to prevent spreading of COVID-19; most importantly the major respondents agreed with the statement that washing hands is essential to reduce the risk of COVID-19 infection and the level of their consent is 79% where 50.8% agree and 28.2% strongly agree; finally many of the respondents believe that the Bangladesh will win the battle against COVID-19 though 52.5% of the respondents have no confidence about the wining against COVID-19 as they oppose to the statement.

Table-V: Attitudinal statements related to COVID-19

Sl.	Statements	SA	Agree	NS	Disagree	SD
1	The transmission of COVID-19 can be prevented	66(53.2%)	33 (26.6%)	03(2.4%)	20(16.1%)	02(1.6%)
2	COVID-19 will eventually be successfully controlled	33(26.6%)	51(41.1%)	03(2.4%)	20(16.1%)	17(13.7%)
3	COVID-19 is a cause for serious illness and death	22(17.7%)	43(34.7%)	05(4.0%)	22(17.7%)	32(25.8%)
4	It is important to maintain physical distance to prevent spreading of COVID-19	46(37.1%)	28(22.6%)	08(6.5%)	22(17.7%)	20(16.1%)
5	Washing hands is essential to reduce the risk of COVID-19 infection	35(28.2%)	63(50.8%)	05(4.0%)	18(14.5%)	03(2.4%)
6	Bangladesh can win the battle against COVID-19	24(19.4%)	35(28.2%)	-	26(21.0%)	39(31.5%)

[SA=Strongly Agree; SD=Strongly Disagree; and NS=Not Sure]

Table-VI shows the practices that are performed by the healthcare workers especially the nurses related to COVID-19 isolated wards in the hospitals in their day-to-day working life. The table also shows the responses towards the adherence and compliances to prevent and precaution measures that are practiced or implemented by the nurses. The results of the respondents answers were as follows: 115 (92.7%) respondents wash and disinfect their hands after patient contact; 105 (84.7%) of the respondents don't maintain the physical distance all the time and they always try to keep them close to the patients to give the best care of their patients; 91 (73.4%) of the respondents also confess that they try to avoid the patient with sign and symptoms of COVID-19 and 121 (97.6%) of the respondents confirm that they always use PPE during care of the COVID-19 positive patients; 122 (98.4%) of the respondents assure that they wear surgical mask during patient contact and most of the cases [120 among 124 (96.8%)] they use N95 mask during patient contact; maximum respondents 112 (90.3%) maintain self-quarantine after return from COVID-19 isolated wards; most importantly almost all of the respondents confirmed that they follow the guidelines of WHO when they remove their PPE and finally 89 (71.8%) of the respondents always Cover their mouth during the time of coughing and sneezing.

Table-VI: Practices of the Nurses related to COVID-19

Sl.	Statement	Always	Occasionally	Never
01	Wash and disinfect my hands after patient contact	115 (92.7%)	7 (5.6%)	2 (1.6%)
02	Always maintain the physical distance	10 (8.1%)	09 (7.3%)	105 (84.7%)
03	Avoid the patient with sign and symptoms of COVID-19	29 (23.4%)	04 (3.2%)	91 (73.4%)
04	Use PPE during care of the COVID -19 positive patient	121 (97.6%)	01 (0.8%)	02 (1.6%)
06	Wear n95 or equivalent mask during patient contact	120 (96.8%)	-	04 (3.2%)
07	Maintain self - quarantine after return from COVID-19 ward	112 (90.3%)	03 (2.4%)	09 (7.3%)
08	Remove PPE properly (by following the guidelines of WHO)	123 (99.2%)	-	01 (.8%)
09	Always cover my mouth during the time of coughing and sneezing	89 (71.8%)	28 (22.6%)	07 (5.6%)

Discussions

Today, the novel Corona-virus or COVID-19 is considered as the most important challenge for physical or mental health, economic and social welfare for human being as it is highly contagious. In world history COVID-19 or Corona-virus is an emerging infectious disease that poses a significant threat to public health in all over the countries regardless developed, developing or under-developed. The threat is serious everywhere in the absence of its vaccine and that is why the preventive and precautionary measures play an important role in reducing the infection rates and controlling the spread of the infectious diseases among the societies. Since the healthcare workers especially the nurses are the frontline fighters of any pandemic and the COVID-19 or Corona-virus is not an exception that is why they need to have sufficient knowledge about the COVID-virus and be aware of it. This indicates the necessity of proper preventive and controlling measures among the nurses, which is affected by their knowledge, skill, attitudes, and practices (KAP). Thus, this study was an attempt to assess the state of knowledge, attitude and practices (KAP) among the nurses those are engaged in caring COVID patients in COVID-19 wards at TMC & RCH, Bangladesh.

A total of 124 samples from the total population (about 300 nurses) were randomly selected for the study where females (79%) were the dominant as usual in most cases. Most of the participants for the study were young adults bearing average age 23 years and most of them were unmarried (67.7%). Though most of the nurses are newly appointed (average service length is 2 years with SD $\pm$ 1.08) but they have the Diploma in Nursing Science and Midwifery as their professional degree.

This study found three most important symptoms by observing the COVID patients from the given six possible symptoms that were given to the respondents and the results are as follows: fever 121(97.6%), cough 104 (83.9%) and runny nose 94 (75.8%); though others symptoms are also important but they affect less among the COVID patients (table-II). The study also found some important issues towards the spread-out of COVID-19 disease among the societies from the knowledge level questionnaire to the respondents. Surprisingly among the given four possible reasons they emphasize the two reasons like- 122 (98.4%) respondents agree with that the Patients with chronic disease are at higher risk for COVID-19 and 115

(92.7%) respondents agree with that the close contact of respiratory droplets is responsible for spread-out the virus; than the other two reasons though they are also vitally important to spread out the disease. Results indicate that the healthcare workers should be more aware about the patients those have chronic disease and when they are engaged in caring COVID patients they need to more protective from the respiratory droplets of each COVID patients (table-III). From the (Table IV) it can be said that the nurses have sufficient knowledge about the preventive methods of COVID-19 disease. Though the COVID-19 virus is a new in the world and very much infectious disease but the healthcare workers especially the nurses of the respective hospitals of the research area are very much conscious and cautious about the preventive methods of the pandemic. Among the several preventive measures they give more importance on frequently washing their hands (85.5%) and wearing face mask (80.6), though the other measures are also important to prevent the infectious COVID disease.

From the section of attitudinal statements (Table-V) among the nurses it was found that they are very much positive towards the controlling of COVID-19 as 79.8% of the respondents are confident that the transmission of COVID-19 can be prevented and 67.7% of the respondents believe that COVID-19 will eventually be successfully controlled. Though many of the respondents have fear about the COVID-19 virus and its negative impacts on the normal life of the general people as well as the healthcare workers or the nurses but it is a matter of fact that about 48% of the respondents believe that Bangladesh will win the battle against the COVID-19 pandemic and it is really a positive sign that will help the nurses to be more confident to fight against the COVID-19 virus. Surprisingly, even after so many publicity and promotional messages by Bangladesh government, national and international organizations (e.g. WHO, CDC) 34% nurses disagree and 6.5% are not sure with the social distancing factor and only 60% of the respondents give their consent in favor of maintaining physical distance to prevent the disease.

From (Table-VI) it was found the practices which are already being performed by the healthcare workers or

the nurses in the Bangladeshi COVID-19 isolated hospitals especially at TMSS Medical College and Rafatullah Community Hospital (TMC & RCH), Bogura a tertiary level Hospital in Bangladesh. Based on the practice score of this study is really impressive and positive for the overall picture of the Covid-19 isolated hospitals in Bangladesh. Most of the respondents 115 (92.7%) wash and disinfect their hands after patient contact and 123 (99.2%) of the respondents remove their PPE properly (by following the guidelines of WHO). Most of the respondents don't fear to contact with Covid-19 patients and they don't avoid the patients with sign and symptoms of COVID-19 virus (84.7%) and (73.4%) respectively as they wear PPE (97.6%), Surgical mask (98.4%), N95 (96.8%) during care of the COVID-19 positive patients. Finally, most of the respondents always Cover their mouth during the time of coughing and sneezing and maintain self-quarantine after returning from the COVID-19 isolated wards 71.8% and 90.3% respectively.

Conclusion

Corona-virus disease popularly known as COVID-19 all over the world and is a rapidly outbound pandemic disease ever in the world history. Nowadays COVID-19 is the most burning issue in all spheres regardless of the boundary of healthcare institutions everywhere. It creates an extra attention by all areas of population either he/she is healthcare professionals or not. But all the healthcare workers especially the nurses are the frontline fighters must emphasize the significance of COVID-19 inside or outside the hospitals to prevent its spread out and that is why they must have proper knowledge, attitude and practicing skills to work and manage about the COVID-19 isolated wards in the hospitals of Bangladesh.

The present study was an attempt to assess the state of knowledge, attitude and practices among the healthcare professionals especially the nurses in the northern area Bogura, Bangladesh. From the survey data study results showed that most of the healthcare workers or the nurses have sufficient knowledge about the COVID-19 pandemic, they are very much positive to behave in a good manner to handle the working environment of COVID-19 isolated wards, and most

of the respondents are performing well in practicing the skills regarding the prevention of corona-virus disease or COVID-19 spread out in the communities. This study may be useful to set several training programs for the nurses that will enrich their knowledge and skills regarding care of COVID patients. It will also help the nurses to be more aware of their attitudinal and practicing behaviors with COVID patients in the dedicated COVID-19 wards.

References

1. Rabbani, U. and Saigul, A.M.A. (2020). Knowledge, Attitude and Practices of Health Care Workers about Corona Virus Disease 2019 in Saudi Arabia. *Journal of Epidemiology and Global Health*, DOI: <https://doi.org/10.2991/jegh.k.200819.002>; ISSN 2210-6006; eISSN 2210-6014
2. Chen, H., Guo, J., Wang, C., Luo, F., Yu, X., Zhang, W., Li, J., Zhao, D., Xu, D. and Gong, Q. (2020). Clinical characteristics and intrauterine vertical transmission potential of COVID-19 infection in nine pregnant women: a retrospective review of medical records. *Lancet*. 2020;395:809–815. doi: 10.1016/s0140-6736(20)30360-3
3. Golemerz, T., Akdaş, M., Paslı, S., Farhana, S. and Jankowska, K. (2020). KNOWLEDGE, ATTITUDES AND PRACTICES (KAP) ASSESSMENT ON COVID-19. Turkish Red Crescent Society (TRCS), COMMUNITY BASED MIGRATION PROGRAMME, September, 2020.
4. Huang, C., Wang, Y., Li, X., Ren, L., Zhao, J., Hu, Y., Zhang, L., Fan, G., Xu, J. and Gu, X. (2020). Clinical features of patients infected with 2019 novel coronavirus in Wuhan, China. *Lancet*. 2020;395:497–506. doi: 10.1016/s0140-6736(20)30183-5.
5. Shukla, S. and Deotale, P. (2020). Knowledge, attitude and practices towards COVID19 pandemic in the community: a cross-sectional web-based survey in India. *International Journal of Research in Medical Sciences*, October 2020, Vol 8, Issue 10, Page- 3656.
6. Khanal, N. and Singh, A.K. (2020). Knowledge, Attitude and Practice Regarding COVID-19 and Its Impact on Dentistry. A Cross-sectional Survey among Nepalese Dentists. *Kathmandu Univ Med J*. 2020;COVID-19 Special Issue 70(2):3-9.
7. Chen, Q., Liang, M., Li, Y., Guo, J., Fei, D. and Wang, L. (2020). Mental health care for medical staff in China during the COVID-19 outbreak. *The Lancet Psychiatry* 2020 Apr;7(4):e15-e16. [doi: 10.1016/s2215-0366(20)30078-x].
8. Iradukunda, P. G., Pierre, G., Muhozi, V., Denhere, K. and Dzinamarira, T. (2020). Knowledge, Attitude, and Practice towards COVID-19 among People Living with HIV/AIDS in Kigali, Rwanda. *Journal of Community Health*, <https://doi.org/10.1007/s10900-020-00938-1>
9. McEachan, R., Taylor, N., Harrison, R., Lawton, R., Gardner, P., & Conner, M. (2020). Meta-analysis of the reasoned action approach (RAA) to understanding health behaviors. *Annals of Behavioral Medicine*, 50(4), 592–612.
10. Gupta, P., Gupta, A., Dixit, S. and Kumar, H. (2020). Knowledge, attitude, and practices regarding COVID-19: A cross-sectional study among rural population in a northern Indian District. *J Family Med Prim Care* 2020; 9:4769-73.
11. Al-Hanawi, M.K., Angawi, K., Alshareef, N., Qattan, A.M.N., Helmy, H.Z., Abudawood, Y., Alqurashi, M., Kattan, W.M., Kadasah, N.A., Chirwa, G.C. and Alsharqi, O. (2020). Knowledge, Attitude and Practice Toward COVID-19 Among the Public in the Kingdom of Saudi Arabia: A Cross-Sectional Study. *Front. Public Health* 8:217. doi: 10.3389/fpubh.2020.00217
12. Nallani, V.R.R., Nadendla, R.R. and Kavuri, N.S.S. (2020). Knowledge, attitude and practice among health care professionals regarding COVID-19 and barriers faced by health care professionals in South India. *Int J Community Med Public Health* 2020;7:3450-8

13. Zhang, M., Zhou, M., Tang, F., Wang, Y., Nie. H., Zhang, L. and You, G.(2020). Knowledge, attitude, and practice regarding COVID-19 among healthcare workers in Henan, China. *Journal of Hospital Infection* 105 (2020) 183e187. [https:// doi.org/ 10.1016/ j.jhin. 2020. 04.012](https://doi.org/10.1016/j.jhin.2020.04.012).
14. Paul, A., Sikdar, D., Hossain, M.M., Amin, M.R., Deeba, F. and Mahanta, J. (2020). Knowledge, attitudes, and practices toward the novel coronavirus among Bangladeshis: Implications for mitigation measures. *PLoS ONE* 15(9): e0238492. [https:// doi.org/ 10.1371/ journal. pone.0238492](https://doi.org/10.1371/journal.pone.0238492)
15. Saqlain, M., Munir, M.M., Rehman, S.U., Gulzar, A., Naz,S., Ahmed,Z., Tahir, A.H. and Mashhood, M. (2020). Knowledge, attitude, practice and perceived barriers among healthcare workers regarding COVID-19: a crosssectional survey from Pakistan. *Journal of Hospital Infection* 105 (2020) 419e423. [https:// doi.org/ 10.1016/ j.jhin.2020.05.007](https://doi.org/10.1016/j.jhin.2020.05.007).
16. Xu, H., Mendez, M.J., M., Guo, L., Chen, Q., Zheng, L., Chen, P., Cao, X., Liu, S., Sun, X., Zhang, S. and Qiao, Y. (2020). Knowledge, Awareness, and Attitudes Relating to the COVID-19 Pandemic Among Different Populations in Central China: Cross-Sectional Survey *J Med Internet Res* 2020;22 (10):e22628 URL: <https://www.jmir.org/2020/10/e22628> doi: 10.2196/22628
17. Giao, H., Han, N.T.N., Khanh, T.V., Ngan, V.K., Tam, V.V. and An. P.L. (2020). Knowledge and attitude toward COVID-19 among healthcare workers at District 2 Hospital, Ho Chi Minh City. *Asian Pac J Trop Med* 2020;13:1e6.

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