Original Article

Seeing COVID-19 through a Health Care Professional's Eye

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Abstract

Introduction: The world is in a state of war. The health care professionals are the front-line soldiers who are fighting this war against COVID-19. The modification in human behavior to a specific stimulus (say the Corona epidemic) is the single most important determinant of the fate of that stimulus. On 26th February 2020, Pakistan reported its first corona-positive cases. Till Mid-March, the number raised to a significantly critical level. As the outbreak was unexpected in Pakistan, the situation created chaos and panic among the public as well as among health care workers. The current study analyzed COVID-19 through a healthcare professional's eye. There has been no previous study according to the PubMed database.

Materials & Methods: In this cross-sectional study, a self-administrated online questionnaire was circulated through emails and social media to the whole country. The questionnaire comprised of assessing knowledge about the cause and symptoms of COVID-19. A total of 146 responses were scrutinized to include in the survey, in the time period of 1 week (March 23-30, 2020). The participants belonged to private and government institutions from all provinces of Pakistan.

Results: The mean values of variables related to awareness regarding COVID-19 breakout were 1.87, 1.99, and 1.65. While the mean values of variables related to awareness regarding COVID-19 symptoms were 1.05, 1.28. The mean values depicted that all health care professionals were well aware of the knowledge, symptoms, and transmissibility of COVID-19.

Conclusion: The study concluded that the healthcare professionals were fully aware of the transmission of COVID-19 and its symptoms.

Keywords: COVID-19, Health care professionals, Transmissibility, Pakistan.

Introduction

COVID-19 is the abbreviation used for Coronavirus disease of 2019, which is a respiratory tract condition. Novel coronavirus was firstly detected in Wuhan, in December 2019. The main clinical symptoms of COVID-19 are weakness, temperature, dry cough, palpitation, etc. According to the stats, 18.5% of the patients reached the severe stage with severe respiratory problems in China and there is a gradual increase in the number of patients across the world.[1,2]

For the current scenario of COVID-19, the health professionals are the population at greatest risk. They are playing as soldiers on the front line of war. Thus getting an inoculum of the virus is very probable for them. The chances of getting infected are far greater than in any other discipline of practical life. Dangers to the healthcare community comprise of medical issues (workplace vulnerability to the virus, mental illnesses, anxiety, depression) and social issues (Burnout, social stigma). In the Health System, Infection prevention and control (IPC) remains the cornerstone of the emergency response to the Epidemic of coronavirus infectious disease (COVID-19) and other infectious etiologies.[3] Health care workers benefit the most in terms of personal protection by Infection prevention and control.[4]

Urgent and imminent measures should be taken, especially by the Low income and Middle-income countries with the risk of getting COVID-19 outbreak, to safeguard the healthcare community. According to the figures of 28th February COVID-19 is breaking the locks in South Korea, Italy, Pakistan, and Iran. These countries need to pace up their awareness campaigns and protective measures to fully equip their health professionals to deal with the epidemic.[5] At the end of the day, preparatory measures like awareness, knowledge, vision to tackle COVID-19 & personal protection, a handsome amount of PPEs, and proper disciplined response would play the key role in controlling the rate of spread. Awareness among healthcare professionals would remain the cornerstone of the response.

Human behaviour is a special weapon. The modifications in human behaviour to a specific stimulus (say a calamity or an epidemic) are the single most important determinant of the fate of that stimulus. When the human race faces a disease outbreak society and individuals "Change", this change shapes the progression of disease either in a positive or a negative direction. Society having a good awareness level will respond vigorously and aggressively to the disease and will take utmost proper and timely precautionary measures in order to limit the havoc of the disease and reduce its transmission. Even in the absence of a universal guideline to tackle the outbreak awareness is what brings people together to fight for the cause. Societies groom behavioural changes through their hands-on experience, social interaction, and information sharing in dealing head-on with the disease. Responsive attitude, awareness, and modification can efficiently reduce the diameter of the outbreak limiting the epidemic not to become a pandemic. Researchers found out that the mere presence of a disease is not the stimulating factor changing the mindset of humans rather it's the aura of the disease (Impact/Awareness of the impact of the disease) that influences the change. To modify an approach to a disease, one doesn't need to be affected by it rather change in behaviours can be made by knowing the presence of the disease in the community. The spread of information regarding a disease's presence itself is a phenomenon creating its own dynamic impact on social and societal changes.[6]

Materials and Methods

On 26th February 2020, Pakistan reported its first corona-positive case. Till Mid-March, the number raised to a significantly critical level. As the outbreak was unexpected in Pakistan, the situation created chaos and panic among the public as well as among health care workers. The current study analysed COVID-19 through a healthcare professional's eye.

Study design: Cross-sectional study

Method: Quantitative method

Data collection: Data was collected through an online survey. The questionnaire comprised of assessing knowledge about the cause, symptoms, and transmissibility of COVID-19 among health care professionals. For improving the quality of web service the Checklist for Reporting Results of Internet E-Surveys (CHERRIES) was respected throughout the data collection

Sampling technique: The E survey was distributed among healthcare professionals including but not limited to physicians, nutritionists, paramedics, public health professionals, healthcare researchers, and surgeons. The distribution was done through emails, personal contacts, and using the social media platforms like Facebook and WhatsApp. We decided to collect the responses from 23rd March 2020 to 30th March 2020. Every response within this period was recorded and assessed for eligibility. A total of 154

responses were gathered. Eight responses were excluded due to inappropriate answers. A total sample size of 146 was finalized for analysis.

Time Period: 1 week (23-30, March 2020)

Statistical Technique: SPSS version 21 was used to analyse the data. The data was presented in the form of frequencies, means, standard deviations, minimum and maximum values.

Results

Table 1: Frequency and percentage of Demographic Characteristics

Characteristics	*F*	*%*
Gender		
Female	89	61.0
Male	57	39.0
Age		
Less than 18	2	1.4
19-25	103	70.5
26-35	30	20.5
36-45	6	4.1
56-65	5	3.4
Geographical Location		
Punjab	119	81.5
Sindh	6	4.1
KPK	1	.7
Baluchistan	2	1.4
GB	1	.7
ISB	17	11.6
Characteristics	*f*	*%*
Gender		
Medicine	90	61.6
Nutritionist	2	1.5
Paramedics	1	.7
Public Health Professional	5	3.4
Researcher	9	6.2
Surgery	39	26.7

Table 1 shows that the majority (61.0%) of the respondents were females as compared to 39.0% of males who participated in the study. The majority (70.5%) were in the age group of 19-25 years followed by 20.5% in the 26-35 age group, 4.1% were in the age group of 36045, 3.4% belonged to the age group 56-65 and only 1.4% were less than 18 years of age. The above table also illustrated that majority (81% of the respondents belonged to Punjab Provinces followed by 11.6% from Islamabad, 4.1% from Sindh, and 1% from KPK, Baluchistan, and Gilgit Baltistan

The table also shows that the majority (61.3%) of the respondents were working in the Medicine department followed by 26.7% in Surgery, 6.2% were researchers, 3.4% were Public Health Workers, while 1% included paramedics and nutritionists. Moreover, the findings also highlighted that healthcare workers perceived the virus as more affecting older persons followed by people with comorbid, neonates' children, and young people.

Table 2: Awareness regarding COVID-19 Breakout (N=146)

Items	Minimum	Maximum	Mean	Std. Deviation
Is COVID-19 the same as SARS and MERS	1.00	3.00	1.8767	.78688
Is COVID-19 more deadly as compared to SARS	1.00	3.00	1.9932	.79217
Is COVID-19 more infectious than SARS	1.00	3.00	1.6528	.87960
Is animal-to-human transmission possible	1.00	3.00	1.6233	.79776
Can I catch COVID-19 from my pet?	1.00	3.00	1.8621	.75112
Is it safe to receive a package from any area where COVID-19 has been reported?	1.00	3.00	1.9521	.55500

The items in the above table were accessed on three options 1: YES, 2: NO, 3: Don't Know. The mean values of all the items depicted that healthcare workers were aware of the spread of COVID-19 which is different from COVID MERS and SARS. They were also aware about its transmission from animal to human and vice-versa is possible and one can get infected from the pets also.

Table 3: Awareness Regarding Symptoms of COVID-19

	Minimum	Maximum	Mean	Std. Deviation
Respiratory symptoms(Fever, Cough, Flu)	1	2	1.05	.214
Pneumonia?	1.00	3.00	1.2828	.54903
Gastrointestinal Symptoms(Diarrhea, constipation, cramps)	1.00	3.00	1.7877	.65610
Is there a vaccine, drug, or treatment for COVID-19?	1.00	3.00	2.0548	.48110

Table 3 also access the items related to symptoms of COVID on three options 1: YES, 2: NO, 3: Don't Know. The Mean value of items 1 and 2 indicated that COVID-19 symptoms are related to the respiratory system of the body, while Gastrointestinal Symptoms like Diarrhea, constipation and cramps is misperceived by some of the respondents. The maximum number of respondents was aware of no vaccine and drugs for COVID-19.

Table 4: Awareness on COVID-19 Risk & Preventions

Items	Minimum	Maximum	Mean	Std. Deviation
Is there a cure for COVID-19	1.00	3.00	1.8759	.52550
Can COVID-19 be prevented?	1.00	3.00	1.0208	.18582
COVID-19 is a fatal disease	1.00	3.00	1.4069	.70215
Are you at a High-Risk location for catching COVID-19?	1.00	3.00	1.6918	.65983
Are antibiotics effective in preventing or treating COVID-19?	1.00	3.00	2.0822	.34254
Are there any medicines or therapies that can prevent or cure COVID-19?	1.00	3.00	1.9726	.62085

The mean value for the items in Table 4 indicated that the majority of the respondents were also aware of the risk and preventive measures of COVID-19 which is only to adopt preventive measures through self-care.

Discussion

This study was conducted in late March, which was the early stage of the COVID-19 outbreak. The analysis of HCWs' knowledge and awareness regarding COVID-19 breakout, symptoms, risks, and preventions could provide a reference for preventing the further spread of the epidemic among HCWs. COVID-19 is neither an air-borne nor water-borne disease; it spreads from infected individuals to others through respiratory droplets while sneezing or coughing, and through contaminated hands. The incubation period has been reported to be 5.2 days (95% CI 4–7)[7], however, the Centers for Disease Control and Prevention (CDC) suggests it can range from 2 to 14 days.[8] The most common symptoms of COVID-19 are fever, fatigue, and dry cough, with one-third of patients experiencing dyspnoea.[9,10] Other symptoms include myalgia, headache, sore throat, and diarrhoea.[10] Moreover, the elderly, patients with chronic diseases (hypertension, diabetes, cardiovascular, cerebrovascular disease, and chronic respiratory diseases), and healthcare professionals are at greater risk of COVID-19.[10,11]

In total, 146 respondents were included in the final analysis. More than one-half of the study respondents were females (61.0%) compared to males (39.0%) and the majority (70.5%) were in the age group of 19-25 years, as shown in Table 1. A larger number (81.9%) of the respondents belonged to Punjab Province and the majority (15.2%) were from district Rawalpindi.

The HCWs who responded to this x-item survey were mainly (57.3%) from the medicine department followed by 27.4% in Surgery, 7.7% were researchers, 5.2% were Public Health Workers, while 1% included paramedics and nutritionists. Our study revealed that the HCWs exhibited a positive perception regarding people who are more vulnerable to getting infected by the COVID-19 virus, which included older age groups (78.8%) and patients with comorbidities (56.2%).

The findings of this survey show that the HCWs have sufficient knowledge and awareness regarding COVID-19 breakout, as mentioned in Table 2. The HCWs were aware of COVID-19 being different from SARS and MERS, and also being less deadly, but more infectious when compared to SARS specifically. Moreover, there was awareness related to the possibility of animal to human transmissibility, catching an infection from pets, and the safety of

receiving packages from areas with a COVID-19 outbreak. The current finding of good knowledge (93.2%, N=386) among HCWs is in agreement with the findings of Giao et al. who reported that 88.4% of participants, had sufficient knowledge regarding COVID-19.[12,13]

The HCWs had adequate knowledge regarding the respiratory symptoms (Mean= 1.05±0.214) but a majority were unaware that COVID-19 patients can also present with gastrointestinal symptoms (Mean=1.79±0.549). Furthermore, when questions were asked regarding vaccines, drugs, or treatment for COVID-19, it was found that a maximum of the respondents (Mean=2.05±0.481) were not aware of such treatment or vaccines (Table 3).

Awareness on COVID-19 risk and prevention was also assessed by the online survey. The findings in Table 4 suggested that the HCWs were completely aware that the COVID-19 infection can be prevented by taking accurate preventative measures (Mean=1.02±0.186). The majority of the HCWs were also aware of the antibiotics being ineffective (Mean=2.08±0.342) in preventing and treating COVID-19.[14]

The findings of this study suggest significant knowledge gaps between the amount of information available about COVID-19 and the depth of knowledge among HCWs, particularly about the extra-respiratory signs and symptoms of COVID-19. Nevertheless, greater encouragement from the health authorities is needed to assimilate COVID-19-related knowledge among all HCWs.[12,13,14,15]

Conclusion

Our study findings suggest that Hepatitis E infectivity among pregnancy with high feto-maternal morbidity and mortality among pregnant women among women presenting in tertiary care hospitals. The burden of HEV infection among these pregnant women can be reduced by preventive measures like the provision of a safe water supply and a better sanitary environment for pregnant women.

References

1. Zhonghua L, Xing B, Zhi Z. Novel coronavirus pneumonia emergency response epidemiology team. The epidemiological characteristics of an outbreak of. 2019:145-51.
2. Chen N, Zhou M, Dong X, Qu J, Gong F, Han Y, Qiu Y, Wang J, Liu Y, Wei Y, Yu T. Epidemiological and clinical characteristics of 99 cases of 2019 novel coronavirus pneumonia in Wuhan, China: a descriptive study. The lancet. 2020 Feb 15;395(10223):507-13.
3. Wang J, Liu F, Tan JB, Harbarth S, Pittet D, Zingg W. Implementation of infection prevention and control in acute care hospitals in Mainland China–a systematic review. Antimicrobial Resistance & Infection Control. 2019 Dec;8(1):1-6.
4. Chang D, Xu H, Rebaza A, Sharma L, Cruz CS. Protecting health-care workers from subclinical coronavirus infection. The Lancet Respiratory Medicine. 2020 Mar 1;8(3):e13.
5. Chowdhry S, Jacobs AK, Kamin K. A crisis in times of crisis: Combating COVID-19 under sanctions in Iran. Kiel Policy Brief; 2020.
6. Funk S, Gilad E, Watkins C, Jansen VA. The spread of awareness and its impact on epidemic outbreaks. Proceedings of the National Academy of Sciences. 2009 Apr 21;106(16):6872-7.
7. Bai Y, Yao L, Wei T, Tian F, Jin DY, Chen L, Wang M. Presumed asymptomatic carrier transmission of COVID-19. Jama. 2020 Apr 14;323(14):1406-7.
8. Hadaway A. COVID-19: Prevent the Spread a Review of www. cdc. gov/coronavirus. Journal of Consumer Health on the Internet. 2020 Oct 1;24(4):407-15.
9. Nicholls JM, Poon LL, Lee KC, Ng WF, Lai ST, Leung CY, Chu CM, Hui PK, Mak KL, Lim W, Yan KW. Lung pathology of fatal severe acute respiratory syndrome. The Lancet. 2003 May 24;361(9371):1773-8.
10. Bai Y, Yao L, Wei T, Tian F, Jin DY, Chen L, Wang M. Presumed asymptomatic carrier transmission of COVID-19. Jama. 2020 Apr 14;323(14):1406-7.
11. Moein ST, Hashemian SM, Mansourafshar B, Khorram-Tousi A, Tabarsi P, Doty RL. Smell dysfunction: a biomarker for COVID-19. InInternational forum of allergy & rhinology 2020 Aug (Vol. 10, No. 8, pp. 944-950).
12. Huynh G, Nguyen TN, Vo KN, Pham LA. Knowledge and attitude toward COVID-19 among healthcare workers at District 2 Hospital, Ho Chi Minh City. Asian Pacific Journal of Tropical Medicine. 2020 Jun 1;13(6):260.
13. Al Sulayyim HJ, Al-Noaemi MC, Rajab SM, Daghriri HA, Al Yami SM, Al-Rashah AS, Alsharyah HM, Al Murdif SH, Al Salom MH. An assessment of healthcare workers knowledge about COVID-19. Open Journal of Epidemiology. 2020 Jun 29;10(03):220.
14. Elhadi M, Msherghi A, Alkeelani M, Zorgani A, Zaid A, Alsuyihili A, Buzreg A, Ahmed H, Elhadi A, Khaled A, Boughididah T. Assessment of healthcare workers' levels of preparedness and awareness regarding COVID-19 infection in low-resource settings. The American journal of tropical medicine and hygiene. 2020 Aug;103(2):828.
15. Abdel Wahed WY, Hefzy EM, Ahmed MI, Hamed NS. Assessment of knowledge, attitudes, and perception of health care workers regarding COVID-19, a cross-sectional study from Egypt. Journal of community health. 2020 Dec;45(6):1242-51.