Knowledge and Perception of Health Care Workers Regarding COVID-19 in Different Parts of Gujarat State

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Abstract:

Introduction: The World Health Organization declared the 2019–20 coronavirus outbreak a Public Health Emergency of International Concern (PHEIC) on 30 January 2020 and a pandemic on 11 March 2020. A poor understanding of the disease among healthcare workers may implicate in delayed treatment and the rapid spread of infection. **Objective:** To know the perception and knowledge of the health care workers in different districts of Gujarat state about the COVID 19. **Method:** A cross sectional web based survey was conducted among the 104 health care workers working in different districts of Gujarat during the month of April 2020. WhatsApp and Telegram based questionnaire was sent to each participant and their response was recorded. Data was entered in Microsoft Excel 2016 and was analysed by applying various statistical test using SPSS version 25. **Results:** Out of 104 participants, 46.15% and 53.85% were male and female respectively. Mean age of participants was 26.40 years. Majority participants were from Saurashtra-Kutch(36.54%) followed by central Gujarat(28.85%) and north Gujarat(23.08%). Out of 63 who had received training of basic course in COVID-19, only 27 were able to give correct answer about criteria for discharge of patient. **Conclusion:** HCWs in our study are having good knowledge regarding COVID 19. They are aware of the measures needed to be taken to reduce the spread of the disease. HCWs were using authentic sources for information; this ultimately affects knowledge and is reflected in attitude and practice.

Key words: Perception, Knowledge, Health care worker, COVID 19

Introduction:

Coronavirus (CoV) infections are emerging respiratory viruses that are known to cause illness ranging from the common cold to severe acute respiratory syndrome (SARS).[1] Multiple epidemic outbreaks occurred in 2002 (SARS), with approximately 800 deaths, and in 2012 (Middle East respiratory syndrome coronavirus, MERS-CoV), with 860 deaths.[2,3] About 8 years after the MERS-CoV epidemic, the current outbreak of coronavirus disease 2019 (COVID-19) in Wuhan City, Hubei Province, China, has emerged as a global outbreak and significant public health issue.[4] On January 30, 2020, the World Health Organization (WHO) declared COVID-19 a public health emergency of international concern.[5] Astonishingly, during the first week of March, a devastating number of new cases were reported globally, and COVID-19 emerged as a pandemic. As of June 15, 2020, more than 3,00,000 confirmed cases in India had been reported.[6] The route of transmission are respiratory droplets, close contact with an infected person through oral, nasal, and mucous membranes of the eye, including through fomites.[7] The first case of

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COVID-19 in India, which originated from China, was reported on 30 January 2020. As of 5 June 2020, the MOH&FW has confirmed a total of 226,770 cases, 109,462 recoveries and 6,348 deaths in the country.[8] India's case fatality rate is relatively lower at 2.80%, against the global 6.13%, as of 3 June 2020.[9] Ongoing pandemic nature of the disease made it necessary for doctors to adopt increased precautions in accordance with the critical situation, and to put effort into implementing appropriate hygienic conditions and follow recommendations.[3] In addition, healthcare workers (HCWs) are at a high risk of getting the infection and the source of transmission in the community. A poor understanding of the disease among healthcare workers may implicate in delayed treatment and the rapid spread of infection. With this background present study is aimed to know the perception of the health care workers in different districts of Gujarat state about the COVID-19.

Method:

A cross sectional survey using google forms was conducted among the 104 doctors working in different districts of Gujarat state during the month of April 2020. A pretested structured 25-item survey instrument was developed using WHO course materials on emerging respiratory viruses, including COVID-19. The survey instrument comprised 19 closed-ended and 6 open-ended questions and took approximately five minutes to complete. The survey covered HCWs' characteristics, awareness, information sources, and knowledge and perceptions related to COVID-19. The developed draft survey instrument was made accessible through a link. The pilot web survey was then conducted among 10 randomly selected doctors to assess clarity, relevance, and acceptability. Feasibility and time required to answer the survey were evaluated on another five participants. These participants were not included in the research. Refinements were made as required to facilitate better comprehension and to organize the questions before the final survey was distributed to the study population through a URL link. Briefly, we used Whats app and telegram a cloud-based instant messaging app. In the groups and individually the survey link was advertised to the target population and was opened in April 2020 for 20 days. The obtained data were coded, validated, and analysed using SPSS version 25 (IBM). Descriptive analysis was applied to calculate frequencies and proportions. The chi-square test was used to investigate the level of association among variables. A p value of less than 0.05 was considered statistically significant. Confidentiality of personal information was maintained throughout the study by making participants' information anonymous and asking participants to provide honest answers. Eligible HCWs' participation in this survey was voluntary and was not compensated. Electronic informed consent was shown on the initial page of the survey.

Results:

Out of 104 participants, 46.15% were male and 53.85% were female. Mean age of participants was 26.40 years. Majority participants were from Saurashtra-Kutch(36.54%) followed by central Gujarat(28.85%) and north Gujarat(23.08%). Among these participants majority (54.81%) were pursuing their Post graduation or completed it, 25% were Medical officers, 14.42% were Intern doctors and 5.77% were from paramedical staff. Out of 63 who had received training of basic course in COVID-19, only 27 were able to give correct answer about criteria for discharge of patient.

Table 1: Knowledge and Attitude about COVID-19

Knowledge about COVID 19	Correct answer (n=104)(%)
Mode of transmission	54(51.92)
Sample to be taken	39(37.50)
Test to be done (RT-PCR)	56(53.84)
Discharge criteria	41(39.42)
Attitude about COVID-19	Yes (n=104) (%)
People are tested adequately in India	14 (13.46)
Stressful to work in COVID hospital	60 (57.69)
Getting adequate sleep	70 (67.31)
Affect family life	52 (50.00)

Table 1 shows that 55(52.88%) participants were having knowledge about which sample has to be taken for diagnosis of COVID 19 and 41(39.42%) participants were knowing when to discharge the patient as per guideline. Majority 70(67.31%) were getting adequate sleep during their duty and for 60(57.69%) participants it was stressful to work in COVID hospital. Half (49.43%) of the participants in govt. hospital were provided with sufficient PPE while in private hospital only 13.33% were getting it. Family life was more(52.81%) affected in those who were working in govt hospital.

Table 2: Association between COVID 19 posting duty and taking prophylaxis

Participants doing / posted at COVID 19 duty	Taking any prophylaxis* for COVID 19	
	Yes	No
Yes	20	47
No	12	25

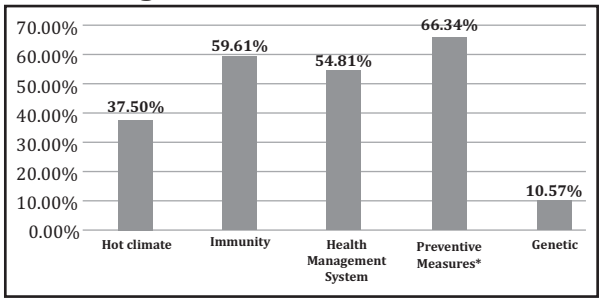
α^0=0.075;p-value=0.78

*Allopathic and/or Ayurvedic and/or Homeopathic

Table 2 shows the association between the participants posted in COVID duty and taking any prophylaxis in which there is no any statistical significance(α^2=0.075;p-value=0.78) between those who are taking and those who are not taking any prophylaxis.

Majority 31.25% of the participants were getting the information for guidelines from websites like WHO/MoHFW, followed by social media (23.26%), television (17.70%), and rest were getting it from news paper (14.23%) and friends(13.54%).

Figure 2: Favourable factors for India to fight against COVID-19



*Hand hygiene, Wearing mask, Social distancing

Figure 2 shows that majority participants believed that preventive measures (66.34%), followed by immunity (59.61%) and health management system (54.81%) were the favourable factors for India to fight against COVID 19.

Discussion:

The findings in our study showed that HCWs had a high level of knowledge and a positive attitude towards the COVID-19 outbreak. Findings of this study suggest out of 104, Majority (31.25%) participants were getting the information for guidelines about COVID-19 from websites like WHO/MOH&FW, which is contrary to a cross sectional study conducted by Huynh Giao et al at District 2 Hospital, Ho Chi Minh City done on 327 participants shows that HCWs are more interested in social media to gather knowledge on COVID-19 than the official website of the Ministry of Health.[9] Obtaining information from authentic sources is pivotal for disseminating unbiased and reliable data about the emerging COVID-19 infection and is essential for HCWs' preparedness and response. Study conducted by us shows that majority(66.34%) of HCWs agreed that maintaining preventive measures is recommended which is similar to finding of a study conducted by Bhagavathula et al which shows that the majority of the HCWs (n=338, 85.6%) agreed that maintaining hand hygiene, covering the nose and mouth while coughing, and avoiding sick patients could help to prevent COVID-19 transmission.[3] Present study shows only 32(30.76%) participants were taking any prophylaxis against COVID 19 which is in contrast to the study conducted by Debajyoti Bhattacharyya et al. at New Delhi, India which shows that around 76% of the HCWs had accepted the prophylaxis and taken HCQ at least once as a part of prophylaxis.[10] Present study shows that 52% participants were having correct knowledge about mode of transmission about COVID 19 while another study conducted on non medical students shows more than 84% students had wrong concept that COVID-19 could transmit through touching persons with flu and 52.5% and 10.8% students believed that COVID-19 could spread

through water and food, and mosquito bite respectively.[11] When question asked about which test has to be done for COVID-19, 46.16% participants were unable give correct answer, While one study done by Saqlain M et al showed 23.91% respondents were unable to identify correct responses regarding the same.[12] One-third(32.69%) of the participants were sleepless during the COVID-19 outbreak and more than half had stress (57.69%) in this study, while in a study done by Abdulah DM et al showed More than two-thirds of the physicians were sleepless during the COVID-19 outbreak (68.3%) and majority had stress (93.7%).[13]

Conclusion:

As the global threat of COVID-19 continues to emerge, greater efforts through educational campaigns that target HCWs are urgently needed. We identified that HCWs in our study are having good knowledge and perception regarding COVID 19.They are aware of the measures needed to be taken to reduce the spread of the disease. The findings also demonstrated that HCWs were using authentic sources for information; this ultimately affects knowledge and is reflected in attitude and practice.

Recommendations:

The study recommends that health ministry should provide a comprehensive training programme, targeting all HCWs, to promote all precautionary and preventive measures of COVID-19, to achieve equilibrium in terms of clinical knowledge about COVID-19.

Declaration:

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Conflict of Interest: Nil

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