**ORIGINAL ARTICLE**

# KNOWLEDGE, ATITUDE AND PRACTICE AMONG DOCTORS REGARDING COVID-19 TRANSMISSION IN DHQ HOSPITAL, NAROWAL

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## ABSTRACT

**Background**: The COVID-19 pandemic has underscored vulnerabilities to widespread health crises, particularly affecting healthcare workers (HCWs) due to inadequate understanding, inappropriate attitudes, and suboptimal practices. Understanding the knowledge, attitudes, and practices of doctors combating COVID-19 is crucial in the context of limited resources in Pakistan.

**Objective:** This study aimed to evaluate clinicians' knowledge, attitudes, and practices concerning COVID-19 infection

**Methods:** This six-month descriptive cross-sectional study was conducted at District Headquarters Hospital (DHQ) Narowal from September 2022 to February 2023. The questionnaire comprised demographic information, COVID-19 knowledge, and behaviors, including preventive measures taken.

**Results:** Among the 382 participants, 91.9% were aged 25 to 35. Gender distribution was 54.75% males and 45.3% females. Rural residents constituted 68.8%, and 31.3% lived in urban areas. Employment duration varied, with 50% reporting 0-5 years. The majority (89.3%) earned less than 150,000 Pakistani rupees. Television and the internet were primary information sources for COVID-19, with female doctors exhibiting a higher mean knowledge score (11.91.718 vs. 11.97.184). Protective measures were widely adopted, and female doctors displayed a higher mean attitude score.

**Conclusion**: Participants exhibited a high level of awareness, optimistic attitudes, and appropriate practices during the COVID-19 pandemic. Education plays a pivotal role in fostering belief in scientific facts and ensuring compliance with preventive measures. These findings can serve as a baseline for national campaigns aimed at amplifying public awareness and inspiring proactive measures for the successful containment of COVID-19.

**Key Words:** COVID-19, Pandemic, Awareness, Attitude, Practices, Healthcare providers, Narowal

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## INTRODUCTION

On December 31, 2019, the World Health Organization (WHO) received a report of a group of people suffering from atypical pneumonia in Wuhan, China, which was later proclaimed a global pandemic on March 11, 2020, i.e. Coronavirus (COVID-19).[1,2] Coronavirus is also referred to as SARS-CoV-2 (severe acute respiratory syndrome coronavirus 2). It causes coronavirus disease (COVID-19), a severe respiratory illness.[3] SARS-CoV-2 is a highly contagious virus that has caused tremendous economic damage in many countries throughout the world. It spreads by droplet infection while coughing and sneezing and also by touching virus-infected surfaces. Fever, dry coughing, shortness of breath, difficulty breathing, and weakness were among the symptoms most frequently recorded, leading to major consequences such as respiratory failure, septic shock, and organ failure.[3]

Pakistan is one of the countries that was severely affected by the COVID-19 pandemic.[1] Pakistan reported the very first verified COVID-19 infection on February 26, 2020[4] in Karachi, and it continues to grow throughout Pakistan, with 469,482 confirmed cases and 9,816 deaths as of December 27, 2020. It was unfathomable for Pakistan to go into complete lockdown amid an ongoing socioeconomic crisis, an inadequate health budget, and IMF debt. During the pandemic, health resources were scarce. Front-line healthcare personnel were putting their lives in danger when detecting, diagnosing, and managing patients with the disease due to a lack of personal protective equipment, a lack of adequate treatment guidelines, additional duties with an increased load of work.

HCWs are at significant risk of infection because they work with infected patients in settings with minimal resources, and the majority of them are uninformed of precautionary measures. WHO promulgated a variety of COVID-19 guidelines for healthcare workers (HCWs) to increase their awareness and adopt safety practices for COVID-19 management, limiting the likelihood of viral transmission. Understanding clinical symptoms, transmission processes, and preventative measures among HCWs can play a crucial role in not only better disease management but also in lowering the risk of healthcare workers contracting the disease.[5] Unfortunately, as a developing country, we lack not only efficient patient care but also resources and devices for their protection.[6]

This survey was carried out during the COVID-19 era to learn more about the knowledge, attitudes, and practices of doctors working at the district level in remote areas like Narowal. The intensified awareness and alertness within the community is the outcome of doctors possessing advanced knowledge, maintaining a positive outlook and adopting healthy practices.

## METHODS

Upon obtaining approval from the ethical review committee of Medical DHQ Hospital, Narowal, this descriptive cross-sectional survey unfolded over a six-month period. The study adhered to the STROBE cross-sectional study guidelines[7], with the exclusion of paramedical staff members from participation. The sample size, determined through the WHO sample size calculator, was set at 382, considering a 50% proportion, a 5% margin of error, and a 95% confidence range. Data collection employed a pre-existing questionnaire, voluntarily completed online via Google Form. This questionnaire, previously utilized in various studies, validated its reliability. Comprising three sections, the first (Section I) gathered demographic data, the second (Section II) focused on knowledge and awareness of COVID-19, and the third (Section III) delved into participants' practices to prevent infection. Presented in English, the questionnaire guaranteed anonymity and featured solely closed-ended questions. The average completion time for the questionnaire ranged from 5 to 10 minutes. Participants, having agreed to partake, were directed to the survey link to complete the questionnaire. Subsequently, SPSS-23 facilitated the analysis of the quantitative outcome data. Descriptive statistics, articulating responses in frequencies and percentages, were employed to summarize the questionnaire's outcomes.

## RESULTS

The response rate was good and over the course of six months, 382 people submitted their responses in total. Following this, the link was disabled for responses, and the data was analyzed.

Table 1: Respondents Demographics (n=382)

| Sociodemographic Characteristic | Number (n) | % |
|---|---|---|
| **GENDER** | | |
| Male | 209 | 54.7 |
| Female | 173 | 45.3 |
| **AGE RANGE** | | |
| 25 To 35 Years | 351 | 91.9 |
| 35 To 45 Years | 21 | 5.5 |
| > 45 Years | 10 | 2.6 |
| **RESIDENCE** | | |
| Rural | 263 | 68.8 |
| Urban | 119 | 31.2 |
| **DURATION OF EMPLOYMENT** | | |
| 0-5 Years | 191 | 50.0 |
| 6-10 Years | 99 | 25.9 |
| 11-15 Years | 51 | 13.4 |
| 16-20 Years | 23 | 6.0 |
| >20 Years | 18 | 4.7 |
| **INCOME** | | |
| <150,000 | 341 | 89.3 |
| >150,000 | 41 | 10.7 |
| Total | 382 | 1000 |

Before the virus emerged in Pakistan, only 26.17% of participants had familiarized themselves with the WHO, ADA, and CDC guidelines on COVID-19 prevention. However, all participants were cognizant of the virus's contagious nature, with 99.4% believing in transmission through touch, saliva, air droplets, and not through contaminated food or water. (TABLE 2).

Table 2 Comprehension of COVID-19

| Question item | Yes (n) % | No (n) % | Don't know n% |
|---|---|---|---|
| Are you familiar with the words COVID-19 or 2019-nCoV, which refer to the novel corona virus? | 382 (100%) | 0 (0%) | 0 (0%) |
| COVID-19 is a viral illness? | 382 (100%) | 0 (0%) | 0 (0%) |
| Did you study any COVID-19 preventive guidelines published by the WHO, ADA, CDC, etc. prior cases started to appear in Pakistan? | 100 (26.17%) | 282 (73.8%) | 0 (0%) |
| What was your major source of information? | | | |
| Television | Male 100 (47.8%) Female 80 (46.2%) | | |
| Internet | Male 80 (38.3%) Female 69(39.9%) | | |
| Both | Male 29 (13.8%) Female 24(13.8%) | | |
| Do doors, tables, and other surfaces hold the virus's ability to survive? | 382 (100%) | 0 (0%) | 0 (0%) |
| Food and water contamination might transmit the COVID-19 virus? | 0 (0%) | 380 (99.4%) | 2 (0%) |
| Does the COVID-19 infection resemble the flu or a cold? | 20 (5.2%) | 362 (0%) | 0 (0%) |
| Shortness of breath, coughing, throat tenderness, and fever are possible signs of COVID-19 infection. | 382 (100%) | 0 (0%) | 0 (0%) |
| It takes 1-2 weeks for COVID-19 infection to develop. | 382 (100%) | 0 (0%) | 0 (0%) |
| Is asymptomatic person a source of infection? | 382 (100%) | 0 (0%) | 0 (0%) |
| Is quarantining of suspected patients effective in reducing the rate of transmission? | 382 (100%) | 0 (0%) | 0 (0%) |
| Older adults and those with weakened immune systems are more vulnerable to contracting the virus. | 382 (100%) | 0 (0%) | 0 (0%) |
| Patients who have concurrent illnesses are more likely to get the infection. | 382 (100%) | 0 (0%) | 0 (0%) |
| To prevent the spread of the COVID-19 infection to other individuals, patients should be immediately quarantined. | 382 (100%) | 0 (0) | 0 (0%) |
| Imposing unnecessary Travel ban will help curtailing the virus? | 162 (42.4%) | 100 (26.1%) | 60 (15.7%) |
| Is there a lab test that is capable of confirming COVID-19 infection? | 382 (100%) | 0 (0%) | 0 (0%) |
| If the COVID-19 sickness spread, would medical personnel be well equipped with resources to treat the affected population? | 304 (79.5%) | 38 (50%) | 40 |
| Is the COVID-19 vaccination capable of reducing death rate? | 302 (79%) | 30 (7.8%) | 50 (13%) |

Additionally, participants were well-informed about preventive measures, including the use of personal protective equipment, practicing hand hygiene, and the importance of social distancing, with 99.4% expressing willingness to receive booster shots for added protection.

## DISCUSSION

The strain on treatment centers, the need for extra bed units, and the prolonged duty hours for healthcare workers underscore the challenges posed by the COVID-19 pandemic. Recognizing the risks of infection and psychological stress, healthcare personnel's pivotal role in pandemic control becomes evident, emphasizing the importance of thorough awareness of disease information, clinical symptoms, transmission means, and

preventive measures, especially within hospital premises. In this study, 173 participants (45.3%) were female, while 209 (54.75%) were male, aligning with findings in a Punjab study by Malik et al where females constituted a majority (53%).[12]

Table 3: Attitude & Preventive Practices

| Questions | Response |
|---|---|
| 1. Would you get a booster dose of the corona vaccine if it were offered without any pressure from the health department? | Yes 380 (99.4%) No 11 (2.87%) |
| 2. Do you think Pakistani doctors can handle COVID -19 pandemic? | Yes 365 (95.5%) No 17 (4.45%) |
| 3. If you are suspecting COVID -19 infection, would you go and pray in congregation? | Yes 19 (4.97%) No 363 (95%) |
| 4. Do you believe that COVID-19 is only a transmissible illness that is receiving unnecessary attention? | Yes 22(5.75%) No 360 (94.2%) |
| 5. Doctors are getting infected with COVID-19 due to their negligence? | Yes 42 (10.9%) No 340 (89%) |
| 6. What preventive measures do you employ? | 380 (99.4%) |
| a. Wearing face masks | 377 (97.1%) |
| b. Frequent hand washing before and after examining COVID-19 infected patient | 380 (99.4%) |
| c. Using hand sanitizers | 382 (100%) |
| d. Using PPE while handling/Treating COVID-19 infected patient | 379 (99.2%) |
| e. Disinfecting personal items | 370 (96.8%) |
| f. Avoiding going for work while having dry cough and fever | 380 (99.4%) |
| g. Avoiding crowded places | 381 (99.7%) |
| h. Avoiding close contact with symptomatic people | |

As the virus spreads globally, it is crucial for healthcare providers to stay informed through reliable sources like the Centers for Disease Control and Prevention. Television (47%) and the internet (39%) were the primary information sources in this study, consistent with other research findings.[11] Salman M et al survey with 429 participants showed social media as the primary knowledge source (65%).[13]

Fever, cough, and difficulty breathing were identified as the primary symptoms by over 89% of infected individuals, aligning with a separate survey where 85.4% of healthcare workers were aware of COVID-19 clinical symptoms.[14] Knowledge of transmission methods was high, with 99.7% of doctors aware, emphasizing "close contact with sick patients" as the most common means. The study indicated that all clinicians possessed sufficient knowledge of COVID-19. Female doctors demonstrated a deeper understanding, but the statistical significance (P value = 0.051) was marginal, with male doctors scoring 11.91 and female doctors 11.97.

Medical professionals' knowledge, attitudes, and behaviors can impact outbreak response. The study revealed a statistically significant difference in mean attitude scores (P value = 0.003), with female doctors scoring higher (11.74) than male doctors (11.53). Over 90% of participants exhibited good knowledge, optimistic attitudes, and safe practices, in line with previous research.[15]

Adequate knowledge enhances positive attitudes, and this study revealed that the majority of doctors are aware of and implement appropriate COVID-19 measures to prevent infection spread. Medical professionals must approach each patient with care and empathy, using their knowledge and adhering to standards of care for effective infection control. Male doctors scored a mean practice score of 8.99, and female doctors scored 9.03.

## CONCLUSION

In the wake of the COVID-19 pandemic, this study sheds light on the knowledge, attitudes, and practices of doctors in remote areas, particularly Narowal, Pakistan. Despite the challenges posed by limited resources and a strained healthcare system, healthcare professionals, especially those at the district level, demonstrated commendable awareness and adherence to preventive measures. Despite resource constraints, the study underscores the importance of continuous education and training for healthcare workers. Efforts to expand this research to include a broader spectrum of healthcare practitioners beyond doctors may offer a more comprehensive understanding of the varied challenges and practices across different healthcare professions. This study not only contributes valuable insights into the preparedness of healthcare professionals in remote areas during a pandemic but also emphasizes the need for ongoing support, education, and resources to strengthen the healthcare system's resilience in facing unprecedented challenges like the COVID-19 pandemic.

## LIMITATIONS OF STUDY

This study is limited as it only includes data from doctors, but data should encompass all healthcare workers (HCWs), including nurses, pharmacists, and paramedical staff. These professionals have diverse education and training compared to doctors, potentially influencing their understanding of the virus and transmission prevention. Including a broader range of healthcare practitioners would offer a more comprehensive evaluation of knowledge, attitudes, and practices related to COVID-19, considering the distinct skills and expertise each profession brings.

## RECOMMENDATIONS

Health authorities could enhance their capabilities through tailored training initiatives aimed at raising public awareness about COVID infection, associated risks, and preventive measures. This would enable them to deliver optimal care to patients and safeguard both healthcare professionals and the public from the virus.

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