

Original Article

STUDY ABOUT KNOWLEDGE, PERCEPTION AND ATTITUDE AMONG FINAL YEAR MBBS STUDENTS AND HOUSE OFFICERS REGARDING COVID-19

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ABSTRACT:

The coronavirus pandemic is the defining global health crisis of our time and the biggest challenge we are facing. The goal of the study is to evaluate the existing knowledge, perception, and attitude of medical students and house officers regarding the SARS-COV 2 pandemic.

Material and Methods: A web-based cross-sectional study was conducted from 15th to 30th June, 2020, targeting final year MBBS students and house officers working in Akhtar Saeed Trust Hospital and Farooq Hospital. A questionnaire was designed and filled by 220 participants showing their demographic information, knowledge, perception and attitude towards corona virus.

Results: Our participants were between 22-26 years of age, predominantly females 168 (76.4%). Regarding the knowledge about the cause and mode of transmission of corona virus, 99% knew that it's a viral infection. Majority 157(71%) of the participants used social media as their main source of information. Ninety nine percent knew about common symptoms, risk factors and preventive measures. Around eighty two percent of participants thought this infection is associated with some social disgrace and 124(56.3%) considered that media had exaggerated the outbreak and that the virus is purposefully manipulated virus. Nearly sixty-five percent of our participants thought that the government has not succeeded in controlling the epidemic.

Conclusion: In the present study, it was observed that participants had ample knowledge regarding COVID-19 and showed good perception of disease symptoms, risk factors, incubation period and its prevented measures but; their attitude towards the disease was not too positive and needs to be changed.

Key Words: Knowledge, Perception, Attitude, COVID-19

INTRODUCTION:

The World Health Organization (WHO) has detected a pandemic over a new corona virus, which causes a deadly disease called COVID-19 that has spread to almost every country. The disease has killed more than 610,000 people and infected over 14 million. On 31st Dec. last year, China alerted the World Health Organization to several cases of this viral disease in Wuhan. The virus was unknown at that time, but then corona virus was officially named as severe acute respiratory syndrome corona virus 2 (SARS COV-2) by WHO on 12 Jan. 2020.¹

This virus is highly contagious and has spread rapidly in the human population with significantly greater case fatalities than previous outbreaks.

Pakistan became part of this deadly disease (COVID-19), when a student in Karachi arrived from Iran. His test came out to be positive on 26th Feb. 2020. After this, by 18th March, positive cases had been recorded in all four provinces of Pakistan including the federal territory of Islamabad. In the mid of July 2020, there have been about 261, 917 confirmed cases with 198, 509 recoveries and 5522 mortalities in the country and many health care workers including doctors, nurses, paramedic staff and young students also got infected. WHO ranked Pakistan among the top ten countries in the world reporting the highest number of new cases of COVID-19.²

The new corona virus is an enveloped RNA virus and four out of six species of corona

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viruses are quite common and cause respiratory, hepatic and neurological disease.³ Knowledge about the mode of disease transmission is important for developing effective control measures. COVID-19 is a communicable disease and spreads mainly through close personal contact and through respiratory droplets by coughing and sneezing of the infected person and maybe by touching contaminated objects. Some asymptomatic people may be able to spread the virus.⁴ The incubation period of disease is about 2 to 14 days. The disease may infect the patient in a milder form or can be quite severe. The most common symptoms are fever, dry cough and tiredness, while less common symptoms include headache, sore throat, rhinorrhea, diarrhea, body aches and loss of smell and taste. More severe symptoms may include shortness of breath and chest pain.^{5,6}

Health care workers are the frontline defense against COVID-19 pandemic so it is important for medical students and house officers to be aware of such epidemics. They must have adequate knowledge, and better attitude towards such diseases as their inadequate knowledge and incorrect attitudes can lead to poor infection control practice and spread of disease and in the future may influence clinical practices. Our study was aimed to identify the existing status of knowledge, perception and attitude of medical students and house officers regarding COVID-19 pandemic.

MATERIAL AND METHODS:

An online cross-sectional survey was carried out to collect data from respondents regarding their knowledge, perception and attitude towards COVID-19 from 15th to 30th June, 2020. A total of 220 participants, including students (Final year MBBS) and house officers working in Akhtar Saeed Trust Hospital and Farooq Hospital, Westwood branch, were included in the study. An electronic questionnaire was developed. Online Google survey

(<https://docs.google.com>) was used through the medium of social networking (WhatsApp and facebook) groups of students to collect data. A hard copy was filled by the house officers. A written informed consent was taken from respondents explaining the purpose of study. The confidentiality of participants was also maintained. The study was reviewed and approved by the Research Ethical Committee of Akhtar Saeed Medical and Dental College.

The questionnaire was divided into different sections. The first section had information about age, sex and discipline (MBBS or House officers). The knowledge section had three parts including cause, mode of transmission of disease and commonly used source of information. The participant's perception about symptoms, risk factors, preventive measures and treatment was assessed by different questions, each answering in yes or no. The attitude section had 11 items and each item was also answered yes or no.

The data was analyzed by SPSS 20. The participant's SAR-COV-2 related knowledge, perception and attitude was analyzed using frequencies and percentages which were presented through tables.

RESULTS:

Two hundred and twenty participants from final year MBBS of Akhtar Saeed Medical College and house officers working in Akhtar Saeed Trust Hospital and Farooq Hospital, Westwood branch completed the survey. Table 1 shows that nearly 2/3rd (76.4%) were females. About 103(46.8%) were aged 22-23 years and 117(53.2%) were in age group of 24-26 years. Most of the participants 156 (70.9%) were final year MBBS students and rest 64(29.1%) were house officers.

Table-1: Demographic Information of the participants

| Characteristics | Participants (n=220) (%) |
|-----------------------|--------------------------|
| Gender | |
| Male | 52 (23.6%) |
| Female | 168 (76.4%) |
| Age | |
| Group A (22-23 years) | 103 (46.8%) |
| Group B (24-26 years) | 117 (53.2%) |
| Discipline | |
| MBBS | 156 (70.9%) |
| House officers | 64 (29.1%) |

Table 2 describes the knowledge of participants. Almost all participants knew about the causative agent of the disease and its mode of transmission. The most commonly used source of information was social media 157(71%), TV and newspaper 25(11%), followed by other internet web pages 20(9%). Other sources include medical journals, session/webinars and colleagues 18 (8%) collectively.

Table-2: Knowledge of participants about corona virus

| Question | n=220 (%) |
|--|-------------|
| 1. Cause of disease | |
| Virus | 219 (99.5%) |
| 2. Mode of transmission | |
| By respiratory aerosol of infected patient | 219 (99.5%) |
| By handling infected objects | 205 (93%) |
| Eating infected food | 138 (62.7%) |
| Close contact with infected patient | 211 (5.9%) |
| 3. Source of information | |
| Social media | 157 (71%) |
| Medical journal | 8 (3%) |
| Colleagues | 5 (2.5%) |
| Other internet web page | 20 (9%) |
| Sessions/ webinars on update of COVID management | 5 (2.5%) |
| TV and Newspaper | 25 (11%) |

Almost 219(99%) participants knew about the symptoms, risk factors and preventive

measures. Only 185(85%) knew the incubation period of the disease. (Table 3)

Table-3: Perception about symptoms, incubation period, risk factors and preventive measures

| Question (Correct Answer) | (Correct Answer No.) (%) |
|--|--------------------------|
| 1. Fever, cough, dyspnoea, generalized body aches are symptoms of corona virus. (Yes) | 219 (99%) |
| 2. Incubation period is 2-14 days. (Yes) | 185 (85%) |
| 3. Predisposing factor (s) of COVID-19 | |
| • Old age (Yes) | 211 (95.9%) |
| • Individuals with malignancy, chronic respiratory disease, diabetes (Yes) | 215 (97.5%) |
| • Immunocompromised (Yes) | 217 (98.6%) |
| • Travelling to infected areas of world (Yes) | 208 (94.5%) |
| • Pregnant women (Yes) | 162 |
| 4. For which of the following situations is medical advice indicated | |
| When someone acquires any of the symptoms (mentioned above) (Yes) | 212 (96.3%) |
| Have been in close contact with a person known to have COVID-19 (Yes) | 183 (83%) |
| Recent travel from an area where disease is already prevalent (Yes) | 182 |
| 5. Which of the following is (are) preventive measure (s) of corona virus | |
| Clean your hands with soap and water or alcohol-based hand rub (Yes) | 220 (100%) |
| Don't touch your eyes, nose or mouth (Yes) | 219 (99.5%) |
| Avoid contact with infected people (Yes) | 219 (99.5%) |
| Wear mask and gloves (Yes) | 200 (100%) |
| Avoid going to public places (Yes) | 219 (99.5%) |
| Maintaining social distance (Yes) | 219 (99.5%) |
| Pay attention to other health habits (Yes) | 218 (99%) |

Table 4 represents the attitude of participants towards corona virus. Nearly, ninety-four percent of participants thought that the disease is hazardous. Similar percentage thought that if they take precautions,

COVID-19 can be prevented, and 91.8% were practicing these safety precautions. About one hundred and eighty-one respondents (82%) thought that the virus was associated with disgrace in society and 56% thought that the media has overblown the pandemic and that the virus was a purposefully manipulated virus. One hundred and eighty-four respondents (83.6%) were willing for vaccination in the future, when available. About seventy-seven percent were concerned about the possibility that they or their family members, 175(79%) can get an infection. One hundred and five participants thought that available information in Pakistan is insufficient and 35% thought that the government has not succeeded in controlling the epidemic.

Table-4: Attitude towards corona virus

| Question (Correct Answer) | Response No. (%) |
|---|------------------|
| 1. Do think that the disease is dangerous? (Yes) | 208 (94%) |
| 2. Do you think that your family members are at risk? (Yes) | 175 (79%) |
| 3. If you take precautions can COVID-19 infection be prevented? (Yes) | 207 (94%) |
| 4. If there is a vaccine, would you take it? (Yes) | 184 (83.6%) |
| 5. Is the available information about COVID-19 in Pakistan sufficient? (Yes) | 105 (47.7%) |
| 6. Has the government succeeded in controlling the epidemic? (Yes) | 73 (35%) |
| 7. Do you think yourself at risk? (Yes) | 171 (77.7%) |
| 8. Do you take safety precautions and prevention? (Yes) | 202 (91.8%) |
| 9. Do you think this virus was purposefully manipulated virus? (Yes) | 124 (56.3%) |
| 10. Do you think media has overblown the pandemic? (Yes) | 124 (56.3%) |
| 11. Do you think the virus is associated with some disgrace in society? (Yes) | 181 (82.3%) |

DISCUSSION:

COVID 19 has established itself as deadliest fastest moving pandemic since 1918 and has caused about half a million mortalities. In the history, previous outbreaks of corona virus including severe acute respiratory syndrome

(SARS COVID), Ebola, Middle East respiratory syndrome (MERS-COVID) and several other flu pandemics have been recorded.⁷ Now a new virus has been identified as SAR-COV 2, which is different from previous viruses in genetic makeup, clinical presentation, number of mortalities and rapid rate of spread around the globe.⁸

This study was conducted to evaluate the knowledge, perception and attitude of MBBS final year students and house officers towards COVID-19 in our institution. Our respondents were between 22-26 years of age, predominantly females (76.4%).

Regarding the knowledge about the cause and mode of transmission of corona virus 99% knew that virus is the cause of this COVID infection. A similar response rate was seen in another local study conducted among students of Combined Military Hospital showing 97.4% response.⁹ Another cross sectional survey from Pakistan conducted among health care workers showed 93.2% response.¹⁰ Similarly, an Egyptian study had reported that 80.4% respondents had sufficient knowledge about the disease.¹¹ On the other hand, in a study from the United Arab Emirates, poor knowledge about disease transmission and symptoms was found in a significant proportion of health care workers.¹² Another study done in Iranian nurses showed 56.5% knowledge about the disease, mode of transmission and its symptoms.¹³

Social media was the most commonly used source of information in the majority of respondents (71%). About 9% used an internet web page and 11% used newspapers and TV. These findings were in line with another study done in health care workers in Pakistan¹ and other international studies.^{12,14} This was unlike another study done in Egyptian health care workers where health care workers followed the WHO web site as their main source of information.¹² It is important for medical students and house officers to be aware of new infectious disease and they should use reliable sources like the Centers for Disease Control and Prevention

(CDC) and WHO guidelines for disease awareness.¹⁵

In this study, respondents showed a very good perception of symptoms, risk factors, incubation period and preventive measures of the diseases. Ninety nine percent knew about the common symptoms, risk factors, and preventive measures. Eighty five percent had knowledge about the incubation period and when to seek medical advice. The findings were consistent with other local and international studies.^{9, 10, 16}

Our survey showed a satisfactory attitude of respondents towards COVID-19. Ninety four percent of our participants thought that the disease is hazardous and if they take precautions, the disease can be prevented and they were practicing it. In spite of this, 22% of participants still thought that they are not at risk and 21% were not worried that their family members could get an infection, and 16.4% were not willing for vaccination, if available in future. A similar attitude of students was observed in another study.⁹ As our respondents are future health workers, their negative behavior will significantly affect their attitude and risk perception regarding the disease.

Eighty two percent thought that the infection with virus is associated with some disgrace in society and 56.3% believed that the media had overblown the corona virus outbreak. A similar fraction of participants thought that it was a purposefully manipulated virus (a reference to table 4 question no 9,10 and 11). That is contradictory to the study conducted among the Egyptian adult population which showed a more positive attitude towards these indicators (reference to table 4 question 9,10 and 11).¹² This maybe because majority of our population including health care workers still consider it as propaganda or over-exaggeration of the media. So, the need of hour is that our future health workers must be aware of the gravity of disease as their positive attitude can help to avoid the disease as well as its spread in the community and clinical settings.

Sixty five percent of our participants thought that the government has not succeeded in

controlling the epidemic and 52.3% thought that the available information on COVID-19 is not sufficient.

LIMITATIONS:

The limitations of the study were the small sample size. Secondly, we could not correlate our results with the general population as this study was conducted in people belonging to the medical field.

CONCLUSION:

In the present study, participants showed high level of knowledge and perception. However, they need to improve their attitude towards COVID-19 pandemic. It may be because our respondents are using less authentic sources of information, i.e., social media, which has its own pros and cons.

The present study highlights the need to create a better attitude and practice among future health care workers as they play a vital role in combating this outbreak. They should be aware of recent developments, especially those related to public health, and should follow the WHO and CDC guidelines in defending the war against this pandemic.

AUTHOR'S CONTRIBUTION:

AM: Conception of an idea, study design and supervisor
US: Data collection
NS: Data analysis
NS: Drafting article
QUA: Drafting article

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