

Original Article

INFLUENCE OF COVID 19 ON KNOWLEDGE AND PRACTICES OF STUDENTS AND EMPLOYEES REGARDING INFECTIOUS DISEASES AT A PRIVATE MEDICAL COLLEGE

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ABSTRACT

Background: The coronavirus pandemic with its rapid transmission and multiple variants wreaked havoc on the health and socioeconomic infrastructure of countries. The struggle to control the spread was a massive problem not only for people at the individual level but for governments while imposing restrictions as well. This descriptive study, hence, aims to evaluate knowledge, attitude and practices during covid-19 and apply it to other impending infectious diseases.

Material and Methods: In this descriptive cross-sectional study an online questionnaire consisting of 17 items broadly addressing awareness regarding the viral variants, understanding of and adherence to protocols as well as knowledge about vaccines was administered to 335 students and employees of CMH Lahore Medical College from January, 2022 to March, 2022. Participants were selected by nonprobability convenient sampling.

Results: The results showed that out of 335 responses, 275 (82.1%) were student responses and the remaining 60 (17.9%) were responses from the employees. The results showed that although 47.5% of employees did not consider the new variants to cause more severe illness but about 85% were motivated enough to continue practicing personal protection and adhere to the control measures.

Conclusion: With the results gathered by our study, it is believed that although attitudes towards control measures have improved individuals still need to practice adherence to preventive strategies set by governments for not only corona virus variants but for other transmissible diseases as well to reduce the risk of future pandemics.

Key Words: Viral diseases, Pandemic, Knowledge, Covid-19

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INTRODUCTION

COVID-19 began in Wuhan, China in December 2019, developing into a pandemic that adversely affected the socioeconomic and health infrastructure of countries.¹ The government hastened to impose preventive strategies to halt the increase in infectivity rates and the collapse of the health authorities.²

The measures included personal protection like hand washing, use of sanitizers wearing face masks in public, social distancing and mass protection like travel bans, lockdowns and quarantine.³ As the virus continues to have disastrous effects, recent statistics reveal that SARS-Cov-2 infected over 260 million people worldwide with over 5 million mortalities since its discovery.⁴ With the inability to eradicate the virus, countries witnessed its mutations and the presence of other communicable viruses which aggravate the burden on health resources. Human factors and conditions like global warming impact the reproduction, or spread of

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pathogens, as well as the presence and number of their vectors.⁵ This in turn affects the severity of the disease, determines its outbreak and risks of a pandemic with the emergence of new and resistant variants.⁶ Similarly, the discovery of the highly transmissible variant, omicron, created unease, uncertainty and further disruption. With the increased prevalence of the variant, the health authorities imposed restrictions to prevent medical management from crumbling.⁷ However, with each new wave, the sensitivity, fear and adherence to precautionary measures of the general population started to decline.⁸ Adolescents and the elderly particularly have been found to have potentially low compliance with preventive measures directed at combating the spread of diseases by viruses.⁹ Others however developed 'behavioral fatigue' with a loss of motivation to adhere to the protocols and a perception that the new pathogen will not be eradicated, rather, it will become endemic to permanently establish itself in humans alongside the other seasonal coronaviruses and microorganisms that cause relatively mild disease.¹⁰ Certain sociodemographic characteristics, such as female sex, better education and occupation have also been associated with greater adherence to prevention against microorganisms, whereas individuals from other demographic backgrounds may lack the mental and physical capacity for conformity due to their occupation or economic concerns.¹¹ Another particular challenge for health authorities in managing the public's response to COVID protocols is the misleading information from unreliable resources and conspiracy beliefs that manipulate people into believing that COVID is propaganda by a certain group of individuals.¹² COVID 19 since the beginning and with the emergence of new strains is a stronghold of conspiracy theories, because it is difficult to understand especially for those who are oblivious to medical science which includes a large fraction of the population of Pakistan.¹³ The basic aim of the study is to evaluate knowledge, attitude and practices

regarding preventive strategies for infectious disease control like covid 19 on people working in medical institutes so that we can have an idea of how to deal with pandemic fatigue to apply them to the emerging and re-emerging variants.

MATERIAL AND METHODS

This descriptive cross-sectional research with non-probability convenient sampling was conducted amongst the undergraduate students of CMH-Lahore Medical College and Institute of Dentistry from January 2022 to March 2022. Undergraduate students from MBBS, BDS, AHS and AFNS together with employees including faculty and supporting staff participated. Anyone not working at CMH Lahore Medical College was excluded. A sample size of 335 participants was used which was calculated from Rao Soft. The tolerable margin of error was kept at 5%. A 17-item self-administered questionnaire was used. Interviews were conducted for supporting staff and they were well explained in simple local language about the terminologies in a lecture before filling out the questionnaire. The pilot study was carried out to check the feasibility and relevancy of the study. Cronbach alpha was found to be 0.72. Informed consent was taken from all participants before data collection. The questionnaire contained statements used to assess the subject regarding awareness and adherence to WHO preventive strategies for COVID-19. The statements were categorized as follows: Awareness of COVID-19 & WHO-recommended preventions, knowledge of vaccines and view on future strains. All data gathered was entered into and analyzed by SPSS version 20. Data was presented in the form of percentages and frequency.

RESULTS

Table-1: Demographic Profile

Attributes	n(%)
Gender	
Males	132(39.4%)
Females	203(60.6%)
Age	
Group 1(below 25 years)	279(83.3%)
Group 2 (above 25 years)	56(16.7%)
Employee Category	
Faculty	37(11%)
Administrative Staff	11(3.3%)
Supporting Staff	12(3.6%)
Students	275(82.1%)
Field of Work	
MBBS	223(66.6%)
BDS	60(17.9%)
Allied health sciences	24(7.2%)
Nursing	28(8.4%)

Table-2: Responses of the individuals

Factors	n(%)
1)Wearing face masks while in the institution or contact with people	287(85.7%)
Yes	
No	48(14.3%)
2) Frequency of hand washing being more than 4 to 5 times a day	249(74.3%)
Yes	
No	86(25.7%)
3)Keeping a hand sanitizer and using it after touching stuff	190(56.7%)
Yes	
No	145(43.3%)
4)Covering the nose with tissue during coughing and sneezing	293(87.5%)
Yes	
No	42(12.5%)
5)Suspected cases of Covid-19 should be quarantined	276(82.4%)
Yes	
No	59(17.6%)
6) Booster Doses are usually very effective against future strains of Covid-19	241(71.9%)
Yes	
No	94(28.1%)
7)future strains are very dangerous and can cause severe illness	176(52.5%)
Yes	
No	159(47.5%)
8)Practicing social distancing in the workplace	183(54.6%)
Yes	
No	152(45.4%)

DISCUSSION

Already present literature reveals that outbreaks like COVID-19 are imminent due to environmental and climatic changes and hence our study supports this view by observing the behavioral patterns regarding strategies for prevention of a pandemic.¹⁴ The educational status of participants was considered as previous studies suggest that well educated people tend to believe less in rumors and generally use an authentic source of information to follow which corresponds to the results in this study.¹⁵

This study also reported that approximately 52.5% of participants believed that newer strains are more virulent and are associated with higher levels of morbidity and mortality. This is a mixed trend among the masses because various strains of COVID-19 had various levels of virulence associated with it such as delta strain; strains that emerged later during the pandemic caused the more severe illness but omicron was associated with mild symptoms.¹⁶ Shaping this perception is also a fact that previous epidemics in the world were not completely eradicated but the morbidity associated with them had considerably declined as seen in influenza variants.¹⁷

About 80% of people included in our study believed in the efficacy of boosters and have got vaccinations done which is a very positive behavior because according to studies an increased level of efficacy of vaccinations for other diseases including smallpox, measles, and mumps is seen which is shown by previously done researches.¹⁸ The discontinuation of vaccines such as the smallpox vaccine results in waning population immunity resulting in the resurgence of monkeypox. There is a need for strict surveillance and case detection to understand the changing epidemiology of resurging diseases. This is of extreme importance because the psychological, behavioral and epidemiological factors determine the responses of vaccines towards combating the spread of diseases.¹⁹

As far as the behavioral trends of participants were considered some students, many faculty

members and a few of the administrative staff, about 52%, thought that future strains of COVID can cause serious illness possibly because people who had already recovered from COVID caused by other strains got reinfected with the delta strain which caused several deaths in India and UK demonstrated by a recent study.²⁰ The remaining percentage of participants, however, did not think so and are quite optimistic so people need strict adherence to simple protocols and modifications in social and public behavior to reduce the transmission of SARS-CoV-2.²¹ About half the people found practicing social distancing a bit difficult to adhere to although they believed it to break the chain of virus transmission but did not comply with it because of the crisis observed during the lockdown together with the economic and psychological problems arising with it as Pakistani economy reported GDP's negative growth (-0.05) for the first time over the last 60 years in 2020, which caused massive financial crisis.²² The majority of people were not obeying government restrictions which are in congruence with pandemic fatigue theory²³ and the attitude regarding the efficacy of booster was also quite discouraging particularly because of the reinfection occurring after getting the two shots of vaccine as observed in past studies.²⁴ Our findings are of utmost value empirically since with the emergence of new rapidly transmissible diseases like the monkeypox virus globally for which the case fatality rate for the Central African clade was 10.6% versus 3.6% for the West African clade, it has become crucial to adopt these preventive strategies as a lifestyle.²⁵ Primary care records of 17,278,392 adults were pseudonymously linked to 10,926 COVID-19-related deaths so this rise in lethal transmissible infections due to population growth, increased urbanization and environmental factors should be taken into account at the individual level and also by the governments.²⁶ Hence, to avoid instances of a future burden on healthcare services by other infectious diseases as occurred during COVID, governments and health authorities

should take into consideration the trends of adherence to previous preventive strategies put into place as shown by this recent study and past studies.

The limitation of this study was that it was conducted at single center only which gave the views of limited people related only to healthcare so a study that caters to the general population would provide better insight. A larger sample size can also help determine the behavioral patterns of the masses better. Data collection during the pandemic was also a challenge due to limited interaction with the participants which also led to difficulty in interviewing participants of lower educational status.

CONCLUSION

Medical students and employees of CMH Lahore have demonstrated positive behavior in following COVID-19 preventive strategies and with regards to booster doses of vaccination but they did not feel comfortable with the idea of prolongation of disease interval. Hence, this fatigability could be kept in view in implementing preventive strategies for future pandemics.

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AUTHOR'S CONTRIBUTION

HM: Data collection, manuscript writing, editing and final drafting.

HBR: Data collection, data analysis, manuscript writing and final drafting.

IP: Data collection and manuscript writing.

JA: Data collection and manuscript writing.

FA: Data collection and manuscript writing.

ZO: Overall supervision, final drafting, revision and final approval of the manuscript.

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