ORIGINAL ARTICLE

COVID-19 VACCINE HESITANCY AMONG THE POPULATION OF LAHORE

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ABSTRACT

Objective: The objective of this study was to assess hesitancy regarding COVID-19 vaccines.

Material & Methods: A cross sectional study was conducted based on health belief model. Data was collected from 201 anonymous participants such as healthcare workers, medical students, and members of the general population through online questionnaires.

Results: Majority of the participants (35.8%) had positive and marked intention to receive the vaccine, with 30.8% had probable intention and 20.9% had possible intention to receive the vaccine. The health belief model had two items about perceived benefits, specifically believe the vaccination which lessen the infection rate up to 86.6%, therefore the vaccination makes them less worried, 91% participants were able to go back to normal routines soon after they get vaccinated and 89% had highest marked intention to take the vaccine of novel COVID19.

Conclusion: The findings determine the effects of health belief model constructs in comprehending COVID-19 inoculation.

Key Words: COVID-19, Hesitancy, Health belief model, Vaccine.

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INTRODUCTION

The COVID-19 has infected more than 111 million individuals as of February 20, 2021.[1] Individuals with COVID-19 may have fever, sore throat, coughing, tiredness, or gastrointestinal illnesses, which can occur in a smaller group of patients. In more severe cases, signs of respiratory failure, as well as heart and kidney damage, may develop.[2]

COVID-19 development had adverse influence on healthcare system globally,. It has been labeled a "black swan" incidence.[3] especially when contrasted to the post-World War II economic situation. [1] With no known cures or medications, governments throughout the world enforced border closures, to prevent the spread of the illness that triggered a massive economic collapse.[4,5] To contain the pandemic and prevent future outbreaks, an efficient vaccination is desperately needed. COVID-19 has few authorized therapies due to the virus's novelty, and SARS-CoV-2 has just lately seen a strictly limited number of vaccinations licensed.[6,7] The pandemic has overburdened healthcare systems worldwide, which are trying to keep up with the massive number of patients requiring ICUs and other specialized care. As a result of their intimate contact with COVID-19 patients, many physicians, nurses, and other healthcare professionals got infected with the virus, and a substantial number of them died. As a result, the rising prevalence of mental health issues has impacted healthcare professionals.[8]

Despite the fact that vaccination is largely considered as the most efficient method of decreasing or eliminating viral infections and dissemination, [9] many people are skeptical of vaccines' role in immunity, resulting in a decrease in the number of persons immunized.[10] The coronavirus epidemic has been classified as a 'comorbidity', meaning that it not only

interacts with, but also worsens and enhance contagious diseases and socioeconomic setting, increasing health disparities.[11,12] The World Health Organization is concerned about vaccine hesitancy and has designated it as one of the top ten global risks in 2019.[13,14] Vaccine reluctance is complicated, but also context dependent. Uptake hesitancy can vary regionally, at various periods, and for different vaccinations due to a variety of factors such as disease complacency, ease of availability, and trust in the vaccine itself.[12,15] The goal of this study was to assess people's knowledge, attitudes, and hesitancy regarding COVID-19 vaccines. The importance of conducting such research in the context of Lahore cannot be emphasized, as it will serve as a guide for the Punjab government in promoting public participation.

MATERIAL AND METHODS

A cross-sectional, anonymous internet-based survey was performed in 2020. The researchers disseminated and advertised the link of the survey to the public using Facebook, Instagram, and WhatsApp. Our sample size was 201. The medical health care professionals, medical students, and general population of age above 40 and having residence at Lahore were included in the study. Respondents who finished the survey were encouraged to share the survey link with all their contacts. The respondents were advised that their taking part in the study was entirely optional, and that their completion of the survey indicates their consent to take part in the study.

Participants were questioned if they had any chronic conditions and how they felt about their general health. Participants were asked if they knew of any friends, neighbors, or coworkers who had been infected with COVID-19.

One item-question was used to determine the intention to get a COVID-19 vaccine. HBM-derived questions were used to assess participants' attitudes toward COVID-19 immunizations. The questions investigated perceived vulnerability to COVID-19 infection (three items), perceived intensity of COVID-19 illness (five items), perceived advantages of a COVID-19 vaccine (three items), perceived barriers to receiving a COVID-19 immunization (six items), and signals to action (two items). Self-efficacy is not one of the HBM components that is required to explain basic health behavior, thus it was not examined in this study

RESULTS

The study consisted of 201 complete responses. A large number of participants (35.8%) showed a definite intent to get the vaccine, with probable and possible intent of getting vaccine as 30.8% and 20.9% respectively. The perceived benefits construct in HBM assessed individual's perception about the effectiveness of different actions to decrease the threat of disease. The survey showed 86.6% of the participants felt less worried after getting the vaccination while 91% were able to resume their activities of daily livings like going back to schools, colleges, and offices as soon as possible by getting vaccinated. 89% of the participants responded definite intention to take the vaccine. Among the accepted group, 65.2% reported willingness to be vaccinated if provided with sufficient information about it, while 64.7% would delay the vaccination until vaccine is administered by majority of public. (Table 1)

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Table 1: Response of the participants about taking "COVID-19 vaccine

	Frequency	Percent
Definitely not	9	4.5
Probably not	16	8.0
Possibly	42	20.9
Probably yes	62	30.8
Definitely yes	72	35.8

DISCUSSION

The HBM is employed in this study to assess the intention to get the COVID-19 vaccination as well as other relevant factors, among the Lahore population. According to a recent study, vaccination acceptability among doctors (78%) is considerably greater than among nurses (61%) (P0.01), compared to 75 percent in the general population. It may also be shown that healthcare personnel who do not care for COVID-19 positive patients tend to be less trusting of a COVID19 vaccination than the general public, with nurses being more vaccine-hesitant than physicians.[16-18] According to our studies the vaccination acceptance rates towards medical students were highest 42.8%, medical health care professional 28.4% while towards Professional and managerial general worker and Housewife/Retired/Unemployed/Others it was of 14.4%

When compared to our research participants, who replied yes to COVID-19 vaccination intent, only (4.5 percent) reacted emphatically no. In a more precise split, the majority (35.8 percent) said yes, certainly, followed by yes, possibly (30.8 percent). Only 2.4 percent answered, and it's likely that the others did not (8.0 percent). According to one study's results on health attitudes and descriptive findings on COVID-19 susceptibility perceptions, coronavirus despite many individuals being worried about it only a tiny minority believed they were at high risk of infection.[19-23]

While based on ours 46.3% can see themselves getting COVID -19 in up-coming time and among them 80.1percent said they were at high risk of being infected with epidemic.Numerous perceived barriers to COVID-19 immunizations described in this study have also been discovered in previous studies involving the introduction of a new vaccine16, and include worries regarding the vaccine's adverse effects, efficacy, and safety on our research 30.8% of the total population despite being having been diagnosed with chronic disease has little to no effect on vaccination acceptance rates.[24-28]

According to the findings of a research done in Bangladesh, 78.52 percent of participants were concerned about the negative effects or safety of coronavirus vaccination, and 76.17 percent were skeptical about the efficiency of the COVID19 vaccine. Some responders (42%) were also skeptical about the COVID-19 vaccination because it was manufactured in India. Almost 36% of respondents believe vaccination is unnecessary since COVID-19 is no longer present or they are young.[29,30] while from the result of our study 70.1% people hesitate to take vaccination due to concerns regarding the COVID-19 vaccination's effectiveness: 69.2% due to safety.

Other studies' findings indicate that strong perceived advantages and the two most important HBM components impacting a strong willingness to undergo coronavirus vaccination were low perceived barriers to receive the vaccine.[31-33] In the multivariate study, high perceived vulnerability to coronavirus infection was likewise related to higher intention of vaccination. As a result, public health intervention initiatives focusing on improving views of the benefits of vaccination and perceived susceptibility to illness, as well as decreasing the identified barriers, is required. 51.2 percent believe it was purposefully published.[34,35]

The desire to be vaccinated and consumption of the coronavirus vaccine were found to be positively related to awareness of infection, apprehension of the severity of probable extended consequences, vaccine's effectiveness, and advantages of immunization.[36,37] For the time being, beliefs of unfavorable side effects and general barriers to immunization reduced the intention to obtain the vaccine or vaccine consumption.[38] The most important element was respondents' opinion of the vaccination's effectiveness, and those who held this attitude were more than four times more likely to intend to take the vaccine.[39,40] And in our study, there is weak co relation between benefits-severity and severity-susceptibility and benefits-barrier exist.[41]

CONCLUSION

Launch of COVID-19 vaccination is expected to be fraught with peril. Most participants planned to receive the coronavirus vaccination. Perceived to be high advantages or fewer perceived obstacles in obtaining the vaccination, as well as higher perceived vulnerability to infection, are important indicators of a firm intention to take the coronavirus vaccination. Interventions aimed at HBM construction may be beneficial in boosting vaccination uptake. This study has significant implications for assisting government officials in designing and delivering strategies of targeted intervention programs is to increase coronavirus vaccination adoption.

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