Short Communication

COVID-19 immunization phase; Acceptance & understandings about the vaccine.

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Abstract

Background: In the current scenario of global immunization against Coronavirus, people do have an uncertain thought regarding the efficacy and effects of the vaccine. The purpose of this study was to assess the knowledge, awareness, and acceptability of vaccines among the general population of Karachi.

Methodology: For the purpose of the study, literature focusing on the knowledge, awareness, and acceptance regarding COVID-19 immunization was reviewed. Google Scholar, PubMed, Research Gate, and Scopus were searched using the keywords COVID-19, non-pharmaceutical Interventions, immunization-related knowledge, awareness, and acceptance. A pilot study was designed to demonstrate the COVID-19 immunization understanding and acceptability.

Results: Low rate of acceptability for getting vaccinated is observed in the local population. Most perceptions indicated vaccines to be not healthy, harmful, and life-threatening.

Conclusion: The current situation of fast-spreading of the virus and the non-acceptance of vaccines is highly alarming for community and health authorities and demands strong health care measures and campaigns to control the disaster.

Keywords

Corona Vaccine, Pandemic, Non-pharmaceutical Interventions, Karachi.

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Introduction

The coronavirus disease 2019 (COVID-19) has massively impacted the world's daily life. This global health crisis has deeply affected various nations' economies, businesses, health care systems, and society as a whole. Such pandemic is associated with psychological distress and symptoms of mental illness among people[1]. The number of reported cases and death rates exceeded the number of deaths observed in Severe Acute Respiratory Syndrome (SARs) during the initial COVID-19 outbreak[2]. The outbreak occurred initially in Wuhan city of Hubei province of China. Afterward, cases escalated exponentially, encompassing 34 regions of China by January 2020[3]. WHO declared public health emergency of global concern[4]. At the same time, the pandemic has abruptly changed daily life for everyone.

Due to this pandemic, the whole world is facing disastrous effects, therefore recommended the demand of palliation guidelines to accommodate the pandemic[5]. The rationale master plan pursued by most of the world was to reduce the transmission of the COVID 19 pandemic disease, generally by non-pharmacological mediation inclusive of implementing masks policy, frequent use of hands sanitizers, physical distancing and restriction on traveling, educational institute closures, isolation, and lockdowns[6]. Until now, non-pharmacological mediation has helped in reducing the ratio of the disease. However, the ultimate suitable strategy is to decrease the pandemic effects and reduce the morbidity and mortality ratio. Until 2020, no anti-viral agents or vaccines have been developed and used against COVID-19[7]. The FDA (Food and Drug Administration) has considered anti-viral Remdesivir an emergency use for hospitalized patients of COVID-19[8,9]. However, World Health Organization (WHO) has not recommended its use[10]. In such situations, anti-viral vaccines used to either one of the most suitable, cheap, and effective public health mediations ever accomplished that were found to reduce morbidity and mortality ratio and save millions of millions every year[11-13]. Accordingly, after WHO declared COVID-19, a pandemic in March 2020, scientists and pharmaceutical industries started to rush against time to develop COVID-19 vaccines[14].

By December 2020, measurably 85 and 63 vaccines were in a preclinical stage in clinical stages, respectively. Among these, 43 vaccines in phase I clinical-stage, 21 in clinical phase II, 18 in phase III were declared for confined use, whereas two were established by legal approval. Pfizer-BioNTech's and Modernam RNA vaccines were ratified for use in urgency in the hospitals of the United States[15].

Attitude towards the Corona Virus Vaccine

The present study was designed to analyze the response and attitude of the Pakistani population, as Vaccine hesitancy in the different regions was observed prevalent with various opinions and perceptions. According to a study conducted in Italy, the very low intentions were evaluated[16] due to different psychological perspectives, and almost a similar response was in jeopardy in other European countries. Vaccine hesitancy was high among the general population of Tamil Nadu, India. However, the frontline healthcare workers accepted the COVID vaccine openly and without showing any reluctance[17]. It shows that the general population has certain beliefs and myths that stopped them from being immunized, and all is due to some psychological reason that needs to be addressed. Accordingly, regarding vaccination of COVID-19, the negative approach is observed as the majority population has insignificant and false opinions about the vaccine's safety. Due to this reason, they mostly refused to get vaccinated as, according to the response, allergic reactions and autoimmune disease risks were very high.

According to the present study, the general population has various doubts and misunderstandings regarding the COVID-19 virus, its spread, and vaccination. That needs to be resolved on an urgent basis, and for this purpose, community-based teaching is strongly required. To achieve the target, educated people and health care professionals should spread awareness of the COVID-19 virus and vaccination.

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The outcomes of our pilot project revealed that 69.6% of respondents stated pharma industries are going to the established coffer and efficacious COVID-19 vaccine, and 35.7% of participants agreed that COVID-19 vaccines manufactured in Europe and the USA are prudent when compared with other vaccines manufactured in other countries. Around 75% of participants refused to take COVID-19 Vaccine. 37.5% stated that vaccination increases allergic reaction and 25% claim that vaccination increases autoimmune disease, and 44.6% agreed that it is not possible to reduce the incidence of COVID-19 without vaccination.

Discussion

History reveals hard evidence of epidemics and pandemics that have been coming with regional and global disasters and have been accounted for a drastic change in the life of people. The scarcity of knowledge and health care facilities may lead to the uncontrolled scenario[18]. Almost 1.5 years back, COVID - 19 disease broke out, spread globally, and appeared as a deadly virus. After a few weeks of the spread of this deadly virus, health care professionals, drug designers, and researchers started to work to develop vaccines. For this purpose, different pharmaceutical companies were approached, and after rigorous working, special, and urgent clinical trials, the vaccine was developed and reached the general population. The whole world went on immunization, governments of different countries arranged the immunization process free of cost to make sure and get maximum safety. They were taken as the most significant public health tool to keep the population safe from COVID - 19 worldwide without considering socio-economic issues.

It is well-known that the vaccine development for certain viruses and bacteria usually takes a decade on average, like Ebola, polio because the clinical trials need to be conducted in a systematic and with measurable gait. Furthermore, all these trials and applications depend on the nature of vaccine and pathogen and in-depth scrutiny of risk-benefit combination. However, in 2020, scientists embarked on a race to produce safe and effective coronavirus vaccines in record time[19]. Among all the facts about the vaccine and regarding high mortality with the fast-spreading nature of Coronavirus, the success chances of the COVID-19 vaccine were very low.

In Italy, the study regarding COVID vaccination was conducted among undergraduate students. Outcomes revealed the hesitancy for vaccines leading to refusal or delay that ultimately affects the immunization campaign for establishing a healthy community. The doubts about vaccines and distrust about campaigns play a role in keeping the population away from adopting this health care practice. Furthermore, fortunately, or unfortunately hastened discovery and development of COVID-19 vaccines novel formulation, have added more doubtfulness[20].

The invention of the widely available COVID - 19 vaccine appeared as a great leap and a milestone for the benefit of mankind. It appeared as the only hope for curing the disease among a long list of hurdles and speculations. Several studies regarding the knowledge, attitude, and preventive measures were carried out among the different populations after the global spread of disease. The outcomes of such studies were concluded with a desire for an ultimate solution and cure, and with the passage of time, the dream came true in the form of the vaccine. Furthermore, global immunization through the COVID vaccine becomes causative for the peace of the general public and front-line health workers. The present study was conducted after immunization to investigate the attitude of the general population.

In our pilot study, it was found that the majority of respondents were found to believe vaccination is a better way to stop the fast spread of disease and have a fear of social and economic loss in the future due to lockdown situations and social distancing. 19% of the population faced the attack of the virus. In contrast, most people strongly take the virus lethal if they again get infected by the virus, which shows an intense fear of the virus among the population. The majority of the population came across various symptoms like cough, fever, nausea,

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vomiting, and shortness of breath after being infected, and the coughing was found a strong source of transmission.

The present study also showed one more thought that the virus was deliberately made and spread globally among various doubts and taking this issue different countries were involved in a fight for accusing the use of coronavirus as a biological weapon for biowar. However, the general population has taken effect of such news, and accordingly, the high spread of the virus was planned. And this global political issue also influenced the general population's perception of COVID vaccination and developed vaccine refusal and hesitancy. To overcome the situation, it is necessary to develop awareness programs and vaccination campaigns to correct their misinformation and to consider people's apprehensions[21, 22].

Conclusion

Potential non-compliance in practices towards preventive protocols could be seen; the doubts about vaccination lead to shaky confidence to be immunized. Also supported by the outcomes of our pilot study (a brief part reflected in this article). The situation needs to follow educational interventions and evidence-based information about the pathogen. It seems that positive information provision from trusting healthcare workers can work and possibly increase the chances of uptake. The results can help to work further to sort out and overcome the factors involved in abrupt fluctuation in confidence regarding immunization and related consequences.

Conflicts of Interest

The authors have declared that no competing interests exist.

Acknowledgment

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