

Awareness about COVID-19 and its variants among Afghanistani population- A Retrospective study

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Abstract

Introduction: Corona virus caused COVID-19 is an unusual, highly contagious infectious disease caused by recently identified severe acute respiratory syndrome coronavirus-2 (SARS-CoV-2) has become a clinical threat and presented a major health crisis worldwide in the absence of a specific vaccine or antiviral drugs. Its severity increases due to its rapidly mutating genotype.

Aim: This study is retrospective analysis awareness in Afghanistani population about COVID-19 and its different variants.

Material and Methods: For obtaining data a questionnaire on general knowledge about COVID-19 and its variants was prepared and distributed among the various classes of population in Afghanistan. The questions like the name, age, sex, education, province, COVID-19 vaccination status and some basic questions about COVID-19 and its variants etc were included to obtain their responses. Questionnaire was prepared in both English and Afghani language to penetrate the population knowledge. The data thus obtained was analyzed using basic statistical techniques for proper understanding of different aspects of awareness.

Results and Discussion: Study reported that educated population of Afghanistan especially medical, nursing, pharmacy and other healthcare sectors were found to be well aware with COVID-19, its causes and prevention. Large educated pool of population about 41.5% did not received even a single shot of Covid vaccine the unusual reasons were God will save them, lack of time, money and more than 10% won't believe in Covid. Prominent anti Covid vaccines administered to Afghanistani population were Covaxin, Covishield, and Johnson & Johnson. Good thing is that with the technological advancements and internet facilities most of the population possesses basic knowledge about COVID-19.

Conclusion: Since a significant large population did not receive even single shot of COVID-19 vaccination, this is an alarming situation because Corona is a rapidly mutating virus and its virulence will pose serious threats to mankind in future. Extensive study is required to find out the root cause of public negligence.

Keywords: COVID-19 Awareness, Afghanistan, Omicron, Alpha, Beta, Delta

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Introduction

Over the past two decades, different corona virus species have caused three severe human disease outbreaks characterized by respiratory tract lesions. The COVID-19 pandemic, caused by a new Corona virus, originated in Wuhan, China, in 2019. The rapid spread of the deadly COVID-19 caused by SARS-CoV-2 is a nightmare for the entire world. The World Health Organization (WHO) reported that 14% of infected patients have severe disease and required hospitalization, 5% of infected patients have very severe conditions and require intensive care admission (mostly for ventilation) and 4% of infected patients die. The huge efforts have been done for finding the pathophysiology and treatment of critical COVID-19 disease. Many therapeutic procedures have been suggested, with little success but there is no global approved protocol for the treatment of critically ill patients that leads to a very low survival rate and prolonged treatment in ICU.¹

COVID-19 is a disease caused by a virus named SARS-CoV-2. It is very contagious infection and spreads rapidly.

Over one million people have died from COVID-19 in the United States of America alone. COVID-19 most often causes respiratory symptoms that can feel much like a cold, the flu, or pneumonia. COVID-19 may attack more than your lungs and respiratory system. Other parts of your body may also be affected by the disease. Most people with COVID-19 have mild symptoms, but some people become severely ill. COVID-19 spreads when an infected person breathes out droplets and very small particles that contain the virus. Other people can breathe in these droplets and particles, or these droplets and particles can land on their eyes, nose, or mouth. In some circumstances, these droplets may contaminate surfaces they touch. Anyone infected with COVID-19 can spread it, even if they do NOT have symptoms.

People with COVID-19 have had a wide range of symptoms reported – ranging from mild symptoms to severe illness. Symptoms may appear 2-14 days after exposure to the virus. Anyone can have mild to severe symptoms. Possible symptoms include Fever or chills, Cough, Shortness of

Table 1: Different COVID-19 vaccines and their examples

S. No.	Genetic Content In Vaccine	Examples
1	Whole Virus	Bharat Biotech's Covaxin, Sinopharm, Sinovac
2	Protein Subunit	Novavax Covid-19 Vaccine
3	Viral Vector	Oxford-AstraZeneca's Covishield, Sputnik V, J&J/Janssen Covid-19 Vaccine (Discontinued)
4	Nucleic Acid (Rna And Dna)	Pfizer-Biontech And Moderna Covid-19

breath or difficulty breathing, Fatigue, Muscle or body aches, Headache, New loss of taste or smell, Sore throat, Congestion or runny nose, Nausea or vomiting, Diarrhea.²

As on 31st December 2023, a total of 773,449,299 cases of COVID-19 have been reported throughout the world out of which 230290 cases were reported from Afghanistan alone.³ Scientists around the world worked day and night and have developed several vaccines to combat the situation. Few COVID-19 vaccines are given in Table 1.⁴⁻⁶

Since then COVID-19 has mutated in several variants with different symptoms and etiology. Well know variants of COVID-19 are Alpha (B.1.1.7) detected for the first time in 2020 in United Kingdom, Beta (B.1.351) detected in 2020 in South Africa, Gamma (P.1) detected in Brazil in 2021, Delta (B.1.617.2) in India in 2021 and Omicron (B.1.1.529) in South Africa in 2021-22. In 2023, a sub variant of Omicron virus named as JN.1 is spreading throught the globe but due to more than 70% vaccination of total world population its virulence is low. Virologists are continuously monitoring the COVID-19 variations and are evolving with new vaccines.⁷

Vaccination status

AS on 26 November 2023, 70.6% of the world population has received at least one dose of a COVID-19 vaccine. 45.96% people in Afghanistan received COVID-19 vaccination of which only 44.05% received both the doses where as 1.90% were partly vaccinated.⁸

The statistics from reputed international agencies shows that still 55% of Afghanistani population has not received even a single dose of COVID-19 vaccine. It's a matter of concern for the government and medical professionals to understand the reason behind this negligence. This online Retrospective survey was to analyze the basic understanding of the Afghanistani population regarding COVID-19.

Material and Methods

To carry out this retrospective survey we have designed a questionnaire using Google form and asked the people from various classes of society like professionals, general public, and businessman and government officials to fill the form. A format of questionnaire is presented in Figure 1(a) and Figure 1(b). The participants were asked to fill the form individually. The responses were collected online and analyzed carefully to understand the population with respect to their COVID-19 awareness. The results were analyzed with basic statistics techniques.

The screenshot shows a Google Form titled "COVID-19 Awareness" with the following questions and options:

- Whether you are vaccinated against COVID-19?** (Dropdown menu)
- Which brand vaccine you received? ***
 - Covaxin
 - Covishield
 - Sputnik
 - Other: _____
- If not vaccinated, why? ***
 - Covid 19 does not exist
 - Vaccination is costly
 - Vaccination make person infertile
 - Vaccination causes death
 - Vaccination doesnot work
 - Dont want vaccine
 - Didn't get time for vaccination
- Covid is: ***
 - Viral disease
 - Bacterial disease
 - Fungal disease
 - Other: _____
- Symptoms of Covid? ***
 - Sneezing, Stomach infection, Fatigue, Head ache
 - Fever, Dry cough, Fatigue, Loss of smell and taste
 - Muscle pain, Fever, Cough with Phlegm, Nausea
- How it is transmitted? ***
 - Contact with infected persons: droplets from sneezing, coughing or breathing
 - Eye contact with infected person
 - Touching surfaces infected with Covid
- An effective hand sanitizer must contain alcohol to kill corona virus with concentration of: ***
 - 20%
 - 40%
 - 60%
 - 80%

Figure 1(a): A Sample of Questionnaire

The screenshot shows a Google Form titled "COVID-19 Awareness" with the following questions and options:

- Which is the latest strain of COVID-19? ***
 - Alpha
 - Omicron
 - Beta
 - JN.1
 - Delta
 - Other: _____
- From where you get news about COVID? ***
 - Newspaper
 - Internet
 - Television
 - Government
 - Option 5
 - Other: _____

Figure 1(b): A Sample of Questionnaire

Results and Discussion

A total of 530 responses were received from participants of different categories. 71.69% participants were in the age group of 20-25 years and most of them were students of medicine, pharmacy and nursing. Most of the participants (65%) possess high to medium level of education and belong to medical and other healthcare sectors like pharmacy and nursing whereas survey involved 15 % participants each from business class and services in private sectors and 5% participants are unemployed or part time workers.

Out of 530 participants, 21% received double doses of vaccines, 42% received only single dose and 4% received multiple doses of vaccines even different brand vaccines at different times. The vaccine brands they received varies from Bharat Biotech's Covaxin (38%), Oxford-AstraZeneca's Covishield (2%), Johnson & Johnson (32%), Didn't remember(17%) and 9% participants received mixed vaccination.

Studies showed that more than 33% educated population of Afghanistan did not receive even single dose of COVID-19 vaccine. The reasons behind this horrible negligence were very surprising. 41.5% reported that they did not get time for vaccination, 26.4% believe that God will protect them, 11.3% participants believes that COVID does not exist, 9.4% reported that vaccine doesn't work. Rest reported very unusual reasons behind non-vaccination like vaccine will make them impotent, can cause death and only 5.7% claimed that vaccines were costly.

Survey reported some positive things like most of the participants were well aware about the nature of disease, the symptoms and prevention measures. With medical background around 65% participants were aware about latest COVID-19 strain JN.1. It's a good sign of awareness among the population. The awareness about COVID-19 has increased a lot due to the increased usage of internet facility in the country. Television, newspaper and government healthcare awareness programs were also played significant role in increasing health awareness among public especially with respect to COVID-19.

Conclusion

In conclusion, this survey is just a small study which needed to be explored more to identify the causes behind public negligence for vaccination like life saving programs because a nation's prosperity is decided by the health of its citizens. Government of Afghanistan will also have to take appropriate action to make the country free of Covid contamination and prevent its further spread.

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