



## Intention to get vaccination against covid-19 in Indian population: a cross sectional study

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### Abstract

**Background:** -Vaccines are effective interventions which will reduce the high burden of diseases globally. Unintended towards COVID-19 vaccines and an uncertainty or unwillingness to receive vaccinations are major barriers to managing the COVID-19 pandemic in the long-term. However, intention to receive vaccine is still matters the extent of COVID-19 vaccinations globally. This study aimed to assess Intention to get vaccination against covid-19 in Indian population. **Method:** -An online Cross-sectional study including both male and female age between 18 to 60 years those are vaccinated and without vaccinated were included in this survey. Self-administered questionnaire was used for assessing intention to receive COVID-19 Vaccine. **Result:** -A total of 336, participants completed the survey. Among the study participants, 56% people are vaccinated in which nearly 96% were willing to take COVID-19 vaccine when it is available for use and only 4% did not wanted the vaccination. Almost two thirds (64.5%) of the young adults aged between 18 and 40 years were vaccinated. **Conclusion:** - The study highlights that 96% of participants were willing to take the COVID-19 vaccine. Various measures are often taken by different stakeholders to enhance the positive attitude.

**Keywords:** COVID-19, Vaccine, Knowledge.

### INTRODUCTION

The world is currently dominated by the pandemic spread of severe acute respiratory syndrome corona virus (SARS COV2)<sup>1</sup>. WHO (World Health Organization) declared COVID-19 as Global Health concern causing severe respiratory tract infection in humans since March 2020. Common clinical features Include fever, cough, sore throat, headache, Malaysia and breathlessness<sup>2</sup>. Pandemic have a negative influence on the economics of the all countries affected. The poor are those that suffer the foremost. The united nation has stated that pandemics pose a

threat to national security<sup>3</sup>. The increasing prevalence of infectious diseases will not only increase human mortality and morbidity, but will also result in the gradual erosion of State capacity and increase in poverty, according to a comprehensive study conducted between 1950 and 1991 involving 20 countries, including developed, developing, and underdeveloped countries<sup>4</sup>.

The COVID-19 pandemic has had a significant impact on people's physical, social, emotional, and behavioral well-being<sup>5</sup>. People are waiting to get obviate this

pandemic and mass vaccination seems to be a promising measure<sup>6</sup>. The COVID-19 vaccine for healthcare and frontline workers was launched in India on January 16, 2021<sup>7</sup>. A large number of eligible applicants have failed to show up for their second dosage of vaccine<sup>8</sup>. People are hesitant to embrace the vaccine despite enormous efforts to develop a safe and effective vaccine<sup>9</sup>. Multiple factors influence vaccination adoption, including people's knowledge and perceptions about the COVID-19 outbreak's potential, the vaccine's perceived safety, logistics, perceived efficacy, and perceived danger, among others<sup>10</sup>. Efficacy results from two major efficacy trials (Pfizer - BioNTech, Moderna) show that the vaccine is effective against symptomatic and severe disease in over 90% of cases<sup>11</sup>. Vaccination programmes will most likely take many months to implement, depending on each state's ability to roll out clinics and the security of vaccine supplies<sup>12</sup>. Vaccination against COVID-19 is voluntary in most Countries, and it's therefore important to know the present views of local populations before the vaccination Program is unrolled. In this study, we analyze the various sociodemographic and economic variables, as well as the beliefs and barriers that may prove to be hurdles during the immunization Program. To the best of our knowledge, there is no proper description given in any study about knowledge and attitude toward intention to take covid vaccination. There for the present study was intended to study the impact of covid 19 and intention to receive vaccine among Indian population.

## Methodology

This cross-sectional, non-interventional, observational self administrative Questionnaire based study was conducted from the March 2021, via an online platform across different Regions in India. survey was administered on the overall population employing a validated questionnaire to assess the knowledge, attitude, practices and concerns of individuals regarding the COVID-19 vaccination program. This study was approved by the Institutional Ethics Committee; Data were collected through a Google Form and telephonic interviews. Participants were informed regarding the study objectives, duration of participation, declaration of confidentiality and voluntary participation before administration of the questionnaire. Participants providing consent were directed to the

most questionnaires. This web link was sent by investigators to their personal and social contacts via email or WhatsApp messenger. In cases where participants had limited technical knowledge and/or limited literacy level, investigators conducted the telephonic interview and filled the Google form on their behalf.

Participants aged 18 to 60 years representing different Socio-demographic variables such as age, gender, socio-economic Status were recruited. The investigators used personal and social Contacts for recruitment of the participants from different regions Of India via purposive sampling techniques. 352 responses were received via Google forms and telephonic Interviews. However, certain responses were excluded thanks to Invalid entries and/or duplication of knowledge. The final data comprised 336 participants across different states of India.

A 16-item self administrative questionnaire developed in this Study was used to obtain data. The information related to Socio-demographic profile such as age, gender, socioeconomic Status was obtained. The study participants were offered the questionnaire in two languages: English and Hindi. The next section of the Questionnaire comprises items assessing knowledge about eligibility to get COVID-19 vaccine amongst different population groups and sources of information regarding COVID-19 vaccine. There are two sessions in this questionnaire first session for those are vaccinated and second those are not vaccinated yet. in both the sessions questions are same. Further, the items were included to evaluate the general attitude regarding COVID-19 vaccine, source of vaccination and barriers for participation in the Vaccination program and concerns towards the COVID-19 vaccine. The responses were marked on 2- point, 3-point and 5-point Likert Scales.

## Statistical analysis

The baseline characteristics of the participants were presented as frequency and percentages. According to the distribution of data, the association between qualitative variables was assessed using Chi-square's test Value <0.05 was considered statistically significant for all analyses.

## Results

Of the 336 respondents, nearly half were in the age group of 18 to 30 years, gender distributions 212 were

female and 124 males described in Table 1. Total 56% people are vaccinated of which 14% were male and 39% are female (figure: 1). 96% people willing took vaccine (figure: 2). 87% think current vaccine is useful were 12 % belived it was not useful (figure: 3). figure: 4 shows who suggested to take vaccine. Figure: 5 describe intention of people to take vaccination. study found that 92% people preferred covishield vaccine and 7% covaxin only 1% take sputnik (figure: 6). People those are vaccinated 83% people feel at risk of getting infected by corona virus 93% people says it is necessary to use mask after Vaccination and 97% people reported that it is not necessary to use sanitizer and wash hand also not necessary to maintain social distance after getting vaccinated (figure: 7).

VARIABLES	N (%)
<b>Age in years</b>	
18-30	276 (82%)
30-60	60 (17%)
<b>Gender</b>	
Male	124 (36%)
Female	212 (63%)
<b>Occupations</b>	
Students	98 (29%)
Housewife	62 (18%)
Teachers	50 (14%)
Service	68 (20%)
Doctors	56 (16%)

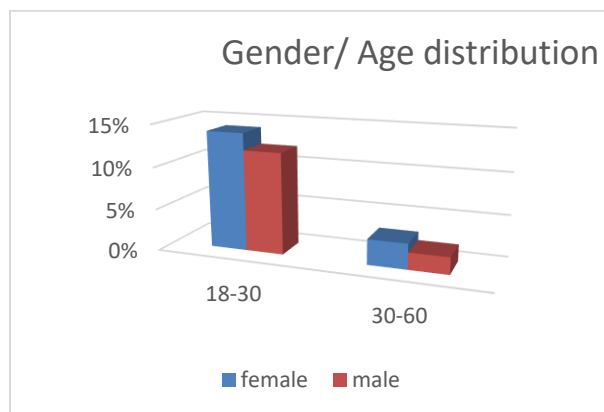


Figure 1

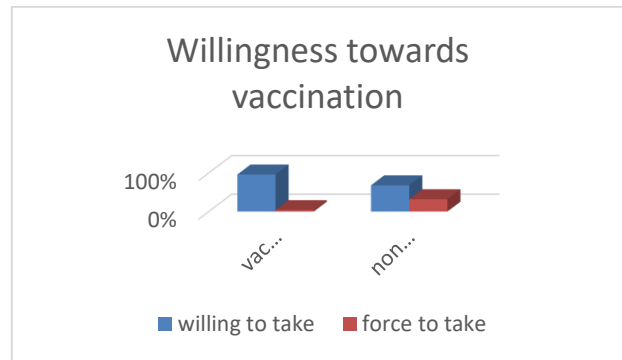


Figure 2

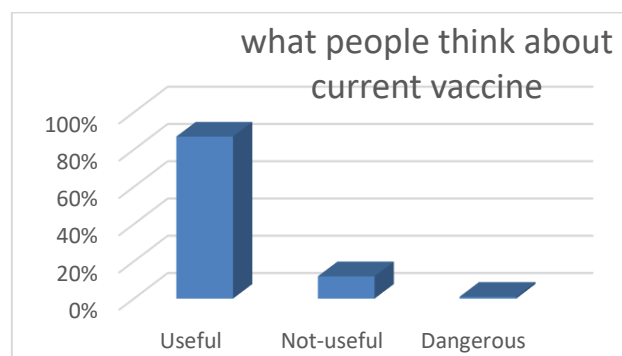


Figure 3

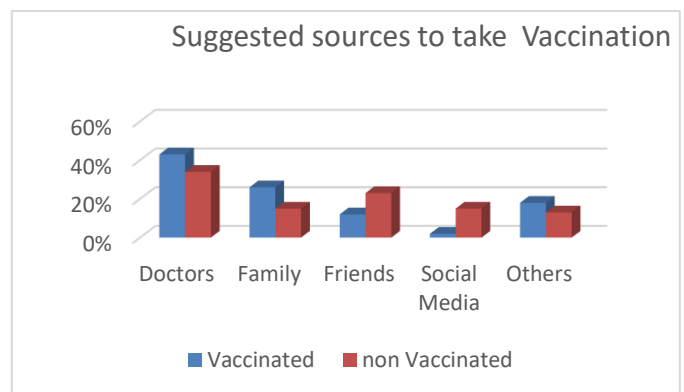


Figure 4

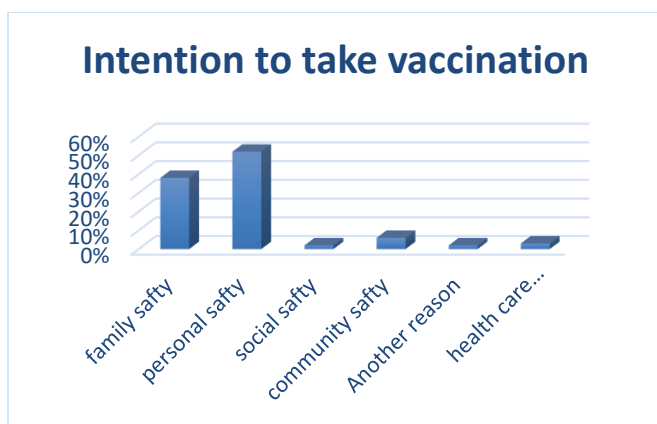


Figure 5

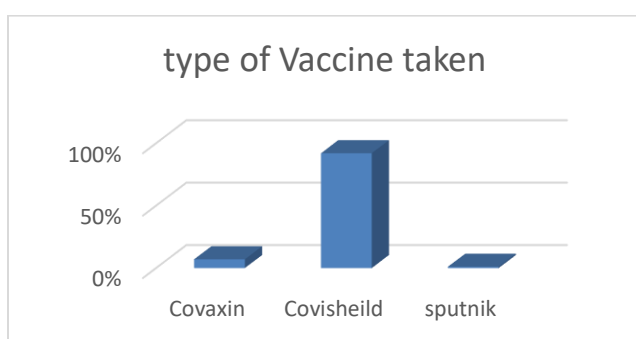


Figure 6

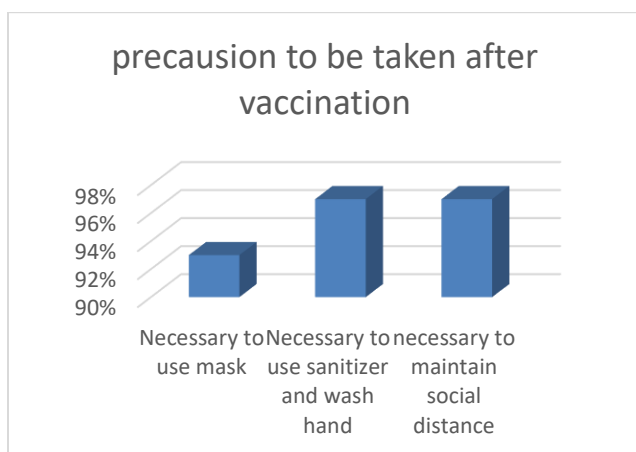


Figure 7

## Discussion

We found that nearly half of the study participants belong to the age group 30-60 years and Our study found that more than half of our students.

In this study we found that 56% people are vaccinated 14% male and 42% female. Highest rate of vaccination is done in age 18-30 yrs. that is 51%. Only 5% people

are vaccinated in age group between 30-60years. In this survey we analyzed that 92% people preferred covishield vaccine and 7% covaxin only 1% take sputnik.

In our study, those vaccinated the majority (96%) of the study participants who were willing to get COVID-19 vaccine. 4% of population were not that willing to take the vaccination. People those are not vaccinated yet 68% population are willingly to take vaccine and 32% are not. The results of our study are also similar to those reported in the IPSOS survey: the authors found a vaccine acceptance rate of 87% among the Indian population<sup>13</sup>. Most cross-sectional surveys across the globe have revealed similar responses amongst the study subjects. More than two-thirds of the study participants in the USA were willing to get COVID-19 vaccine<sup>14</sup>. On the opposite hand, in China, the COVID-19 vaccine acceptability rate was found to be quite 90%. People those are vaccinated 43% get vaccine as per doctor's suggestions 26% as family recommendation and 12% as per friends' advice only 2% people are taken due to social media<sup>15</sup>.

We also found that the percentage of vaccine reluctance (2.2%) among the participants was lower when compared to studies done in Brazil (12%), Australia (12%), Malaysia (15%) and Saudi Arabia (16%)<sup>13</sup>. Since most other countries have equally robust public health education initiatives and immunization systems, this is an intriguing fact that requires additional explanation. One probable explanation is that these investigations were conducted within six months of the COVID-19 epidemic, when there was likely more doubt regarding the vaccine's quick development. People those are vaccinated 87 % people think Covid 19 vaccine is useful and only 1% people think it is dangerous same result found in people those are not vaccinated yet.

In our study we asked people what intentions was to take vaccine so we found that 52% people take for personal safety 38% for family 6% for community safety, 2% take because their friends taking. We also seen in the people those are not vaccinated yet 45% people are going to take for their family safety, 50% for personal safety.

According to Dror et al, participants' approval of a prospective COVID-19 vaccination wasn't influenced by their job within the healthcare field, with 75

percent of doctors, 66 percent of nurses, and 71 percent of the general population in Israel accepting the vaccine. The reason for this was, predictably, concerns about the vaccine's safety, given its rapid development. They discovered that men were more receptive to the idea of a vaccine, and that current influenza vaccination was the most significant positive predictor of acceptance of a prospective COVID-19 vaccine<sup>16</sup>.

We also see that what people think about present vaccine are effective for controlling new strain of corona virus 66% people think it is effective for controlling corona virus. Same results found in those are not vaccinated.

Among the study participants, nearly 88% were willing to Take COVID-19 vaccine when it is available for use and Only 12% did not want the vaccination. We found that 59% people still have fear about COVID virus. Somewhat same results seen in people those are not vaccinated. People those are vaccinated 83% people feel at risk of getting infected by corona virus 93% people says it is necessary to use mask after Vaccination and 97% people reported that it is not necessary to use sanitizer and wash hand also not necessary to maintain social distance after getting vaccinated. To enhance vaccination positively, a variety of approaches can be implemented. We believe that, notwithstanding the government's active engagement in immunizing citizens, it is impossible to do so without proper transparency in scientific trials. It could also pursue efforts such as mass educational campaigns backed by vaccine trial data, free and fair reporting of side effects/adverse effects, and the preservation of a free press policy backed by sufficient scientific proof. Various stakeholders, such as Non-Governmental Organizations, can also take initiatives to raise public awareness. As medical practitioners, we may promote a favorable image by getting the vaccine and informing the general public about its benefits.

### Limitations of study

The sample size is small, a bigger sample might have yielded results that could be generalized Due to COVID-19 precautionary measures, we had to use an online method to collect the sample, this might have some influence on the authenticity of the data collected. we cannot able to reach rural area.

### Future scope

Future scope that the unwilling populations to require vaccination for that population extra strategies are often applied like explaining the advantages of the covid-19 vaccination. Additional studies to identify the barriers to vaccine acceptance and the populations at a higher risk for vaccine hesitancy are also critical. They will help the public health policy makers to formulate more definitive, efficient strategies that can help to implement the COVID-19 vaccination program successfully in India.

### Conclusion: -

The current study highlights that 56% people are vaccinated and 96% of the participants in India were willing to take the current COVID-19 vaccine. This can be considered as a positive check in ending the continued COVID-19 pandemic. The level of awareness and acceptance of the COVID-19 vaccine varies based on sociodemographic factors. The occurrence of mild or major side effects following immunization is the most critical determinant for vaccine reluctance, and this could be the biggest obstacle in the worldwide response to the pandemic.

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