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## Original Research Article

# Household's perception on COVID-19 vaccination in India

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### ABSTRACT

An attempt was made to assess the households' perception on Covid-19 and vaccination. By using multistage sampling technique, 400 samples were collected during June 15<sup>th</sup> to July 15<sup>th</sup> 2021. Further, descriptive statistics were used to analyse data. Households are well-aware of Covid-19 symptoms and their preventive measures i.e., quarantine period, social distancing, hand-wash and vaccination. Results also highlight that social hierarchies and rumours about vaccine are responsible for low vaccination in the sample villages. A grass-root awareness programme is prerequisite for complete vaccination and to avoid third-wave of Covid-19 in India.

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## 1. Introduction

On January 30, 2020, India has reported the first verified case of severe acute respiratory syndrome corona virus-2 (SARS-Cov-2) infection. It presently has the highest number of corona virus (Covid-19) infections and fatalities in Asia. In India, till now (9 July 2021), there have been 30, 752, 950 confirmed cases of Covid-19 with 405, 939 deaths reported to the World Health Organization.<sup>1</sup> The real number of illness and deaths is likely to be considerably higher than what is officially reported. Covid-19 has had a profound impact on people's lives, even if they are not sick, since isolation, contact restrictions, and economic closure have altered India's social and economic landscape. Large populations and dense settlements have increased the number of instances in India. Results reported that countries with dense populations and a long history of travel will exacerbate the challenge for decision-makers if testing is restricted or unequal. The WHO has made projections of 3.5 beds per 1000 population, but India the availability of bed is 0.53 beds per 1000 population in hospitals which

is again the concern of government. We all have seen the disasters stories during the second Covid-19 wave in Delhi, Mumbai and Lucknow. People have suffered in majority as they don't get oxygen, beds in the hospitals and medicines in pharmacies.

In India, the overall number dying constantly increased, amongst them a lot of the demise circumstances pointed to a particular age-group of population. In India, among the total Covid-10 cases and total deaths, 90% were older than 40 years.<sup>2</sup> Overall, people in the age group of 40 years and greater have suffered the major impact of the current Covid-19 eruption and are more vulnerable. The massive loss of people in the workforce is likely to have devastating social and economic consequences.<sup>3,4</sup>

Covid-19 has brought to light structural impediments as well as long-standing issues with India's social and public health infrastructure. It has shown inequalities and a lack of pandemic preparedness in India. It has aided in refocusing our attention on long-standing issues such as quality of public health systems, the need for improved data, the significance of communication, and the need for more multidisciplinary skills to solve the so-called wicked

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challenges highlighted by the present pandemic. It is critical to use this as a lesson and to create robust mechanisms to prepare for future pandemics. Emergence of Covid-19 highlights that there is need of significant budget allocations and leadership to improve the health security agenda, particularly in the management of communicable illnesses. Addressing worrisome levels of air pollution, reducing the incidence of non-communicable illness, and providing appropriate assistance for mental health needs will be critical. Investment in public health must be significantly increased above pre-pandemic levels.

The WHO has prescribed several preventive measures such as social distancing, regular hand-wash, sanitization, masking and vaccination. Among aforesaid measures, vaccination has most acceptable, scientific and tested preventive measure to deal with Covid-19. In India, vaccination has first started with health workers and frontline workers.

The Covid-19 vaccine was launched in India on 16<sup>th</sup> January 2021 for healthcare and frontline workers in 1<sup>st</sup> Phase. The healthcare and frontline workers were initially not found to be very accepting of the vaccine and were hesitant to receive the vaccine. A study conducted by Jain et al.<sup>5</sup> have assess vaccine hesitancy and factor related to it among medical student in India by collecting 1068 responses from online survey. The results show that vaccine hesitancy was 10.6%. Further, medical students are very concern regarding vaccine safety and efficacy, lack of awareness regarding their eligibility for vaccination and lack of trust in government agencies.

In order to have a wide coverage of the population by vaccination and Shum hesitancy towards the vaccine, it is critical to comprehend rural households' views on vaccination. Hence, this study aims to interpret current knowledge, attitude, perceptions, concerns and acceptance of Covid-19 vaccine among rural households of Uttar Pradesh, India.

## 2. Materials and Methods

After detailed review of previous studies<sup>4-6</sup> consultation with doctors and academicians, a structured schedule was prepared to elicit household's perception to Covid-19 and effectiveness of vaccination in India. Further, socioeconomic and demographic data was also collected as Indian society has multiple social hierarchies. Field survey was undertaken June 15<sup>th</sup> to June 15<sup>th</sup> 2021. Because of Covid-19 has highly contagious disease, all the necessary preventive measures such as sanitization, Mask and Personal Protection Kit (PPP) has used.

A multistage sampling technique was opted to collected household-level data. In the first step, most populous state out of 36 states and union territories was selected i.e., Uttar Pradesh. In second step, 1 district out of 75 districts was randomly selected i.e., Mathura. In third step, all

the four Tehsil (i.e., Mathura, Chhata, Mat, Mahavan) were selected for better representation of samples. In fourth step, 4 Development Blocks (i.e., Mathura, Chhata, Mat and Baldev) are randomly selected. In fifth stage, 4 villages (i.e, Virjapur, Badanpur, Atroni and Jamalpur) are purposively selected. Finally, 100 samples from each village are collected using systematically random sampling technique. Thus, total 400 samples are collected to elicit the socioeconomic status of households and their perception on Covid-19 vaccination.

## 3. Results and Discussion

### 3.1. Socioeconomic status of sample households

Epicts socioeconomic status of sample households. Sample households revealed that more than 60% of households are belonging to the Hindu religion which is dominant in India. Further, 1/4<sup>th</sup> households also belonging to the socially backward groups i.e., scheduled caste and scheduled tribes. About 50% of head of households are married and illiterate. Further, only about 22.25% of households have assured source of income i.e., salaried. Mean annual income of the households is Rs. 124007, which varies from Rs. 116922 in Atroni village (lowest) to Rs. 138072 in Virjapur village.

### 3.2. Households' perception on Covid-19 and vaccination

Epicts households' perception on Covid-19. The results from Table 2 show that about 28.25% of households are infected to Covid-19. Further, about 44.75% of households are perceived that Covid-19 is a health-hazard and severely affected their livelihoods. Half of the households are quantify the symptoms of covid-19, while more that 70% of households are well-aware of quarantine period. Furthermore, about 66.75% of households are perceived that by using preventive measures such as Masking, social distancing, sanitization and regular hand-wash Covid-19 pandemic can be eradicated without vaccination. Data also show that nearly 65% of households are vaccinated; more than 80% of households are willing to vaccinate their children. As Indian society has multiple social hierarchies; hence, still 55% of the sample households are know that their relatives are not willing to take vaccine. Half of the households are perceived that all the available Covid-19 vaccines should be provided free of cost. Lastly, about 49% of households are perceived that there is less chances of Covid infection, if they vaccinated.

### 3.3. Reasons for not vaccinated

Data on inadequate vaccination in the sample villages depicts that 29.75% of households responded that vaccine is not available, while 24.75% of households are not aware of registration and vaccination (Figure 1). Further,

**Table 1:** Socioeconomic status of sample households

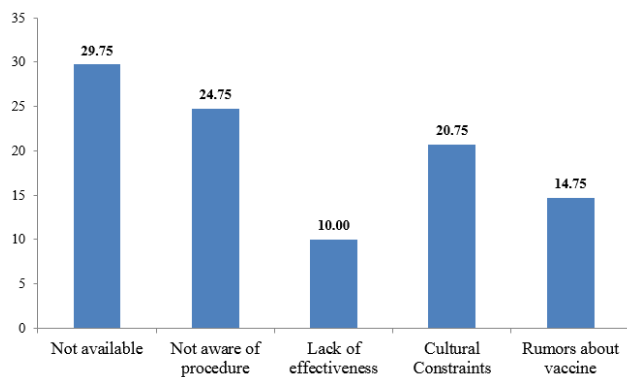
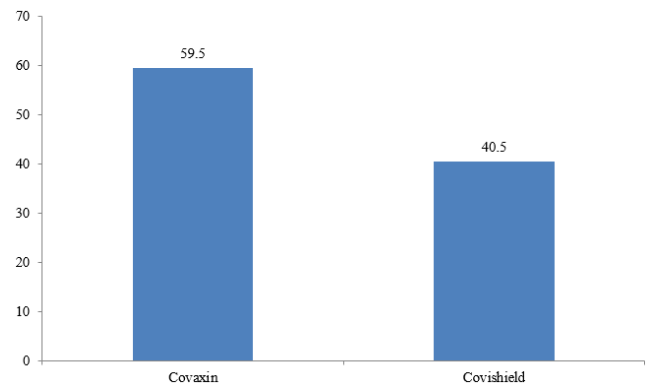
Indicators	Virjapur	Badanpur	Atroni	Jamalpur	Overall
<b>Religion</b>					
Hindu	71.00	64.00	63.00	68.00	66.50
Muslim	29.00	36.00	37.00	32.00	33.50
<b>Social Group</b>					
General	37.00	34.00	38.00	33.00	35.50
Other Backward Caste	39.00	39.00	39.00	42.00	39.75
Scheduled Caste	23.00	27.00	23.00	25.00	24.50
Scheduled Tribe	1.00	0.00	0.00	0.00	0.25
<b>Marital Status</b>					
Married	50.00	49.00	39.00	52.00	47.50
Unmarried	50.00	51.00	61.00	48.00	52.50
<b>Education</b>					
Illiterate	52.00	50.00	49.00	50.00	50.25
Literate	48.00	50.00	51.00	50.00	49.75
<b>Occupation</b>					
Daily Wage Worker	50.00	41.00	47.00	36.00	43.50
Casual Worker	34.00	35.00	28.00	40.00	34.25
Salaried	16.00	24.00	25.00	24.00	22.25
Mean Annual Income (Rs.)	138072	123946	116922	117087	124007

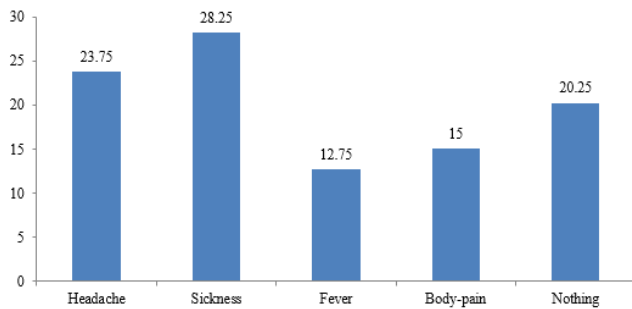
Source: Field Survey Data, 2021. Note: values are in percentage.

**Table 2:** Households' perception of Covid-19

Indicators	Yes	No
Did you infected to Covid-19	28.25	71.75
Do you perceive that Covid-19 is a health-hazard	44.75	55.25
Do you know about the symptoms of Covid-19	58.25	41.75
Do you know about the quarantine period	71.00	29.00
Do you know about the testing procedure of Covid-19	51.75	48.25
Do you think that if everyone in the society maintains the preventive measures, the COVID-19 pandemic can be eradicated without vaccination	66.75	33.25
Did you vaccinated	64.25	35.75
Do you plan to vaccinate children against COVID-19	80.25	19.75
Do you personally know anyone who has said they will not get the COVID-19 vaccine	55.50	44.50
Do you think the vaccine should be administered free of charge in India	51.00	49.00
Do you think that after vaccination, there is less chances of Covid-19 positivity	49.00	51.00

Source: Field Survey Data, 2021. Note: values are in percentage.

**Fig. 1:** Reasons for not vaccinated Source: Field survey data, 2021.**Fig. 2:** Preferred Vaccine Source: Field survey data, 2021.



**Fig. 3:** Post-vaccination effects Source: Field survey data, 2021.

10% of households are perceived that vaccine is not effective to cope with Covid-19. Furthermore, 20.75% of households are not vaccinated because of cultural constraints. Moreover, due to the rumours about vaccine, 14.75% of households are not willing to vaccinate.

### 3.4. Vaccine preference

Mixed perception on vaccine selection was observed. About 60% of households are preferred Covaxin, while 40% of households are preferred Covishield (Figure 2). Data on post- vaccination effect are also analyzed.(Figure 3) depict that headache, sickness, fever, body-pain are some of common symptoms after getting vaccine. Further, 23.75% of households are reported that headache was common symptom after getting vaccination. Further, about 28.25, 12.75 & 15% of households are reported that sickness, fever and body-pain were common symptom after getting vaccination, while 20.25% of households are reported that there is no symptom after vaccination.

## 4. Conclusion

The present study begins with asking questions about what factors are restricting households for vaccination, and what factors are influences for vaccination in the villages belonging to the Mathura district of Uttar Pradesh, India. In this connection, a multistage field survey for 400 households covering 4 villages of Mathura district of Uttar

Pradesh, India is undertaken. Results from this study shows that households have differential perception with social hierarchies. Social connection, awareness and availability of Covid-19 are vital for vaccination. The present study suggests that there is dire need of a grass-root awareness programme is prerequisite for complete vaccination and to avoid third-wave of Covid-19 in India.

## 5. Source of Funding

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## 6. Conflict of Interest

None.

## References

1. Covid-19 weekly epidemiological update, 2021, World Health Organization; 2021. Available from: [Covid-19weeklyepidemiologicalupdate,2021,WorldHealthOrganization](#).
2. COVID-19. Tracker India; 2020.; 2020. Available from: <https://www.COVID19india.org/>.
3. Mishra VK. India's projected aged population (65), projected life expectancy at birth and insecurities faced by aged population. *Age Int.* 2020;45:72–84.
4. Jatav SS, Surendra M, Sanatan N, Sonali N. Coping to Covid-19 in Uttar Pradesh, India: Evidence from NSSO 76th Round Data. *Curr Urban Stud.* 2021;9(2):206–17. doi:10.4236/cus.2021.92013.
5. Jain J, Saurabh S, Verma P, Goel M, Gupta A, Raghav M, et al. Covid-19- vaccine hesitancy among medical students in India. *Epidemiol Infect.* 2021;p. 149. doi:10.1017/S0950268821001205.
6. Kumari A, Piyush R, Sakshi C, Divjyot K, Tanveer K, Kamal BK, et al. What Indians Think of the COVID-19 vaccine: A qualitative study comprising focus group discussions and thematic analysis. *Diabetes Metab Syndr.* 2021;15(3):679–82. doi:10.1016/j.dsx.2021.03.021.

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