

Assessment Of Covid-19 Vaccination Literacy And Post Vaccination Effects Among Vaccinated Population: A Cross-Sectional Online Survey Study

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Abstract

BACKGROUND:

A safe and effective vaccine against COVID-19 has become a public health priority. However only a few studies have been conducted to investigate the post vaccination symptoms and awareness among the public about the vaccination. This study aimed to assess the COVID-19 vaccination literacy and post vaccination effects among the vaccinated population in India.

METHODOLOGY:

A descriptive cross-sectional study was conducted with a convenience sample of the adult population in India. Data was collected through an online anonymous questionnaire. We used Google forms an online survey platform, to publish the questionnaire and manually generated the answer URL link to the eligible candidates.

RESULTS:

A total of 533 responses were collected. Among the participants, 463 (86.90%) were aged between 18 and 40 years old. Of which 289 (54.2%) were male and 244 (45.8%) were female participants. Among the respondents 374 (70.2%) completed both the doses of vaccine. 498 (93.4%) participants took the vaccination willingly and 35 (6.6%) participants were forced to get vaccinated. Body ache 327 (61.4%), Fever 307 (57.6%), headache 211 (39.6%) and alopecia 70 (14%) were the most commonly reported post vaccination symptoms.

CONCLUSION:

Overall, our study demonstrated that there was a high willingness to accept COVID-19 vaccine in India and the rate of infection with COVID-19 has been reduced after vaccination which proves that the vaccine is efficient. The rate of people getting hospitalized due COVID-19 has been drastically reduced. Cold, cough, mild hypersensitivity reactions were also been reported as post vaccination symptoms and no serious adverse effects were reported so far due to vaccination which proves that the vaccine is safe.

Keywords: COVID-19, literacy, side effects, vaccination

INTRODUCTION:

The outbreak of the severe acute respiratory syndrome Coronavirus 2 (SARS-CoV-2) disease pandemic is threatening public health all over the world, and more than 42 million confirmed cases have been reported so far. At the moment, India is on the third wave of COVID-19. Total cases were discovered to be 3.4 crores and total mortality was reported to be 4.51 lakhs at the time of this study. It will be difficult for the Indian government to carry out a widespread immunisation campaign while dealing with repeated COVID-19 outbreaks.¹ In India, vaccination planning has also proven difficult. The vaccine will aid us in accomplishing two goals: first, it will reduce further mortality rates, and second, it will reduce the number of new cases. 84 percent of COVID deaths occur in adults over the age of 50 who acquire severe sickness as a result of other comorbidities such diabetes, kidney disease, and chronic respiratory disorders. It is possible to decrease the mortality rate in this group if we can minimise the severity of the condition. Furthermore, if you're willing

to vaccinate a large number of people, together with those who have obtained immunity naturally as a result of having been exposed to the disease, will assist us in achieving herd immunity. Three vaccines have been certified for emergency use in India: Covishield [ChAdOx1 nCoV-19; Oxford–AstraZeneca; produced by Serum Institute of India], Covaxin [BBV152; Bharat Biotech], and Sputnik V [Gam-COVID-Vac; Gamaleya Research Institute of Epidemiology and Microbiology].

India began its COVID-19 immunisation programme on January 16, 2021.³ The initial recipients were 1.59 million Indian Armed Forces Health Care Workers (HCWs) and Frontline Workers (FLWs), who were given COVISHIELD (Astra Zeneca) and Covaxin® by Serum Institute of India (manufactured by Bharat Biotech Limited). In the month of April 2021, EUA was awarded to Sputnik - V. (Under the EUA) Due to a restricted number of vaccine slots, fewer administrations occurred during the first five months of the immunisation programme, resulting in higher demand.³The Indian government has amended its vaccination policy, eliminating the need for preregistration and providing free immunizations to expedite the programme. Phase 4 of the vaccination drive all people above the age of 18 becoming eligible. By mid of 2021, 326.44 million Indians (23% of the population) had received the first dosage of the vaccine, and 854.44 million (61% of the population) had received the second dose.⁴ Vaccine apprehension is a widespread problem in India, fuelled by misinformation and mistrust, particularly in rural areas, which account for 65 percent of the population.²

. In patients who were vaccinated, just a few post-vaccine illnesses were documented when comparing patterns of infection and mortality in the first and second waves of the pandemic. The COVID-19 infodemic are often countered by scientific evidence, clear and consistent communication, and improved health literacy of both individuals in need of data and people providing it. The aim of the present survey was to assess people abilities to gather and understand information about vaccinations, at a time when discussion was particularly intense about the longer term COVID-19 vaccines, during the first and later stages of their development .These abilities correspond to health literacy skills, entailing people’s knowledge, motivation and competence to seek out, understand and use health information,⁴ which is critical amidst a pandemic and assess health literacy skills about vaccination, which may be useful to adapt medical communication strategies, for a better understanding of the value of immunization.⁵

OBJRCTIVE: This study aimed to assess the COVID-19 vaccination literacy and post vaccination effects among the vaccinated population in India.

METHODOLOGY:

Study design:

Descriptive cross-sectional study.

Study duration: 3 months

Study criteria:

Inclusion Criteria:

- Individuals who were above or at least 18 years old, vaccinated and from India.
- Who were able to read and complete the self-administered questionnaire independently.
- Who voluntarily agreed to participate in this survey.

Exclusion Criteria:

- People who are not vaccinated
- People less than 18 years of age.
- People not belonging to India.

This survey is a cross-sectional study with a convenience sample of the adult population in India. Data were collected from all 4 parts of India through an online anonymous questionnaire. We used Google forms an online survey platform, to publish the questionnaire and manually generated the answer URL link to the eligible candidates. The participants visited the URL on their mobile phones to answer the questionnaire.

RESULTS & DISCUSSION

PARTICIPANT CHARACTERISTICS:

A total of 533 vaccinated respondents were recruited in this survey, who were asked to fill a questionnaire containing 25 questions and their responses were collected. Among the participants, 463 (86.90%) were aged between 18 and 40 years old. The proportion of male and female participants in this survey was 54.2%:45.8%. Among the female participants, 1 (0.5. %) was pregnant and 7(2.5%) were lactating women. In this online survey, 368 (69.00%) of the respondents were students, 120 (22.50%) were working professionals and 45 (8.4%) were unemployed. Most of the participants were from southern part of India 457, (69%), followed by west part 37 (96.9%), north 25 (4.7%), and east 14 (2.6%). 103 participants (19.32%) of the survey had chronic illness (Table-1). Among all the participants, 65 (37.8%) consulted physician before taking vaccination.

Table 1: COMORBIDITIES

Type of Chronic Illness	No of Participants	Percentage
Hypertension	21	40.4%
Diabetes mellitus	11	21.2%
Thyroid	14	26.9%
Pulmonary disorder	3	5.8%
Cardiac disorder	3	5.8%
Cancer	1	2%
Autoimmune diseases	3	5.8%
Other metabolic diseases	9	17.3%

WILLINGNESS TO TAKE VACCINATION:

498 (93.4%) participants took the vaccination willingly, which shows increased vaccine acceptance among people than before and 35(6.6%) of participants were forced to get vaccinated.

KNOWLEDGE ABOUT VACCINE:

Among the respondents 374 (70.2%) completed both the doses of vaccine and 159 (29.8%) took only single dose of vaccine. Among the participants 254 (47.7%) got to choose the brand of vaccine before getting vaccinated Fig-1, and they had various reasons to choose a particular brand like social media influence 15 (5.4%), efficacy of the vaccine 151 (54.7%), and friends and family suggestion 110 (39.90%). 60.20% of participants said they were very confident about the vaccine which implies positive attitude of people towards vaccine acceptance than before.¹¹ 36.60% were not sure and 3.20% were not confident about the vaccine¹³. People who still follow precautions like social distancing and wearing masks are almost 97.6% and 2.4% People have been not following any precautions like social distancing and wearing masks.

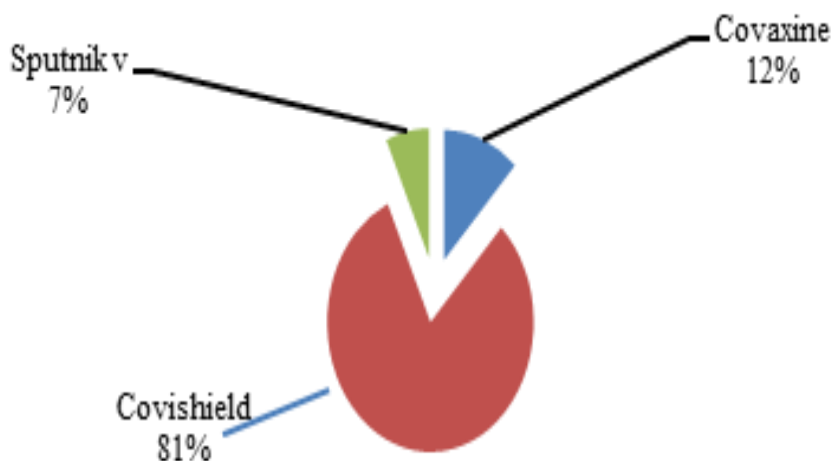


Figure 1 BRAND OF VACCINE

HISTORY OF INFECTION WITH COVID 19 BEFORE TAKING THE VACCINE:

14.30% of people have History of Infection with COVID-19 before taking the vaccine and 85.70% People do not have any History of Infection with COVID-19 before taking the vaccine.¹⁴

INCIDENCE OF INFECTION AFTER VACCINATION:

508 (95.3%) People did not have COVID 19 infection after vaccination, 25 (4.7%) people had COVID-19 infection even after vaccination. The rate of people getting hospitalised after vaccination have been greatly reduced.¹⁰

SYMPTOMS AFTER VACCINATION:

Among the symptoms experienced after vaccination, fever and body ache were found to be the most prevalent symptoms/side effects after vaccination.⁹ Other symptoms like hypersensitivity, Dyspnea, Hair loss was a strange side effect observed in certain people after vaccination. This was in accordance with previous study Recurrence of alopecia areata after COVID-19 vaccination ,Alfredo Rossi MD, PhD,Francesca Magri MD, et al. ⁸ (Table-2). 221 (52%) people have experienced symptoms after 24 hours of vaccination and 167 (39.3%) people experienced after 48 hours of vaccination.

Table 2: POST VACCINATION SYMPTOMS

Type of Symptom	No of Participants	Percentage
Fever	307	57.60%
Cold	78	14.60%
Headache	211	39.60%
Cough	30	5.60%
Body ache	327	61.40%
hypersensitivity reactions	99	18.60%

Dyspnoea	7	1.30%
Hair loss	70	14.00%

MANAGEMENT OF POST VACCINATION SYMPTOMS:

For management of symptoms, post vaccination, 58.7% took OTC medications and 24.8% didn't do anything (Fig-2).⁷

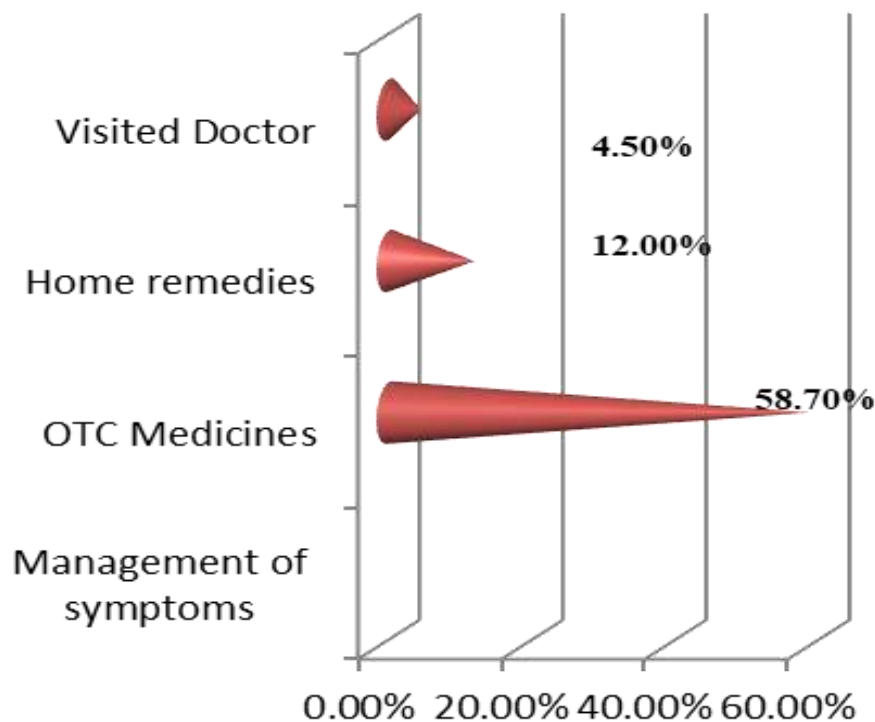


Figure 2 MANAGEMENT OF SYMPTOMS

CONCLUSION:

Overall, our study demonstrated that there was a high willingness to accept COVID-19 vaccine in India. Body ache, Fever, headache and alopecia were the most commonly reported symptoms. No serious adverse effects were reported so far due to vaccination and the mild symptoms usually subsides within a week or two which proves that the vaccine is safe. The rate of infection with COVID 19 has been reduced after vaccination which proves that the vaccine is efficient.

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Authors contributions:

Conceptualization: A.Priyadharshini.

Manuscript draft preparation: A.Adhisaya, K.Srinivas, R.Roopini, S.Anand

Review and editing: A.Priyadharshini.

Conflict of Interest: The authors declared no conflicts of interest.

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