



COVID-19 VACCINE ACCEPTANCE IN RURAL AREA OF CENTRAL INDIA: A CROSS-SECTIONAL SURVEY.

Community Medicine

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ABSTRACT

INTRODUCTION: To slow the spread of SARS-CoV-2 infection and mitigate its health effects, nations around the world have implemented different control measures, such as social distancing, partial and comprehensive lockdowns, closing schools and businesses, and/or wearing face masks in public. Vaccines have been a key strategy for improving health outcomes and life expectancy by controlling and preventing infectious diseases, such as smallpox, polio, and plague. . Hence, to better understand and inform the public health authorities, the current study aimed to collect information about the opinions of rural Indian people about COVID-19 vaccines, their willingness to be vaccinated and reasons for vaccine hesitancy. **METHOD:** By means of an online survey we tried to reach voluntary participants aged above 18 years old residents of rural area of central India and asked them to answer questions regarding acceptance of COVID-19 vaccine **RESULT:** 67% had taken covid19 vaccine and 33% had not taken covid19 vaccine. Most common reason (33%) being afraid of side effects. **DISCUSSION:** Vaccine acceptance in our study were 124(67%) is more than study done by Alqudeimat Y,et.al. 20(30.3%) study subjects not taking vaccine because of afraid of side effects of vaccine.

KEYWORDS

COVID-19, Vaccine Hesitancy, Vaccine Acceptance, Rural India

INTRODUCTION

- In December 2019, an outbreak of the novel coronavirus disease 2019 (COVID-19), caused by severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2), was initially detected in Wuhan city, Hubei province, China. [1]
- Subsequently, on March 11, 2020, the WHO declared COVID-19 as a pandemic due to the alarming levels of spread and severity of the infection. [1]
- To decrease the spread of COVID-19 infection and its health effects, nations around the world have implemented different preventive measures, such as social distancing, avoid crowds, subsequent lockdowns, and wearing face masks in public places.
- Although such measures have helped in controlling COVID-19 cases, the resurgence of COVID-19 has been reported as societies and economies reopened.
- Hence, there is an urgent need for long-term preventive measures.
- Few countries sought to achieve herd immunity, which is defined as a level of immunity in a population that prevents outbreaks through natural infection; however, such an approach has been deemed both unethical and unachievable. [1]
- Vaccines have been a key strategy for improving health outcomes and life expectancy by controlling and preventing infectious diseases, such as smallpox, polio, and plague. [2]
- Nevertheless, misinformation and conspiracy theories surrounding COVID-19 vaccines can highly influence vaccine uptake once available.
- Hence, vaccine hesitancy, described as a "delay in acceptance or refusal of vaccination despite availability of vaccination services", can hamper future COVID-19 vaccination efforts. [2]
- On 16 January 2021, India rolled out the world's largest vaccination programmed, marking the beginning of an effort to vaccinate a population of 1.3 billion against Covid-19.
- The cumulative number of confirmed cases reported globally is now over 231 million and the cumulative number of deaths is more than 4.7 million. [4]
- In India cumulative number of confirmed cases reported is over 34 million and the cumulative number of deaths is more than 0.451 million, and 968 million doses of vaccine administered. [4]
- Various media reports and anecdotal evidence suggest that lack of confidence and trust in health services, concerns regarding safety and efficacy of vaccines, and complacency of not being infected so far, were the major challenges for the acceptance of vaccination in rural area of India.
- Although such information is essential in planning strategies to increase vaccine acceptability before a vaccine becomes available. Hence, to better understand and inform the public health authorities, the current study aimed to collect information about the opinions of rural Indian people about COVID-19 vaccines,

their willingness to be vaccinated and reasons for vaccine hesitancy.

This study was done with objective to assess the COVID-19 Vaccine Acceptance in rural area of central India.

METHODS

- Study design:** Cross-sectional survey.
- Study subjects:** Respondents of online survey questionnaire in rural areas of central India.
- Study setting:** Rural area of Central India.
- Study duration:** 3 Months
- By means of an online survey we tried to reach voluntary participants aged above 18 years old residents of rural area of central India and asked them to answer questions regarding acceptance of COVID-19 vaccine.
- The English version of the online questionnaire translated into Marathi and adapted to the local context in residents of rural area of central India.
- A snowball approach by sharing the questionnaire through WhatsApp groups while asking participants to further distribute the questionnaire to their contacts and family members.
- Using the online tool, informed consent of participants was taken prior to data collection.

Data will be analyzed using appropriate statistical method.

RESULTS:

- A web survey based cross sectional study of covid19 vaccine acceptance includes 68% male and 32% female. Includes 66% study subjects belongs to 30 to 60 years of age, 19.5% of more than 60 years and 14.5% subjects below 30 years of age. About 29% of study subjects were illiterate, 22.5% studied up to primary school, 20.5% SSC, 16.5% HSC, and 11.5% subjects studied graduate and above. 22(11%) study subjects had comorbidity.
- 58.5 % Subjects not ever tested themselves for covid19 irrespective of symptoms and 41.5 Subjects tested themselves for covid19 with having symptoms or coming in contact with patient or for some other reasons like travelling, getting epass etc. of which 14.5% subject had positive result and 27% had negative result.
- 93% subjects said that covid19 is prevented by taking vaccine and 7% subjects said covid19 is not prevented by vaccine.
- 93 % subjects believed that present vaccine available against covid19 are effective and 7% not believed present vaccine are effective against covid19.
- 97.5 % subjects knows someone can be re-infected with coronavirus after recovering from previous Covid19 infection.

- Most vaccination centres have covishield vaccine available other vaccine available are Covaxin and Sputnik V.
- 67% had taken covid19 vaccine and 33% had not taken covid19 vaccine.
- 129(64.5%) were little worried/fearful about getting infected or re-infected by the coronavirus, 31(15.5%) very worried(3.5%) extremely worried , 5 (2.5%) moderately worried and 14 (28 %) not worried at all ,about getting infected or re-infected by the coronavirus.

Table 1: Sociodemographic factors of study subjects (n=200)

Variables		n	%
Gender	Male	124	62
	Female	76	38
Age (years)	< 30	29	14.5
	31-45	67	33.5
	46-60	65	32.5
	> 60	39	19.5
Education	Professional Degree	6	3
	Graduate or Postgraduate	17	8.5
	HSC	33	16.5
	SSC	41	20.5
	Primary School	45	22.5
	Illiterate	58	29
Comorbidity	Present	22	11
	Absent	178	89

Table 2: Reason for not taking Covid19 vaccine (n=66)

Reason for not taking Covid19 vaccine	n (%)
The covid-19 pandemic is over	12(18.2)
I don't think there is covid-19	4(6.1)
I already had covid-19 , I am immune	3(4.5)
My body is strong , I don't need vaccine	9(13.6)
I think vaccine is design to harm us	3(4.5)
I don't like to take injection or fear of injection	3(4.5)
I think vaccine is not effective	3(4.5)
I am afraid of side effects	20(30.3)
None of above	9(13.6)

DISCUSSION:

We conduct study on vaccine acceptance includes 62% male and 38% female. Most of study subjects belong to 30 to 60 years of age. 58(29%) of study subjects were illiterate and rest educated at least primary education. Vaccine acceptance in our study were 124(67%) is more than study done by Alqudeimat Y, et.al. 20(30.3%) study subjects not taking vaccine because of afraid of side effects of vaccine. Those who not take vaccine also have various reasons for not taking vaccine.

LIMITATION:

The results of this study should be interpreted within the context of study limitations. Methodological issues limit the validity of the research results.

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