



A STUDY ON KNOWLEDGE, ATTITUDE AND PERCEPTION OF ADULTS OF AGE 18-45 YEARS ON COVID-19 VACCINE

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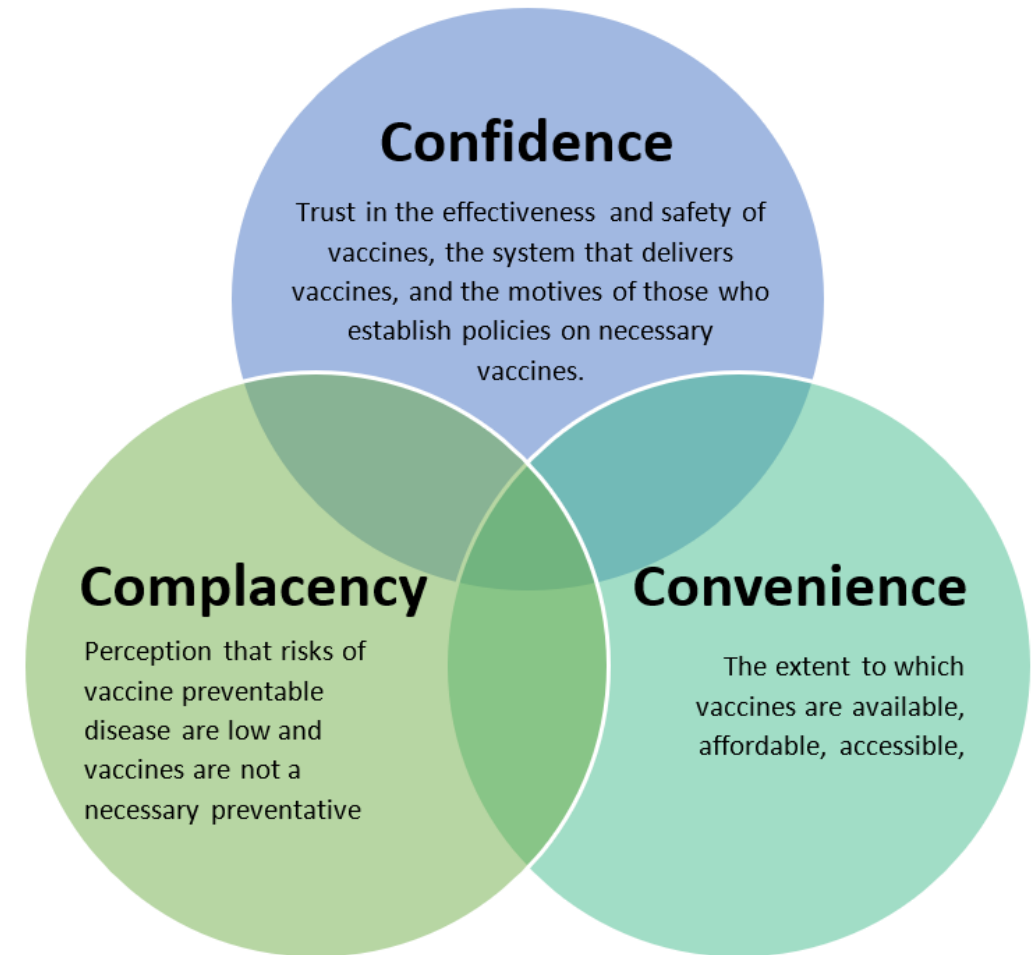


INTRODUCTION

- Its nearly two years since the start of pandemic and we have made huge strides towards finding the cure for the virus, nearly 300 vaccine proposals have been made and presently in India 3 vaccines have been approved for administration. The vaccination program in India started on 16th January 2021. Nearly 300 million people have been vaccinated.
 - The government hopes to vaccinate all Indians by the end of this year, but the effort has been hampered by a poor pace, a lack of doses, and vaccine reluctance. People are still unaware of vaccines available and hesitant towards immunisation against covid.
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Vaccine Hesitancy

- The introduction of any vaccination raises a slew of concerns. Based on past research on the introduction of different vaccines, we can list the barriers that occur at the level of Vaccine – such as manufacturing, trials, marketing, safety, and cold chain management.
- Hesitancy about vaccine is a complex issue, it is a continuum between complete acceptance and complete denial of vaccine. The behaviour responsible for hesitancy may be due to belief, ease of access, confidence, and complacency. Many experts believe that addressing vaccination reluctance at the population level is the best way to go.



PHASES 3-4

COVID-19 vaccines in clinical development around the world





Objectives of the study

To assess the knowledge of the people regarding the available vaccines and vaccination against covid-19

To assess the attitude of people towards the vaccination and vaccines available.

To assess the perception of people regarding what needs to be done with the vaccination policies.

METHODOLOGY

- **Research Design-** Cross-sectional, descriptive type of study.
- **Data type-** Primary Data
- **Study setting-** Online Survey using google form was forwarded through means of email, WhatsApp, and other social media platforms.
- **Inclusion Criteria-** People from the general population who are in the age group of 18-45 years.
- **Exclusion Criteria-** Children and Old age population.
- **Sample Size-** N=222
- **Sampling Technique-** Convenience Sampling



RESULTS AND DISCUSSION

Demographic Characteristics- N=222

- **Gender-** Male: 117(52.7), Female: 105(47.3)
- **Age-** The descriptive mean age of the sample (μ) is 28.04 and standard deviation (α) is 6.62 indicating most participants belonged to age group of 22-35.
- **Residence-** 15.3% of the respondents belonged from the rural areas and 84.7% of the sample belonged from the urban residence.
- **Education-** 45% are post-graduates, 47.3% are graduates, 1.4% are primary and 6.3% have completed secondary education.
- **Employment Status-** 103 respondents are employed, 87 are students and 32 respondents are unemployed

- Among the respondents 169 have been vaccinated and 53 have not been vaccinated.

Knowledge of the Respondents

- Are you aware of vaccine available- 99% of the respondents were aware that vaccine is available for Covid-19.
- Vaccines you have heard about- 91% of the respondents heard about all three vaccines presently approved in India. 5% of the respondents heard only about Covaxin, 3.6% of the sample heard only about Covishield and 0.5% have heard only about Sputnik V.
- Vaccine available for which age groups- 86.9% have responded 18 and above years of age, 1.8% have responded to 18 below and 11.3% have responded that all age groups have the vaccine available.
- Vaccine Eligibility- 20.3% have responded that those who are at risk, 3.2% have responded that those who have recovered from covid-19, 0.9% responded that those who have tested positive and 75.7% have responded all the above are eligible to get vaccinated.

ATTITUDE OF THE RESPONDENTS

- Majority of the respondents have strongly disagreed upon not wanting to take vaccine.
- Most of the respondents have agreed strongly to take vaccine to protect themselves and their family members.
- Respondents were concerned and not sure about the vaccine's safety.
- Participants agreed that recommendation by their workplace or college has prompted them to take vaccine and rest have been neutral or disagreed with the statement

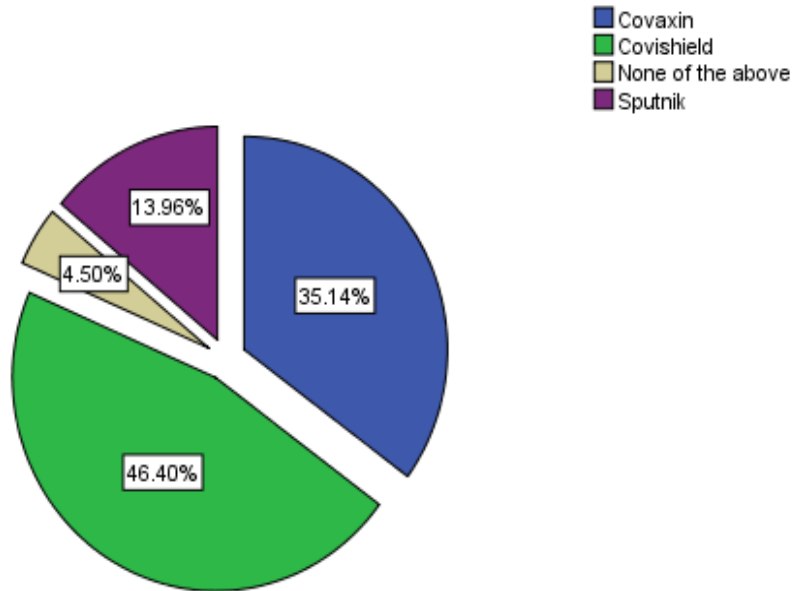
Reason for vaccination	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
Do not wish to take vaccine	20 (9.0)	10 (4.5)	18 (8.1)	59 (26.6)	115 (51.8)
To Protect myself	174 (78.4)	37 (16.7)	9 (4.1)	1 (0.5)	1 (0.5)
To protect family and loved ones.	182 (82)	34 (15.3)	5 (2.3)	-	1 (0.5)
Concerned about complications of vaccine.	28 (12.6)	55 (24.8)	80 (36)	42 (18.9)	17 (7.7)
Vaccine will be useful to control the disease.	119 (53.6)	80 (36)	21 (9.5)	-	2 (0.9)
Recommended by your workplace or college.	30(13.5)	56(25.2)	57 (25.7)	54 (24.3)	25 (11.3)
Prefer natural immunity rather than vaccine.	30 (13.5)	24 (10.8)	57 (25.7)	76 (34.2)	35 (15.8)

- Majority of the participants have strongly agreed that they need information about the vaccine efficacy, safety, and the side effects to decide.
- Many respondents said they would take vaccine if it went well in others.
- Almost half the respondents have agreed that their colleagues getting vaccinated has an influence on them.
- Respondents were willing to take vaccine if available.

Information necessary to take decision on vaccine	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
Vaccine Efficacy	159 (71.6)	53 (23.9)	8 (3.6)	2 (0.9)	-
Vaccine safety and side effects	146 (65.8)	58 (26.1)	8 (3.6)	3 (1.4)	-
Vaccine went well in others.	72 (32.4)	86 (38.7)	52 (23.4)	8 (3.6)	4 (1.8)
Colleagues are getting vaccinated.	35 (15.8)	60 (27)	60 (27)	51 (23)	16 (7.2)
Vaccine is available for vaccination	90 (40.5)	68 (30.6)	42 (18.9)	15 (6.8)	7 (3.2)

PERCEPTION REGARDING VACCINATION

Vaccine preference of respondents



Majority of the respondents felt there is a need for vaccines and vaccines are safe.

When asked about preference of vaccine respondents have given the following responses, 35.1% have said Covaxin, 46.4% wanted Covishield, 14% wanted Sputnik V, and 4.5% wanted none of the above.

When the respondents were asked whether they would recommend people to get vaccinated almost all of them have responded with a yes. 196 respondents feel there is a need to raise awareness regarding the importance of vaccination and 19 have responded there may be a need.

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- A descriptive crosstabulation was performed between vaccination status and age group, residence, and employment status to measure the association and how these factors affect the vaccination among participants. In the results participants of age above 30 years nearly everyone is vaccinated, and those who are employed nearly all of them have been vaccinated which can be due to compulsion of vaccination at their workplace. 21.6% of urban population are yet to be vaccinated which may be associated with non-availability of vaccine in the urban areas. Those who are still in college or below 24 years of age half of them are vaccinated which can be attributed to their peer pressure of others getting vaccinated.
 - In descriptive cross tabulation of perception with education level, respondents with primary and secondary education preferred only the Indian make vaccines whereas the respondents with higher education status opted for Sputnik as well which shows a gap in the knowledge regarding the vaccine. In terms of improving awareness all the participants have responded that there is a need for creating awareness.
 - The effectiveness and reliability of the Likert twelve statement scale were found to be strong, with a Cronbach alpha value of 0.738 and a reliability of 0.706 when combined with knowledge and perception questions. This shows that the reproducibility of our study is high, and our scale can be used to measure knowledge, attitude, and perception of the covid-19 vaccine.
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CROSSTABLATIONS

		Vaccinated	Not vaccinated
Age group	18-20	8 (3.60)	7 (3.1)
	21-25	57 (25.6)	33 (14.8)
	26-30	49 (22)	10 (4.5)
	31-35	17 (7.6)	-
	36-40	17 (7.6)	-
	40-45	21 (9.45)	3 (1.3)
Residence	Rural	29 (13)	5 (2.2)
	Urban	140 (63)	48 (21.6)
Employment	Employed	94 (42.3)	9 (4)
	Unemployed	55 (24.7)	12 (5.4)
	Student	20 (9)	32 (14.4)

		Rural	Urban
Need for vaccines	Yes	32 (14.4)	182 (81.9)
Are vaccines safe	Yes	32 (14.4)	182 (81.9)
Vaccine preference	Covishield	18 (8.1)	85 (38.2)
	Covaxin	12 (5.4)	66 (29.7)
	Sputnik V	3 (1.3)	28 (12.6)
	None of the above	1 (0.4)	9 (4)
Recommend vaccine	Yes	33 (14.8)	186 (83.7)
Awareness important	Yes	7 (3.1)	168 (75.6)
	No	-	7 (3.1)
	May be	6 (2.7)	13 (5.8)

A correlation study has been observed between need for the vaccine, vaccine safety, and recommendation for vaccination. It was found that a positive correlation between all the variables was observed at 0.01 level of significance (2-tailed).

		Recommend vaccine	Need vaccine	Vaccine safe
Recommend vaccine	Pearson Correlation	1	.396**	.396**
	Sig. (2-tailed)		.000	.000
Need vaccine	Pearson Correlation	.396**	1	.222**
	Sig. (2-tailed)	.000		.001
Vaccine safe	Pearson Correlation	.396**	.222**	1
	Sig. (2-tailed)	.000	.001	
**. Correlation is significant at the 0.01 level (2-tailed)				

There is a strong correlation between vaccine safety, vaccine efficacy and getting vaccinated to protect self and family members. Also, it is observed that correlation exists between colleagues getting vaccinated and willing to take vaccine; concerned about vaccine and vaccine went well in others; need of vaccination and availability; workplace recommendation and colleagues getting vaccinated.

		Vaccine efficacy	Vaccine safety	Vaccine went well	Colleague vaccinated	Vaccine available
Not want vaccine	Pearson Correlation	-.089	-.055	.182**	.322**	.063
	Sig. (2-tailed)					
		.185	.416	.006	.000	.353
To protect myself	Pearson Correlation	.430**	.362**	.062	-.069	.071
	Sig. (2-tailed)					
		.000	.000	.354	.304	.293
To protect family	Pearson Correlation	.452**	.358**	.087	-.073	.100
	Sig. (2-tailed)					
		.000	.000	.198	.279	.137
Concerned about vaccine	Pearson Correlation	.061	.122	.317**	.280**	.184**
	Sig. (2-tailed)					
		.367	.071	.000	.000	.006
Vaccination needed	Pearson Correlation	.270**	.254**	.292**	.097	.339**
	Sig. (2-tailed)					
		.000	.000	.000	.150	.000
Recommended by workplace	Pearson Correlation	-.062	-.069	.189**	.582**	.201**
	Sig. (2-tailed)					
		.356	.303	.005	.000	.003
Natural immunity than vaccine	Pearson Correlation	-.012	-.011	.186**	.328**	.009
	Sig. (2-tailed)					
		.860	.869	.005	.000	.143
**. Correlation is significant at the 0.01 level (2-tailed)						

Chi-Square Test

The association between education with knowledge regarding vaccine in bivariate analysis with the help of non-parametric test, results indicate significant Chi-Square values for education and knowledge

	Education	Vaccine heard	Vaccine available for	Vaccine eligible	Aware of vaccine
Chi-Square	160.523 ^a	516.559 ^a	290.027 ^b	323.982 ^a	218.018 ^c
Df	3	3	2	3	1
Asymp. Sig.	.000	.000	.000	.000	.000
a. 0 cells (0.0%) have expected frequencies less than 5. The minimum expected cell frequency is 55.5.					
b. 0 cells (0.0%) have expected frequencies less than 5. The minimum expected cell frequency is 74.0.					
c. 0 cells (0.0%) have expected frequencies less than 5. The minimum expected cell frequency is 111.0.					

CONCLUSION

An attempt is made to understand the people's knowledge, attitude, and perception regarding the covid-19 vaccines. There are still many unknowns regarding the virus and the first step to tackle the pandemic is getting vaccinated against it. People have different perceptions and beliefs about the current approved virus and there is a need to improve awareness about the vaccines and their importance. The government needs to bring in policies to change the perception about vaccines and educate people about the vaccines, their working, and the benefits. There was a strong correlation between the vaccine efficacy and vaccine acceptance. The participants who are highly educated know the importance of vaccine and the vaccines which are approved for the usage but focus needs to be on the people who have no access to information and are unaware of the vaccines. The overall knowledge of the participants in this study is 88.7%, and the perception is 94.92%. Most of the study population has a positive view towards vaccine and they feel the awareness regarding vaccine needs to be increased. The mass media marketing strategies need to be ramped up and government should take necessary steps to improve vaccine policies and incentives should be provided if needed to increase the vaccination status.