

Public attitude towards Covid-19 booster dose vaccination, Vijayawada, Andhra Pradesh, India

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Abstract:

This study aimed to explore the attitude of the public towards COVID-19 booster vaccination in Vijayawada, Andhra Pradesh, India.

Materials and methods: A study was conducted in urban and rural areas of Vijayawada Andhra Pradesh. A -structured questionnaire was used to interview around 700 respondents who took two doses of the covid-19 vaccine. Finally, the data were analyzed with 456 respondents, who filled out the questionnaire.

The questionnaire included three parts socio-demographic characteristics, selected factors, and beliefs about COVID-19 booster vaccination. The data collected was analyzed using Microsoft excel software and using SPSS.

Results: About the Covid-19 booster vaccination, 80.7% of the public in the age group of 20-40 are ready to take the booster dose without hesitation, followed by 87.5% of the public in the age group of 40-60 are ready to take booster dose without hesitation, followed by 100% respondents in the age group 60-80 are ready to take booster dose without hesitation, followed by 100% respondents in the age group 80 and above are ready to take booster dose without hesitation take covid-19 booster dose in the study area out of 390 respondents under the age group of 20-40, majority, 80.76% respondents' are expressing that Govt. should supply covid-19 booster dose at free of cost. Out of 48 respondents, under the age group of 40-60, majority 83.51% of respondents are expressing that Govt. should supply covid-19 booster dose free of cost, followed by 100% of respondents under the age group of 60-80 expressing that Govt. should supply covid-19 booster dose at free of cost, followed by 50% respondents under the age group of 80 and above are expressing that Govt. should supply covid-19 booster dose at free of cost

Conclusion: Most of the public is ready to take the booster covid-19 vaccine. They believe that preventive mechanisms like social distance, wearing the mask, and sanitizers will be better than taking a booster dose vaccination. So the government has to create awareness about the covid-19 booster dose and should eliminate apprehensions about the covid-19 vaccine. The sports persons and movie stars have to take initiation to curtail apprehensions in the minds of the public. The colleges have to conduct awareness programs to educate the public with the help of healthcare warriors.

Keywords: Covid-19 booster dose vaccination, Attitude, awareness, public

Introduction: Even though there are still significant global inequalities in COVID-19 vaccine access and distribution, (1) many high-income countries' vaccine programs are well-developed.

(2) Although evidence on the duration of immunity conferred by initial vaccinations is emerging, estimates indicate that immunity fades. As a result, health officials in several countries are debating, planning, or implementing COVID-19 booster programs. (5,6,7) A booster dose is an additional dose of a vaccine given after the first (primer) and second dose. A booster immunization provides re-exposure to the immunizing antigen after the initial immunization. It is intended to restore protective immunity to that antigen after memory for that antigen has deteriorated over time. Following a primary vaccination, the need for a booster dose is assessed in a variety of ways. One method is to measure the level of antibodies specific to a disease a few years after the initial dose is administered. Anamnestic response, or the rapid production of antibodies in response to an antigen stimulus, is a common method for determining the need for a booster dose of a specific vaccine. The World Health Organization (WHO) has also proposed annual boosters for high-risk individuals and biannual boosters for the general population [8]. A growing number of countries are now administering a third booster shot to the general public. Clinical evidence supports the widely accepted two-dose vaccination schedule [9, 10, 11, 12], but there is limited clinical evidence to support the need for boosters in India.

The research problem for the study

As we know at the present whole world is in crisis due to this deadly pandemic of new variants like delta and omicron, not only INDIA but also the whole world is under an economical crisis. Due to more human loss, every country is facing a problem. Although there have been many studies examining public acceptance of the current COVID-19 vaccination, little is known about booster acceptance in India. Hence this study has been undertaken.

Research Aim

The main aim of the research is to know the public attitude toward Covid-19 booster vaccination

Research Questions

- a) What are respondents' opinions on COVID-19 booster dose vaccines,
- b) What factors influence their decision to take the booster vaccine or not?
- c) If you disagree, please explain why you are declining the COVID-19 booster vaccination

Objectives

- 1) To study the awareness about COVID-19 booster vaccination.
- 2) To study the attitude of the public towards the COVID-19 booster dose vaccine.
- 3) To explore the impact of Demographic factors on the attitude towards COVID-19 booster dose vaccine.

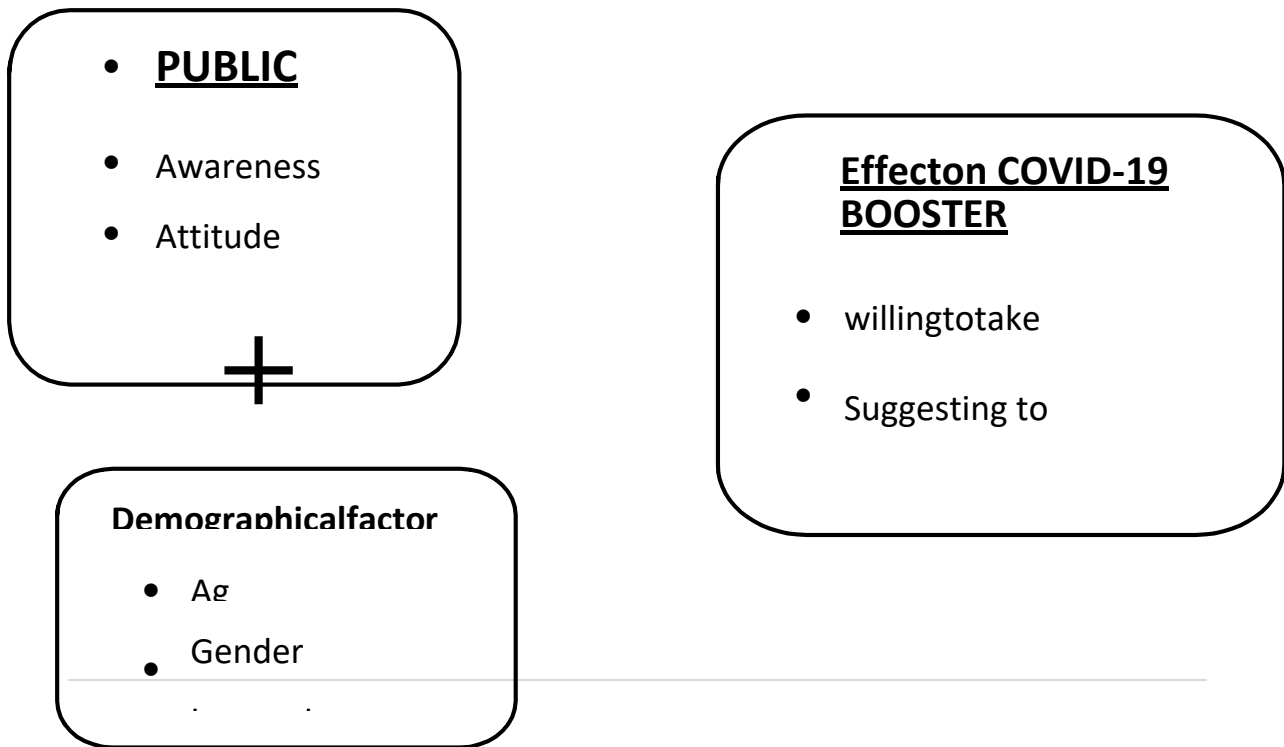
HYPOTHESIS OF THE STUDY:

- H₀:** Opinions regarding taking vaccination are without hesitation and are not dependent on age.
H₁: Opinions regarding taking vaccination are without hesitation not dependent on gender.

Research Methodology: A study has been undertaken to know the public attitude towards covid-19 booster dose vaccination, Vijayawada, Andhra Pradesh. A structured questionnaire is prepared and forwarded to around 700 respondents of different ages, and gender public in Vijayawada. A convenient sampling technique was adopted and got 456 responses and analyzed with SPSS software.

CONCEPTUAL FRAMEWORK:

Conceptual framework



DATA ANALYSIS

Table: 1

GENDER		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Female	177	38.8	38.8	38.8
	Male	279	61.2	61.2	100.0
	Total	456	100.0	100.0	

Source: Field survey

Table: 1 shows that out of 456 respondents, the majority 61.2 % (29) are male, followed by38.8 % (177) are female in the study area.

Table: 2

AGE		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	20--40	390	85.5	85.5	85.5
	40-60	48	10.5	10.5	96.1
	60-80	9	2.0	2.0	98.0
	80 above	9	2.0	2.0	100.0
	Total	456	100.0	100.0	

Source: A field survey

Table: 2 shows that out of 456 respondents, the majority of 85.5 % (390) are under the age group of 20-40, followed by 10.5%(48) are in the age group of 40-60, followed by2%(9) are in the age group of 60-80, followed by2%(9) are in the age group of 80 and above in the study area

Table: 3

RELIGION		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	CHRISTIAN	36	7.9	7.9	7.9
	HINDU	405	88.8	88.8	96.7
	JAIN	3	.7	.7	97.4
	MUSLIM	12	2.6	2.6	100.0
	Total	456	100.0	100.0	

Source: Field survey

Table: 3 shows that out of 456 respondents, the majority 88.8% (405) are related to the Hindu religion, followed by 7.9%(36) are Christians,2.67%(12) are Muslims, 0.7%(3) are jains in the study area.

Table: 4

NATIVITY

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid SEMI-URBAN	138	30.3	30.3	30.3
URBAN	216	47.4	47.4	77.6
VIJAYAWADA	102	22.4	22.4	100.0
RURAL				
Total	456	100.0	100.0	

Source: A field survey

Table No. 4 shows that out of 456 respondents, 47.4%(216) respondents are living in the urban area, followed by 30.3% (138) are living in a semi-urban area, followed by 22.4% are living in Vijayawada rural area

Table: 5

EDUCATIONAL QUALIFICATION

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid DEGREE	198	43.4	43.4	43.4
INTER	15	3.3	3.3	46.7
PG	222	48.7	48.7	95.4
PHD	12	2.6	2.6	98.0
SSC	9	2.0	2.0	100.0
Total	456	100.0	100.0	

Source: A field survey

From the above Table: 5, 48.7% are from PG background, 43.4% are from Degree, 3.3% are from Inter, 2.6% are from Ph.D., and 2% are from SSC in the study area.

Table: 6

OCCUPATION

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Retired employee	18	3.9	3.9	3.9
GOVT. EMPLOYEE	45	9.9	9.9	13.8
OWN BUSINESS	60	13.2	13.2	27.0
PRIVATE EMPLOYEE	135	29.6	29.6	56.6
Farmer	198	43.4	43.4	100.0
Total	456	100.0	100.0	

Source: A field survey

From the above Table: 6, the Majority, 43.4% of respondents are farmers, 29.6% are private employees, 13.2 are doing their own business, Inter, 9.9%are Govt. Employees, 3.9% are retired employees in the study area

Table: 7

INCOME				
Income/Year	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Below 2 LAKHS	36	7.9	7.9	7.9
2-4 LAKHS	405	88.8	88.8	96.7
4-6 LAKHS	3	.7	.7	97.4
6- AND ABOVE	12	2.6	2.6	100.0
Total	456	100.0	100.0	

Source: A field survey

Table: 7 shows that, out of 456 respondents, majority 88.8% of respondents' annual income is between 2-4 lakhs, followed by 7.9% of respondents' annual income is below 2 lakhs, 7% of respondents' annual income is between 4-6 lakhs, 2.6% respondents annual income is above 6 lakhs in the study area.

Table: 8

Gender * Ready to take Covid-19 Booster dose without any hesitation

Count

	Ready to take Covid-19 Booster dose without any hesitation					Total
	Agree	Disagree	Neither Agree nor Disagree	Strongly Agree	Strongly Disagree	
Valid Female	68	04	02	101	2	177
Male	101	3	10	165	0	279
Total	169	07	12	266	2	456

Source: A field survey

Table No. 8, shows that 95.6% of the public are ready to take a booster dose without hesitation, followed by 2.6% of the public is either agree or disagree, followed by 1.8% of respondents are disagree to take covid-19 booster dose in the study area.

Table: 9

AGE * Ready to take Covid-19 Booster dose without any hesitation

Count

	Ready to take Covid-19 Booster dose without any hesitation]					Total
	Agree	Disagree	Neither Agree nor Disagree	Strongly Agree	Strongly Disagree	
Valid 20--40	211	24	48	104	3	390
40-60	21	3	0	21	3	48
60-80	3	0	0	6	0	9
80 above	3	3	0	3	0	9
Total	238	30	48	134	6	456

Source: A field survey

Table No. 9, shows that 80.7% of the public in the age group of 20-40 are ready to take booster doses without hesitation, followed by 87.5% of the public in the age group of 40-60 are ready to take booster doses without hesitation, followed by 100% respondents in the age group 60-80 are ready to take booster dose without hesitation,

followed by 100% respondents in the age group 80 and above are ready to take booster dose without hesitation take covid-19 booster dose in the study area

Table: 10

NATIVITY * Ready to take Covid-19 Booster dose without any hesitation

Count

	Ready to take Covid-19 Booster dose without any hesitation]						Total
	Agree	Disagree	Neither Disagree	Agree nor Disagree	Strongly Agree	Strongly Disagree	
SEMI-URBAN	126	3	3		04	2	138
URBAN	138	4	7		67	2	216
VIJAYAWADA	85	2	6		9	0	102
RURAL							
Total	349	09	16		80	4	456

Source: A field survey

The table No.10, shows that out of 138 semi-urban respondents, the majority, 92.75% of semi-urban respondents are ready to take covid-19 booster dose without any hesitation, 94.9% of urban respondents are ready to take booster dose without hesitation, 92.15% of rural respondents are ready to take vaccination without any hesitation.

Table: 11

GENDER * Govt. should supply covid-19 booster dose free of cost

	GOVERNMENT SHOULD SUPPLY COVID-19 BOOSTER DOSES AT FREE OF COST					Total
	Agree	Disagree	Neither Agree nor Disagree	Strongly Agree	Strongly Disagree	
Female	66	04	00	105	2	177
Male	68	33	13	165	0	279
Total	134	37	12	270	2	456

Source: A field survey

The table No.11, shows that out of 177 female respondents, the majority, 95.55% respondents' are expressing that Govt. should supply covid-19 booster dose free of cost out of 279 male respondents, majority 83.51% of respondents are expressing that Govt. should supply covid-19 booster dose at free of cost

Table: 12

AGE * * Govt. should supply covid-19 booster dose free of cost

Count

	Ready to take Covid-19 Booster dose without any hesitation]						Total
	Agree	Disagree	Neither Agree nor Disagree	Strongly Agree	Strongly Disagree		
20--40	201	24	48	114	3	390	
40-60	14	3	7	21	3	48	
60-80	3	0	0	6	0	9	
80 above	3	3	0	3	0	9	
Total	221	30	55	144	6	456	

Source: A field survey

Table No.12, shows that out of 390 respondents under the age group of 20-40, the majority, 80.76% respondents are expressing that Govt. should supply covid-19 booster dose free of cost. Out of 48 respondents, under the age group of 40-60, majority 83.51% of respondents are expressing that Govt. should supply covid-19 booster dose free of cost, followed by 100% of respondents under the age group of 60-80 expressed that Govt. should supply covid-19 booster dose free of cost, followed by 50% of respondents under the age group of 80 and above are expressing that Govt. should supply covid-19 booster dose free of cost

Table: 13. A

Gender * I will take the Covid-19 vaccine without hesitation Crosstabulation

	I will take the Covid-19 vaccine without hesitation					Total
	Agree	Disagree	Neutral	Strongly agree	Strongly disagree	
Female	68	04	02	101	2	177
Male	101	3	10	165	0	279
Total	169	07	12	266	2	456

Source: Field survey

Table 13. B

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	2.827	4	.587
Likelihood Ratio	2.847	4	.584
N of Valid Cases	200		

For this hypothesis, the significant value (0.587) is greater than the level of significance (0.05), and we accept our null hypothesis. Therefore, opinions regarding taking vaccination are without hesitation not dependent on gender.

Table: 14. A

AGE * Ready to take Covid-19 Booster dose without any hesitation

Count

	Ready to take Covid-19 Booster dose without any hesitation					Total
	Agree	Disagree	Neither Agree nor Disagree	Strongly Agree	Strongly Disagree	
20--40	211	24	48	104	3	390
Valid 40-60	21	3	0	21	3	48
60-80	3	0	0	6	0	9

	80 above	3	3	0	3	0	9
Total	238	30	48	134	6	456	

Source: A field survey

Table: 14. B

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	5.423	4	.247
Likelihood Ratio	6.546	4	.162
N of Valid Cases	200		

For this hypothesis the significant value (0.247) is greater than the level of significance (0.05), we accept our null hypothesis. , opinions regarding taking vaccination are without hesitation not dependent on age.

Findings:

The research reveals that most of them know about the different coronavirus variants and their effect. They are having trust in the vaccines and protection given by vaccines against on covid-19. The public is a positive attitude to take booster doses, to get protection from new variants. But they are apprehensive about the efficacy of booster doses against new variants and side effects. Demographic parameters did not affect the public much because they are educated and aware of the COVID-19 vaccine. 95.6% of the public were ready to take a booster dose without hesitation, followed by 2.6% of the public who either agree or disagree, followed by 1.8% of respondents who disagree to take the covid-19 booster dose in the study area. 92.75% of semi-urban respondents are ready to take the covid-19 booster dose without any hesitation, 94.9% of urban respondents are ready to take the booster dose without hesitation, and 92.15% of rural respondents are ready to take vaccination without any hesitation. 80.7% of the public in the age group of 20-40 are ready to take booster dose without hesitation, followed by 87.5% of the public in the age group of 40-60 are ready to take booster dose without hesitation, followed by 100% respondents in the age group 60-80 are ready to take booster dose without hesitation, followed by 100% respondents in the age group 80 and above are ready to take booster dose without hesitation take covid-19 booster dose in the study area. 390 respondents under the age group of 20-40, 80.76% respondents are expressing that Govt. should supply covid-19 booster dose free of cost. Out of 48 respondents, under the age group of 40-60, majority 83.51% of respondents are expressing that Govt. should supply covid-19 booster dose free of cost, followed by 100% of respondents under the age group of 60-80 expressing that Govt. should supply covid-19 booster dose at free of cost, followed by 50% respondents under the age group of 80 and above are expressing that Govt. should supply covid-19 booster dose at free of cost

SUGGESTION:

The success or failure of any government program depends upon the awareness and attitude of people towards the program. The government of India is started vaccinating against COVID-19. Similarly Govt. of India should promote the need and importance of booster dose covid-19 vaccination to get protection from different variants. Some sectors of people are having apprehension about the results of clinical evidence about covid-19 booster dose vaccination. Government should clear all apprehensions through an appropriate promotion strategy. Government should supply free of cost.

Conclusion:

In conclusion, our preliminary findings indicate that a relatively large proportion of respondents in Vijayawada, Andhra Pradesh, accept COVID-19 booster vaccination.

The findings indicate that more efforts are needed to increase perceived benefits and decrease perceived barriers to vaccination to increase acceptance of COVID-19 boosters.

Our findings could be used as a model for other Indian states and countries to analyze public perceptions and acceptance of COVID-19 booster vaccination to design effective and appropriate vaccination extension strategies when boosters become widely recommended in the future.

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