

Assessment of Knowledge, Attitude and Acceptance of COVID-19 Vaccine among Pregnant & Lactating Females

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Abstract

Background: The COVID 19 Virus globally has caused tremendous morbidity and mortality among the general population around the world. To assess knowledge, there has been limited number of studies done to know the prevalence of COVID-19 vaccine acceptance among pregnant and lactating women. **Aims:** To assess knowledge, attitude and acceptance of Covid-19 vaccine among pregnant & lactating females in rural area of western U.P. **Methodology:** This was a cross-sectional study conducted on pregnant & breast-feeding women attending the antenatal & postnatal OPDs in the department of Obstetrics and gynecology & department of Pediatrics at Teerthankar Mahaveer Medical college & Research center. A total 1560 patient responses were taken from age group 18 to 42 years. All were provided with a pre-validated questionnaire consists of multiple choice. These questions evaluate knowledge of COVID-19 vaccine authorization and published materials. The universal acceptance of the COVID-19 vaccine. Three- and five-point Likert scales were used to rate the responses. **Results:** knowledge regarding COVID-19 vaccination among participants was obtained from government agencies was insignificant given by 16%, somewhat significant by 40% and significant by 44%, from news channel and radio was 20%, 42% and 38%, from social media in 25%, 48% and 27%, from friends and family in 18%, 50% and 32% and through healthcare provider in 14%, 36% and 50% respectively. In response Strongly disagree, disagree, neither agree nor disagree, agree, and strongly agree were seen as responses to desire to take the COVID-19 vaccine seen in 3%, 4%, 12%, 26% and 55%, through obtaining natural immunity COVID-19 vaccine was seen in 18%, 25%, 22%, 18% and 17%, desire to spend money for the COVID-19 vaccine was seen in 4%, 12%, 14%, 35% and 35% and there was tendency to recommend vaccines to people who were already familiar with them 3%, 8%, 12%, 34% and 43% respectively. **Conclusion:** Corona Virus immunization is reliable and accessible method of controlling the pandemic and as a result reduces it reduces the morbidity and mortality. Pregnant and lactating women need additional knowledge and attitude regarding COVID-19 vaccination.

Keywords: COVID-19, Pregnant, Lactating women.

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INTRODUCTION

In worldwide the COVID-19 had placed tremendous illness and mortality impacts on the general population. According to the data there were more than 2.5 million people died worldwide [1, 2]. The elderly population had a higher mortality rate due to their severe medical conditions like respiratory disease, heart disease, diabetes mellitus and immunocompromised patients [3]. The Safety precautions like face mask,

maintain social distancing, overcrowding avoided, proper hand washing and proper sanitization are all part of the global endeavor to reduce the impact of pandemic over health and socio-economic [4]. The scientific community and pharmaceutical sector put in enormous effort, supported by government aid, to create effective & safe vaccinations for the SARS-CoV-2 pandemic [5].

In India Covishield and covaxin are used widely. Despite the fact that vaccine production and availability to COVID-19 vaccinations were hampered by apprehension over the approved and projected COVID-19 immunization [6]. World Health Organization (WHO) state that hesitancy of vaccine described as refusal or delay in accepting immunizations notwithstanding the availability of treatments. COVID 19 immunization is a safe and effective treatment of controlling the pandemic and as a result reduces the morbidity and mortality. Vaccine is both reliable and efficacious and general population must accept for reducing mortality and morbidity [7]. The current research focused at pregnant and breast-feeding women's knowledge, attitude and acceptance of Covid-19 vaccine.

MATERIALS & METHODS

This Cross-sectional study was conducted in all pregnant & breast-feeding women attending the antenatal & postnatal OPDs in the department of Obstetrics and gynecology & department of Pediatrics at Teerthanker Mahaveer Medical College & Research

center. A total 1560 patient responses were taken from age group between 18-42 years.

Inclusion criteria

All Pregnant and breast-feeding women > 18 years who came for regular ANC visit & post-natal care clinic follow-up in OBGYN and pediatric OPD.

History of Psychiatric illness and hearing loss, refusal to participate and H/O drug allergy and hypersensitivity to vaccination components were excluded in this study.

All were provided with a prevalidated questionnaire consists of multiple choice [8]. These questions assessed understanding of COVID-19 vaccine eligibility and source of information. The general people Impression of COVID 19 Vaccine. The distribution of data was assessed by chi-square test or fisher's exact test and was taken significant value p value <0.05.

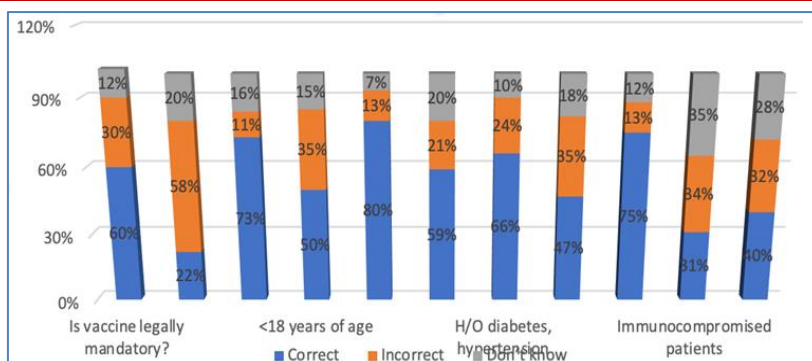
RESULTS

Table-I: Knowledge about COVID-19 vaccines

Questionnaire	Correct	%	Incorrect	%	Don't know	%	P value
	No.	%	No.	%	No.	%	
Is vaccine mandatory?	546	35%	826	53%	187	12%	<0.05
When will the immunity obtained?	343	22%	904	58%	312	20%	<0.05
Vaccination is indicated in <1 years old	1138	73%	171	11%	249	16%	<0.05
<18 years of age	780	50%	546	35%	234	15%	<0.05
Above >18 years	1248	80%	202	13%	109	7%	<0.05
Pregnant ladies and lactating mothers	920	59%	327	21%	312	20%	<0.05
H/o Diabetes, hypertension	1029	66%	374	24%	156	10%	<0.05
With active COVID-19 infection	733	47%	546	35%	280	18%	<0.05
Patients recovered from COVID-19	1170	75%	202	13%	187	12%	<0.05
Immunocompromised patients	483	31%	530	34%	546	35%	>0.05
Those allergic to food items/drugs	624	40%	499	32%	436	28%	>0.05

Table I, graph I shows that in response to whether vaccine legally mandatory, 35% replied correct, 53% incorrect and 12% don't know. In response to when protective immunity will be obtained, 23% replied correct, 58% incorrect and 20% don't know. In response to indication of vaccination in <1 years old, 73% replied correct, 11% replied incorrect and 16% don't know. In response to <18 years of age, 50% replied correct, 35% incorrect and 15% don't know, those with above 18 years of age, 80% replied correct, 13% incorrect and 7% don't know. In pregnant ladies

and lactating mothers, response was 59%, 21% and 20%, in response to those having history of diabetes, hypertension; response was 66%, 24% and 10%. Those with active COVID-19 infection, response was 47%, 35% and 18%, those with recovered from COVID-19 response was 75%, 13% and 12%, in immunocompromised patients, response was 31%, 34% and 35% and those allergic to food items/ drugs the correct response was given by 40% incorrect by 32% and don't know by 28% respectively. A significant difference was observed ($P < 0.05$).



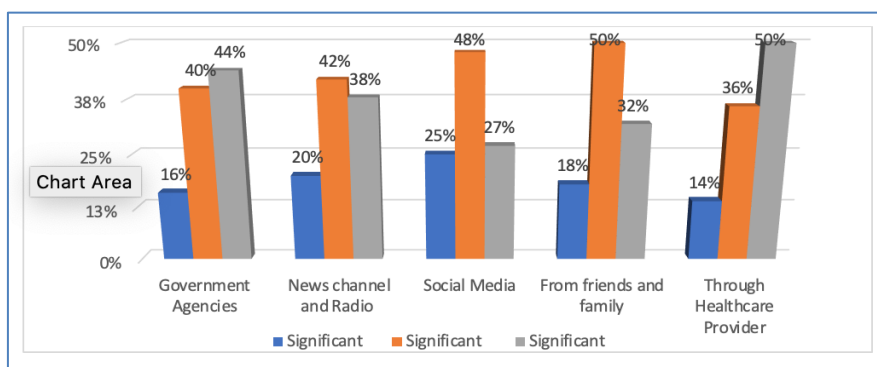
Graph-I: Knowledge about COVID-19 vaccines

Table-II: Information sources that influence public opinion about COVID-19 immunization

Questionnaire	Insignificant		Somewhat significant		Significant		P value
	No.	%	No.	%	No.	%	
Government Agencies	249	16%	624	40%	686	44%	>0.05
News channel and Radio	312	20%	655	42%	592	38%	<0.05
Social Media	390	25%	748	48%	421	27%	<0.05
From friends and family	280	18%	780	50%	499	32%	>0.05
Through Healthcare Provider	218	14%	561	36%	780	50%	>0.05

Table II, graph II shows that source of knowledge regarding COVID-19 vaccination was obtained from government agencies was insignificant given by 16%, somewhat significant by 40% and significant by 44%, from news channel and radio was

20%, 42% and 38%, from social media in 25%, 48% and 27%, from friends and family in 18%, 50% and 32% and through healthcare provider in 14%, 36% and 50% respectively. The difference was significant (P< 0.05).



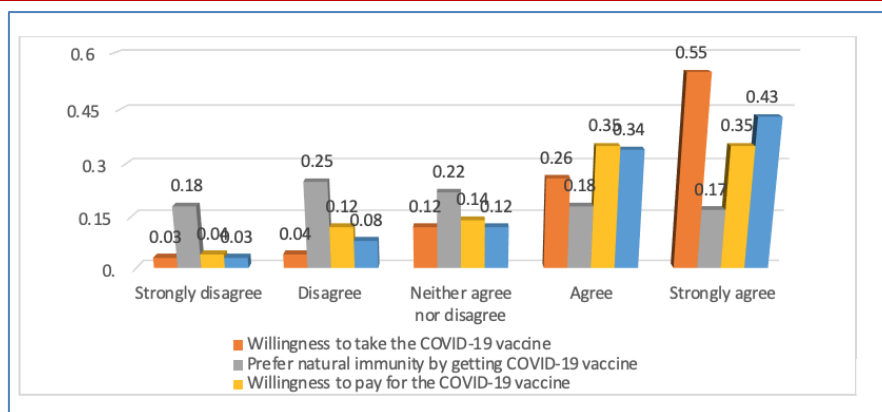
Graph-II : Information sources that influence public opinion about COVID-19 immunization

Table-III: General towards COVID-19 vaccination programmed

Attitude	Strongly disagree		Disagree		Neither agree nor disagree		Agree		Strongly agree		P value
	NO.	%	No.	%	No.	%	No.	%	No.	%	
Want to get vaccinated against COVID-19	47	3%	63	4%	187	12%	405	26%	858	55%	<0.05
Prefer natural immunity	280	18%	390	25%	343	22%	280	18%	265	17%	<0.05
Willingness to pay	62	4%	187	12%	218	14%	546	35%	546	35%	<0.05
Willingness to recommend vaccine to known	47	3%	125	8%	187	12%	530	34%	670	43%	<0.05

Table III, Graph III shows that in response to willingness to take the Very disagree, disagree, neither agree nor disagree, agree, and strongly agree were the responses to the COVID-19 seen in 3%, 4%, 12%, 26% and 55%, through obtaining natural immunity COVID-19 vaccine was seen in 18%, 25%, 22%, 18% and 17%,

desire to spend money on COVID-19 vaccination was seen in 4%, 12%, 14%, 35% and 35% and willingness to recommend vaccine to known was seen in 3%, 8%, 12%, 34% and 43% respectively. The difference was significant (P< 0.05).



Graph-III: General towards COVID-19 vaccination programmed

DISCUSSION

COVID-19 infection causes serious physical, mental social emotional and financial consequences [9]. Numerous precautionary techniques have been established with the goal of limiting the spread of corona virus which includes regular hand washing, social distancing and restriction. COVID-19 infection has been managed with limited success, and the disease's second wave has stunned the world [10]. The ongoing COVID-19 immunization regimen appears effective in providing protection against the virus [11]. The current research focused at pregnant and breast-feeding women's knowledge, attitude and acceptance of Covid-19 vaccine.

In present study, we observed that in response to whether vaccine legally mandatory, 35% replied correct, 53% incorrect and 12% don't know. In response to when protective immunity will be obtained, 23% relied correct, 58% incorrect and 20% don't know. In response to indication of vaccination in <1 years old, 73% replied correct, 11% relied incorrect and 16% don't know. Kumari *et al.* [12] in their study included a total of 1294 responses.

The majority of the respondents had limited awareness about vaccine acceptability in vulnerable population such as allergy sufferers (57.89%), immune-compromised patients (62.98%), pregnant and breastfeeding women (41.89%), and chronic illness patients (34.78 percent). Elder participants were more inclined to receive the COVID-19 vaccine ($p < 0.05$) because they believed it was safe and that it was a societal obligation. Participants who were younger ($p < 0.05$).

We found that in response to <18 years of age, 50% replied correct, 35% incorrect and 15% don't know, those with above 18 years of age, 80% replied correct, 13% incorrect and 7% don't know. In pregnant ladies and lactating mothers, response was 59%, 21% and 20%, in response to those having history of diabetes, hypertension; response was 66%, 24% and 10%. Those with active COVID-19 infection, response

was 47%, 35% and 18%, those with recovered from COVID-19 response was 75%, 13% and 12%, in immunocompromised patients, response was 31%, 34% and 35% and those allergic to food items/ drugs the correct response was given by 40% incorrect by 32% and don't know by 28% respectively.

According to kourlaba *et al.* [13] people who are relying on social media for information about vaccination have become less prone to get vaccinated. This necessitates the dissemination of accurate COVID-19 vaccination updates to the general public, particularly those who live in rural areas and have a lower socioeconomic standing.

Furthermore, the government should leverage and manage social media channels to convey accurate vaccine information in order to reduce vaccine dropout rates and increase vaccine receptivity.

We observed the source of knowledge regarding COVID-19 vaccination was obtained from government agencies was insignificant given by 16%, somewhat significant by 40% and significant by 44%, from news channel and radio was 20%, 42% and 38%, from social media in 25%, 48% and 27%, from friends and family in 18%, 50% and 32% and through healthcare provider in 14%, 36% and 50% respectively. We found that in response to willingness to take the vaccine was seen in 3%, 4%, 12%, 26% and 55%, through obtaining natural immunity of vaccine was seen in 18%, 25%, 22%, 18% and 17%, desire to spend money on COVID-19 vaccination was seen in 4%, 12%, 14%, 35% and 35% and receptivity to recommend vaccine to known was seen in 3%, 8%, 12%, 34% and 43% respectively. China did a study and state that that the desire to pay for the vaccine was impacted by socioeconomic characteristics. Because India has such significant economic differences, government officials should ensure that vaccines are offered for those from lower socioeconomic classes at no cost or at subsidized rates in order to ensure widespread immunization coverage [14].

Pregnant or recently pregnant women are more likely than non-pregnant women to become very ill as a result of COVID-19. Getting vaccinated against COVID-19 can help keep you from getting sick from it. People who are pregnant, breastfeeding, attempting to conceive, or who may become pregnant in the future should have the COVID-19 vaccine. Women who are pregnant can receive booster dose.

During pregnancy the amount of evidence strengthen the reliability and efficacy of COVID-19 vaccination. According to these findings, the advantage of getting a COVID-19 vaccine appears to outweigh any known or potential risks of vaccination during pregnancy. There is currently no confirmation that any vaccine, including COVID-19, causes infertility in women or men.

CONCLUSION

Corona Virus immunization is reliable and accessible method of controlling the pandemic and as a result reduces it reduces the morbidity and mortality. Pregnant and lactating women need additional knowledge and attitude regarding COVID-19 vaccination.

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