

Attitude of Pregnant and Lactating Women Towards Vaccination Against Covid-19

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ABSTRACT

Background: COVID-19 pandemic has brought a lot of perils for humanity, especially pregnant and lactating women, who are susceptible to many complications and thus bear a major factor amongst pregnant and lactating women. **Objective:** To determine the attitude of pregnant and lactating women towards the vaccination of COVID-19 at a tertiary care Hospital. **Study Design:** Cross-sectional study. **Settings:** Department of gynecology and obstetrics, federal government polyclinic Hospital, Islamabad Pakistan. **Duration:** January 2021 to June 2021. **Methods:** All pregnant and lactating women aged 18 to 45 years who visited the Gynecology OPD for a routine checkup and were willing to participate in the study were included. After taking demographic information, women were interviewed regarding the COVID-19 vaccine to observe their perceptions about the efficacy and safety of vaccines. In addition, women were interviewed regarding their acceptance of the COVID-19 vaccine and, for those who stated that they were not willing, their views, regarding the vaccine. All the information was collected via a questionnaire-based study proforma for the purpose of analysis. **Results:** A total of 300 women were assessed towards vaccination of COVID-19, out of them 51.7% were aged 18-30 years and 48.3% were aged 31-45 years. Out of all, 57.0% of women showed a positive attitude, while 43.0% of participants had a negative attitude towards vaccination against COVID-19. Attitudes toward vaccination against COVID-19, were statistically insignificant according to age, SES, and employment status ($p > 0.05$), while it was statistically significant according to educational status ($p=0.001$). **Conclusion:** As per the study conclusion, more than fifty percent of the women had positive attitudes towards COVID-19 vaccination among pregnant and lactating women, while the refusal rate was still observed to be high. Illiteracy and inadequate counselling seem to be causal factors linked to the negative attitudes.

Keywords: Attitude, COVID-19, Vaccine, Pregnancy, Lactation.

INTRODUCTION

Coronavirus disease 2019 (COVID-19), an extremely contagious viral infection characterized by severe acute respiratory syndrome coronavirus 2,¹ has resulted in a detrimental effect on the globe's demography, causing the mortality rate of more than 6 million individuals all over the world.¹ In addition to this, being pregnant seems to be an immunosuppressive state, and a lowered immune system makes females more prone to experiencing negative effects as a result of infection.²

Women during pregnancy are regarded to be a high-risk population for having the disease COVID-19, which can cause very severe symptoms because by the certain physiological changes to the immune system's capacity, the respiratory system, and certain other comorbidities.^{3,4} On the other hand, because so many breastfeeding women were required to remain in isolation during COVID-19, the nourishment that their babies received was negatively impacted. As a protective measure, breastfeeding gives numerous benefits to both the mother and the newborn, including a host of health advantages.⁵

The WHO released a scientific review in 2021 that described three different ways through which a virus could be transferred to newborns from their mothers,^{5,6} as the virus may transmit from the mother's bloodstream through the placenta to the fetus's tissues during pregnancy, during birth if the newborn exposed to contaminated maternal blood, feces, or vaginal discharges and after delivery, it may be transmitted either through the mother's breast milk or by direct contact with an infected person or contamination.^{5,6} Therefore, the prevention of infections in women who are pregnant or breastfeeding needs to be a major priority. Although the vaccination reduces the risk of getting COVID-19 as well as the severity of the disease that results from the virus being transmitted without the use of other protective measures.⁷ It has been observed that the acceptability of the COVID-19 vaccination differs amongst breast feeding or pregnant women, independent of whether or not such women get the COVID-19 vaccination.⁸

Vaccination faces a number of barriers, one of these is the refusal of the vaccine, which can be described as the decision made by an individual or group to decline vaccination when offered the chance to get vaccinated.^{9,10} In low- and middle-income countries, despite the accessibility of COVID-19 vaccines, there is a paucity of evidence regarding the knowledge, attitude, and practices of pregnant females in relation to COVID-19 vaccines.^{10,11} Furthermore, in developing countries, including Pakistan the vaccination acceptance rate is still very low.¹⁰ Consequently, it would indicate that information provided by health specialists regarding the COVID-19 vaccine is very important for women during pregnancy.¹² However, this study has been conducted to explore the recent information regarding the attitudes of pregnant and lactating women regarding COVID-19 vaccination, which is going to give us an estimate of the proportion of pregnant women willing to get vaccinated and the causes of refusal that could be helpful in formulating a robust policy to improve the attitudes of such participants towards COVID-19 vaccination in our local population.

METHODS

This was a cross-sectional observational study carried out at the department of obstetrics and gynecology at the Federal Government Polyclinic Hospital, Islamabad, from January 2021 to June 2021, after receiving approval from the hospital's Ethical Review Board.

All pregnant and lactating women aged 18 to 45 years who visited the Gynecology OPD for a routine checkup and were willing to participate in the study were included. All the psychologically ill women and those who were not willing to participate in the study were excluded. A verbal informed consent was obtained, and

all of the women were thoroughly briefed about the purpose and nature of this research study. The women were also briefed on the fact that all of their information would be kept private.

After taking the demographic information, women were interviewed in a friendly atmosphere regarding the COVID-19 vaccine to observe their perceptions about the efficacy and safety of vaccines. In addition, women were interviewed regarding their acceptance of the COVID-19 vaccine as well as those who stated that they were not in favour of it. A self-made questionnaire following the previous studies was used. This questionnaire consisted of five questions asked of each participant. Attitude of the participant was considered positive towards vaccination if participant showed strong agreement towards all five questions. However, those participants who expressed their strong disagreement to any of the five questions were considered as having a negative attitude towards vaccination against COVID-19.

All the information was collected via a questionnaire - based study proforma for the purpose of analysis. The data was analyzed using SPSS Version 26.0. A chi-square test was applied, and a p-value ≤ 0.05 was taken as significant.

RESULTS

A total of 300 women were evaluated for COVID-19 vaccination, with 51.7% being between the ages of 18 and 30 years, and 48.3% being between the ages of 31 and 45 years. Out of all 31.3% women were of poor socioeconomic status, 38.3% belonged to middle socioeconomic status, while 30.3% belonged to rich families. This data along with employment status shown in table 1.

Table 1: Demographic characteristics of the participants (n=300)

Variables	Frequency	Parentage	
Age groups	18-30 Years	155	51.7%
	31-45 Years	145	48.3%
Socioeconomic status (SES)	Poor	94	31.3%
	Middle Class	115	38.3%
	Rich	91	30.3%
Employment status	Employed	150	50.0%
	Housewives	150	50.0%
Educational status	Illiterate	68	22.7%
	Formal education	124	41.3%
	Well educated	108	36.0%

According to the attitude of pregnant and lactating women towards vaccination against COVID-19, 57.0% of participants showed a positive attitude, while 43.0% of participants had a negative attitude towards vaccination against COVID-19. Table 2

Table 2: Attitude of pregnant and lactating women towards COVID-19 vaccine n=300

Attitude	Frequency	Percent
Positive	171	57.0%
Negative	129	43.0%
Total	300	100.0%

The attitude of the pregnant and lactating women towards vaccination against COVID-19, was statistically insignificant according to age, SES, and employment status ($p > 0.05$), while it was statistically significant according to educational status ($p = 0.001$) as shown in the table 3.

Table 3: Attitude of pregnant and lactating women according to age, SES and employment status n=300

Variables		Attitude		p-value
		Positive	Negative	
Age groups	18-30 Years	93 (60.0%)	78 (53.8%)	0.287
	31-45 Years	62 (40.0%)	67 (46.5%)	
SES	Poor	59 (62.8%)	35 (37.2%)	0.360
	Middle class	61 (53.0%)	54 (47.0%)	
	Upper	51 (56.0%)	40 (44.0%)	
Employment status	Employed	82 (54.7%)	89 (59.3%)	0.414
	Housewives	68 (45.3%)	61 (40.7%)	
Educational status	Illiterate	33 (11.0%)	35 (11.7%)	0.0001
	Formal education	55 (18.3%)	69 (23.0%)	
	Well educated	83 (27.7%)	25 (8.3%)	

DISCUSSION

The COVID-19 pandemic appears to be continuing in several countries, and new strains of the virus that are causing concerns have triggered alarms all around the world. Moreover, it has recently been indicated that a relationship exists between a history of COVID-19 and unfavorable outcomes for both mothers and newborns.¹³ Regardless of the fact that millions of the women have undergone pregnancies, births and breastfeeding during the SARS-CoV-2 pandemic, it is necessary to comprehend patient perception and barriers to vaccination acceptance are essential fundamental aspect in helping the pandemic to end.¹⁴ To the best of our knowledge, Pakistan has no exact data on the acceptability of vaccines by pregnant, breastfeeding, and childbearing women. However, this study has been done to determine the attitude of pregnant and lactating women towards the vaccination of COVID-19 at a tertiary care Hospital. In this study, 57.0% of the pregnant and lactating women had a positive attitude towards vaccination against COVID-19, while 43.0% of the participants had a negative attitude. In the comparison of this study, Naqvi S *et al*¹⁰ around half of the female respondents agreed that the COVID-19

vaccination is either very or moderately effective, and such respondents thought that the vaccine is safe for women during pregnancy. On the other hand, a study by Yoon H *et al*¹² in Korea reported that, 26.6% of women reported having had a COVID-19 vaccine during their pregnancies, and furthermore they demonstrated that the most frequent reason for COVID-19 vaccine hesitation among females who did not desire to get the vaccine and fear that the vaccine could harm the fetus (91.7%), following by doubt in the efficacy of the vaccine (42.6%).¹² In contrast to this study, Kumari A *et al*¹⁵ reported that the majority of study subjects, 90%, were in agreement that it was important to get vaccinated against COVID-19, and seemed to be knowledgeable that women who are pregnant (72.2%) or lactating (65.2%) are able to get vaccinations.¹⁵ In an Indian study, Kalpana MM *et al*¹⁶ determined that 92.7% of women had positive attitudes, 6.9% had average attitudes, and only 0.4% had negative attitudes. The difference in the studies regarding attitude levels may be because of difference in study sample size, study selection criteria, and women's educational levels.

In this study, 51.7% of the women were between the ages of 18 and 30, and 48.3% were between the ages of 31 and 45. Out of all the 31.3% of women were of poor socioeconomic status, 38.3% belonged to middle socioeconomic status, while 30.3% belonged to rich families, and 50% of the women were employed, while 50% were housewives. 22.7% women were illiterate, 41.3% women had formal education and 36.0% women were well educated. These findings are nearly identical to those of Abuhammad S *et al*. (17), who found that 55.2% of women were aged 26-35 years, followed by 26.6% of women aged 18-25 years, 15.5% of women aged 36-45 years, and only 2.7% of women aged 46-55 years. Furthermore, they reported that 56.2% of the women were unemployed, and most of the women were uneducated and had formal education. Our findings were also similar to the study by Kalpana MM *et al*¹⁷.

In this study, the attitude of the pregnant and lactating women towards vaccination against COVID-19 was statistically insignificant according to age, SES, and employment status ($p > 0.05$), while it was statistically significant according to educational status ($p = 0.001$). In the comparison of this study, Abuhammad S *et al*¹⁶ reported that in most of the studies reviewed in their paper, it was found that a greater vaccine acceptance rate was associated with a higher educational level, an older age, and a higher SES, while these studies also showed that it is difficult to adjust many elements that influence COVID-19 vaccine acceptability, such as socioeconomic and regional influences.¹⁶ On the other hand, women with higher levels of education were more likely to engage in public health preventative practices.^{16,18} Meanwhile, even in Ghana and Ethiopia, where

awareness was high, the rate of adoption of preventative behaviors among pregnant women was low.^{16,19,20} This study has several limitations, such as the fact that the sample size was limited and collected from a single health facility, limiting the generalizability of our findings because vaccine uptake undoubtedly varies widely across the nation. Additionally, because those who attended antenatal clinics were more likely to be chosen as participants, there was a possibility of adverse selection. Additionally, this survey did not investigate possible factors that could affect vaccination uptake.

CONCLUSION

As per the study conclusion, more than fifty percent of women had a positive attitude towards covid-19 vaccination among pregnant and lactating women, while the refusal rate was still observed to be high. Illiteracy and inadequate counselling seem to be the causal factors linked to the negative attitudes.

LIMITATIONS

Limited sample sized study and conducted at single health facility

SUGGESTIONS / RECOMMENDATIONS

It has been recommended that the government publicizes data on the efficacy and safety of the COVID-19 vaccine for pregnant and lactating women through print and electronic media and devise a robust strategy for running awareness campaigns to mitigate the negative attitude amongst pregnant and lactating women towards the COVID-19 vaccination in our local population.

CONFLICT OF INTEREST / DISCLOSURE

None.

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