



## A CROSS-SECTIONAL STUDY TO EVALUATE KNOWLEDGE, ATTITUDE, AND PRACTICES AMONG PREGNANT & LACTATING WOMEN TOWARDS THE COVID-19 PANDEMIC

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### ABSTRACT

**Objective:** To evaluate the knowledge, attitude, and practices among pregnant & lactating women towards the COVID-19 pandemic

**Materials and Methods:** A cross-sectional study was conducted during the months of November & December 2021 to evaluate the knowledge, attitude, and practice among pregnant & lactating women visiting the outpatient department at Community Health Center Mashobra, Shimla, during the COVID-19 pandemic.

**Results:** Mass media was the primary source of information for the majority (57.8%, 63) of participants, followed by health personnel (28.4%, 31). Most of the participants had more than or equal to 10 years of education (72, 66.1 %).

94% of women knew the symptoms of COVID 19, 88% knew it could be transmitted by air droplets, and 76% were aware that it could be more severe during pregnancy. Around 93% of women were aware that there is a vaccine available against COVID 19, but only 64% knew that it could be administered during pregnancy & 63% were aware that it could be safely given during lactation. A greater knowledge level about COVID 19 was seen with increasing age and the higher education level of the participants.

59% of women washed hands with soap/used sanitizer on coming home and 72% of women put on a face mask before going out. Only 51% of women were willing to report symptoms of COVID 19 to the health facility, but 61% of women were willing to seek health care after becoming seriously ill. 53% of pregnant and 59% of lactating women were vaccinated or willing to be vaccinated against COVID 19.

**CONCLUSION:** The target population demonstrated acceptable knowledge but poor practice toward COVID-19 infection and vaccination. Health-care personnel should pay more attention to creating awareness about COVID 19 vaccination among pregnant and lactating women at every point of contact.

### KEYWORDS :

#### INTRODUCTION

Coronavirus disease 2019 (COVID-19) virus is an emerging respiratory disease caused by severe acute respiratory syndrome coronavirus-2, which is a single-strand, positive-sense ribonucleic acid virus associated with high morbidity and mortality in the elderly population, immunocompromised people, and persons with comorbidities.<sup>1</sup> Pregnancy is a state of immunomodulation, which makes pregnant women generally more susceptible to COVID-19 infection and severe illness.<sup>2</sup> So, extensive precautions have been recommended to avoid exposure to the virus. However, it's unclear whether pregnant women in the rural area of Shimla are knowledgeable about COVID-19 and practice preventive measures against it. So this study was conducted to assess the knowledge and preventive practices towards COVID-19 among pregnant and lactating women seeking antenatal services in Community Health Center, Mashobra, Shimla.

#### MATERIALS AND METHODS

A cross-sectional study was done at the Community Health Center, Mashobra, Shimla, the capital of Himachal Pradesh, a small state in North India. This study was conducted during the month of November & December 2021 to evaluate the knowledge, attitude, and practice among 112 consecutive pregnant & lactating women visiting the outpatient department at Community Health Center Mashobra, Shimla, towards the COVID-19 pandemic.

#### Exclusion Criteria:

Women who were not willing to participate in the study.

Purposive sampling was used. The questionnaire used in this study, designed by the authors, was initially developed in English and later on translated to Hindi, a language in which participants were well versed. After obtaining written informed consent, the questionnaire was given for the data collection, which was voluntarily filled out by the women attending the outpatient department at CHC Mashobra. It was used to assess the knowledge, attitude, and practice among pregnant & lactating women towards the COVID-19 pandemic.

The patients were given reassurance about the confidentiality and secrecy of the information provided by them. The components of this study were knowledge, attitude, and practice of females regarding the COVID-19 pandemic. The females in this study were also educated and counseled about the COVID-19 pandemic at the end of the interview.

The collected data were analyzed with respect to the information given by the patients according to the set questionnaire items at the end of two months study period. Appropriate tests for statistical analysis were used.

## RESULTS

A total of 112 women were approached for this study, and 109 females out of 112 females were willing to participate in the study. The mean age of women who participated in the study was  $25.27 \pm 3.21$  years (ranging from 19 years to 34 years).

Mass media was the primary source of information for the majority (57.8%, 63) of participants, followed by health personnel (28.4%, 31) and friends (5.5%, 6). Most of the participants had more than or equal to 10 years of education (72, 66.1 %), 26.6% (29 women) had eight years of education, and only eight women (7.3%) were illiterate. Homemakers comprised 76% (83 women), and working women 24% (26) of the study participants.

**Table 1 Knowledge Towards Coronavirus Infection**

Knowledge	n	%
Do you know the symptoms of COVID-19 infection	102	93.6
COVID-19 infection can be transmitted by air droplets	96	88.1
COVID-19 can be severe in pregnancy	83	76.1
There is a vaccine available against COVID -19	101	92.6
COVID 19 vaccination is safe in pregnancy	70	64.2
COVID 19 vaccination is safe during lactation	69	63.3

94% of women knew the symptoms of COVID 19, 88% knew it could be transmitted by air droplets, and 76% were aware that it could be more severe during pregnancy. Around 93% of women were aware that there is a vaccine available against COVID 19, but only 64% knew that it could be administered during pregnancy & 63% were aware that it could be safely given during lactation. A greater knowledge level about COVID 19 was seen with increasing age and the higher education level of the participants.

**Table 2 Attitude And Practice Towards Coronavirus Infection**

	n	%
Wash hand with soap/use sanitizer	64	58.7
Wearing a face mask when going out	78	71.6
Reporting COVID-19 symptoms to a health facility	56	51.3
Seeking health care when seriously ill	66	60.6
Pregnant females vaccinated or willing to be vaccinated against COVID 19	58	53.2
Lactating females vaccinated or willing to be vaccinated against COVID 19	64	58.7

59% of women washed hands with soap/used sanitizer on coming home and 72% of women put on a face mask before going out. Only 51% of women were willing to report symptoms of COVID 19 to a health facility, but 61% of women were willing to seek health care after becoming seriously ill. 53% of pregnant and 59% of lactating women were vaccinated or willing to be vaccinated against COVID 19.

## DISCUSSION

As the outbreak of COVID-19 continues to unfold, major concerns are being raised about its effects on pregnancy and the potential risk of vertical transmission. Recent evidence suggests that the risk of maternal mortality appears to be high in COVID-19 pregnant women with severe disease.<sup>3</sup> This study was conducted to ascertain the knowledge, attitude, and practice of pregnant women in a rural area of Shimla, India, toward COVID-19. The high prevalence of adequate knowledge in our study may be attributed to the constant sharing of information on COVID-19 by the Government of India, media, television, radio, and mobile van announcements. Health education about COVID-19 is also being imparted at the various health facilities. In this study,

higher education level was also associated with greater knowledge about COVID 19, similar to the findings from the studies conducted in China.<sup>4</sup> It may be because they are more exposed to health information, especially regarding COVID-19, and are therefore likely to take positive measures to protect themselves against the disease.

The practice of COVID-19 public health measures among pregnant women was quite low in the area. This implies that having adequate knowledge does not translate into the adoption of a new practice. The government will need to follow a strict regulatory strategy on COVID-19 preventive measures in order to cut the chain of transmission among the target population.

Studies have shown that older age is a risk factor for severe complications and fatality related to COVID-19.<sup>5</sup> This might be the reason why older women in our study were more engaged in good COVID-19 preventive practices to avoid getting infected with the disease.

Despite having adequate knowledge about COVID 19 disease and vaccination, the willingness of pregnant and lactating women for COVID 19 vaccination was not very high. It could be due to fear of potential side effects of the vaccine on the pregnancy or infant. We need to bring about a change in this attitude by spreading awareness and clearing the myths & misconceptions among the population.

## CONCLUSION

The target population demonstrated acceptable knowledge but poor practice toward COVID-19. Health-care personnel should pay more attention to educating pregnant and lactating women at every point of contact; legal enforcement should be done when necessary to improve the practice of preventive measures. Special attention should be paid to less-educated pregnant women and those from rural areas.

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