



## PERCEPTION AND ATTITUDE TOWARDS COVID-19 VACCINE AMONG ANTENATAL MOTHERS IN SELECTED HOSPITAL KAMRUP (M) ASSAM: A DESCRIPTIVE STUDY

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**ABSTRACT** **Background of the study:** Coronavirus disease (COVID-19) is an infectious disease caused by a newly discovered severe acute respiratory syndrome coronavirus (SARS-CoV-2). In this current corona virus disease 2019 (COVID-19) pandemic, vaccination remains a critical strategy to curbing infections and reducing severity. **Aim:** To find out the level of perception and attitude towards Covid-19 vaccine among antenatal mothers in selected Hospital Kamrup (M), Assam. **Method:** Quantitative research approach was used. The samples were collected using non probability convenience sampling technique from 150 antenatal mothers. Self structured knowledge questionnaire was used to assess the level of perception and 5 point likert scale for attitude. **Results:** Data analysis was done by calculating mean, SD, and chi square test. The level of perception towards Covid-19 vaccine among antenatal mothers was found that majority i.e. 71(47%) had moderately adequate and adequate knowledge respectively and 8(6%) had inadequate knowledge on. The level of attitude reveals that majority i.e. 131(87%) had desirable attitude and 19(13%) had moderately desirable attitude whereas none of the respondents have undesirable attitude. The study also reveals that age, religion, education, Have you taken any Covid-19 vaccine during the pregnancy period, income and trimester had shown statistically significant association with level of perception where none of the demographic variables had shown statistically significant association with level of attitude. And there was a moderate positive correlation between perception and attitude. **Conclusion:** From this study it was concluded that majority of antenatal mothers had moderately adequate and adequate knowledge respectively and majority had desirable attitude which clearly infers that if their perceptions are clear on Covid 19 vaccine they will surely have a positive attitude on taking the Covid 19 vaccine.

**KEYWORDS :** Perception, Attitude, Covid-19 vaccine, Antenatal mothers

### INTRODUCTION

Coronavirus disease (COVID-19) is an infectious disease caused by a newly discovered severe acute respiratory syndrome coronavirus (SARS-CoV-2). On 11<sup>th</sup> March 2020, the World Health Organization (WHO) declared the COVID-19 outbreak as a global pandemic with exponential spread worldwide. According to WHO, more than two million death have been recorded worldwide up to February 2021. Therefore it is important to avoid infection. The physiological and immunological changes in pregnancy make women more susceptible to severe illness from respiratory infections. A recent Centre for Disease Control and Prevention (CDC) report demonstrated that pregnant women with COVID-19 are more likely to be hospitalized, admitted to the intensive care unit and receive mechanical ventilation with similar risk of mortality compared to non pregnant women. In this current corona virus disease 2019 (COVID-19) pandemic, vaccination remains a critical strategy to curbing infections and reducing severity.

Jayagobi PA, Ong C, Thai YK, Mathur M, Lim CCW, Jiun SM(2021) conducted a cross sectional study on perception and acceptance of Covid-19 vaccine among pregnant and lactating mother in Tertiary maternal and child hospital in Singapore. The result shows that vaccine acceptance rates in pregnant and lactating women were 30.3% and 16.9% respectively. Most pregnant women (70.0%) and lactating women (83.7%) were willing to take the vaccine only when more safety data during pregnancy and breastfeeding were available. From this survey, it found out to be low vaccine acceptance.

### OBJECTIVES:

1. To assess the perception and attitude towards Covid-19 vaccine among antenatal mothers attending the antenatal OPD in the selected hospital Kamrup (M), Assam.
2. To determine the correlation between perception and attitude towards Covid-19 vaccine among antenatal mothers attending antenatal OPD in the selected hospital Kamrup (M), Assam
3. To find out the association between the level of Perception and attitude towards Covid-19 vaccine among antenatal mothers with the selected demographic variables.

### RESEARCH METHODOLOGY:

**Research approach:** Quantitative research

**Research design:** Descriptive survey research design.

### Variables:

**Research variables:** Perception and attitude level.

**Demographic variables:** Age, Religion, Level of education, Residence, Occupation, Working under frontline job Kind of job, Parity, Type of family, Income, Covid-19 vaccine taken or not during pregnancy, Trimester of pregnancy, Previous information regarding Covid-19 vaccine, Source of information, Any health education attended on Covid-19 vaccine.

**Setting of the Study:** District Hospital Sonapur, Kamrup Metropolitan District, Assam.

**Population:** Antenatal mothers

**Target population:** Antenatal mothers who were attending the antenatal OPD in District Hospital Sonapur Kamrup (M), Assam.

**Accessible population:** Accessible populations were antenatal mothers who fulfill the inclusion criteria.

**Samples:** Antenatal mothers who are attending the antenatal OPD in District Hospital, Sonapur, Kamrup (M), Assam and who fulfill the inclusion criteria.

**Sample size:** 150

**Sampling technique:** Non probability convenient sampling technique

**Inclusion criteria:** The inclusion criteria in the study were:

- a) Those who will give written consent after understanding the objectives of the study by signing the informed consent form after reading it properly.

**Exclusion criteria:** The exclusion criteria in the study were:

- a) Who are not willing to participate.
- b) Who are absent at the time of study.

### Tools and technique:

Self structured knowledge questionnaire was used to assess the perception level and a 5 point likert scale was used to assess the level of anxiety and technique was self report.

### Scoring key:

**Section I: Self Structured knowledge questionnaire:** This part of the tool consisted of 16 questions. For every correct response a score of 1 mark was given and 0 mark for incorrect response. The total score on

knowledge towards Covid-19 vaccine was 16.

**Section II: 5 point Likert Scale:** This part of the tools consisted of 14 statements (each statements has a score of 1-5 and the total score is 70) to assess the attitude of the respondents. For every statement the highest score is 5 and the lowest score is 1.

**Content validity of the Tool:** The prepared tool (self structured knowledge questionnaire and 5 point likert scale) along with the problem statement and objectives was submitted to nine experts.

**Reliability of the Tool:**

The reliability of the tool was done by using split half method followed by Spearman Brown Formula for self structured knowledge questionnaire and Test retest method has been used for attitude calculated by Karl person correlation coefficient. The method revealed that the tool was reliable, the reliability of self structured knowledge questionnaire was found to be r=0.8 and the reliability of 5 points Likert scale for attitude were found to be 0.9.

**Pilot study:** Pilot study was conducted from 30/11/21 to 6/12/21, 32 samples were selected using convenience sampling technique. And the study was found to be feasible.

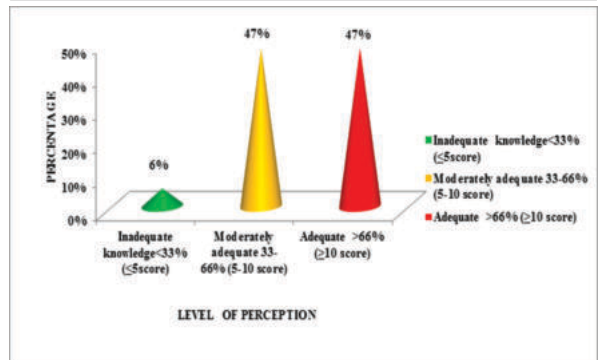
**Main study:** The main study was conducted from 17<sup>th</sup> January'22 to 4<sup>th</sup> February'22.

**RESULTS:**

**Table I: Frequency And Percentage Distribution Of Demographic Variables Of Antenatal Mothers.** n= 150

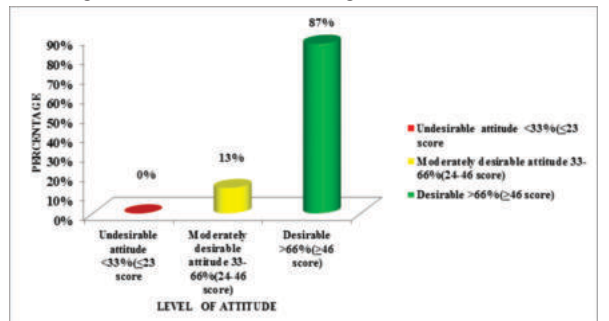
Demographic Variables	Frequency (f)	Percentage (%)
<b>Age in years</b>		
≤25	98	65.3
25 – 30	46	30.7
30 – 35	6	4.0
≥35	-	-
<b>Religion</b>		
Hinduism	113	75.4
Islamic	35	23.3
Christian	2	1.3
Others	-	-
<b>Level of education</b>		
No formal education	2	1.3
Primary level	45	30.0
Secondary level	79	52.7
Graduate	24	16.0
Post graduate	-	-
<b>Residence</b>		
Rural area	147	98.0
Urban area	3	2.0
<b>Occupation</b>		
Business	8	5.3
Government	-	-
Private	2	1.3
Others	140	93.3
<b>Are you working under the Frontline job?</b>		
Yes	-	-
No	150	100.0
<b>Which kind of job are you in?</b>		
Doctors	-	-
Nurse	-	-
Ward girl	-	-
Police	-	-
Others	-	-
<b>Parity</b>		
Primiparous	90	60.0
Multiparous	60	40.0
<b>Type of family</b>		
Nuclear family	106	70.6
Joint family	43	28.7
Extended family	1	0.7
<b>Income per month</b>		

≤Rs.10001	85	56.6
Rs.10002 – 29972	64	42.7
Rs.29973 – 49961	1	0.7
Rs.49962 – 74755	-	-
Rs.74756 – 99930	-	-
Rs.99931 - 199861	-	-
≥199862	-	-
<b>Have you taken any Covid-19 vaccine during the pregnancy period?</b>		
Yes	117	78.0
No	33	22.0
<b>Trimester</b>		
≤ 3 months	65	43.3
(4-6) months	34	22.7
≥7 months.	18	12.0
Nil	33	22.0
<b>Previous information on Covid-19 vaccine</b>		
Yes	149	99.3
No	1	0.7
<b>Source of information</b>		
Mass media	67	44.7
Health professionals	26	17.3
Family members	55	36.7
Others	2	0.3
<b>Any health education /counseling given on Covid-19 vaccine</b>		
Yes	8	5.3
No	142	94.7



**Figure I: Frequency And Percentage Of Perception Towards Covid-19 Vaccine Among Antenatal Mothers.**

The data represented in cone diagram depicts the frequency and percentage distribution of level of perception towards COVID-19 vaccine among antenatal mothers. The diagram depicts that out of 150 antenatal mothers majority 71(47%) had moderately adequate and adequate knowledge respectively and 8(6%) had inadequate knowledge on COVID-19 vaccine among antenatal mothers. n=150



**Figure II: Frequency And Percentage Distribution Of Level Of Attitude Towards Covid-19 Vaccine Among Antenatal Mothers**

The data represented in cylindrical diagram depicts that the frequency and percentage distribution of level of attitude towards COVID-19 vaccine among antenatal mothers. The diagram shows that majority 131(87%) had desirable attitude and 19(13%) had moderately

desirable attitude whereas none of the respondents have undesirable attitude towards COVID-19 vaccine among antenatal mothers.

**Table II: Corelation Between Perception And Attitude Towards Covid-19 Vaccine Among Antenatal Mothers** n = 150

Variables	Mean	S.D.	'r' value	'p' value
Perception	10.01	3.21	r = 0.384	p = 0.0001, S***
Attitude	52.98	5.29		

\*\*\*p<0.001, S – Significant

The table shows the relationship between perception and attitude towards COVID-19 vaccine among antenatal mothers. The mean score of perception was 10.01±3.21 and the mean score of attitude was 52.98±5.29. The calculated Karl Pearson's Correlation Value of r = 0.384 shows a moderate positive correlation between perception and attitude scores which clearly infers that when the perception of antenatal mothers towards COVID-19 vaccine increases their attitude towards it also increases. Thus, the research hypothesis (H1) is accepted and null hypothesis (H0) is rejected.

Association Between The Perception And Attitude Towards Covid-19 Vaccine Among Antenatal Mothers With Their Selected Demographic Variables.

The demographic variables age, religion, level of education and have you taken any Covid-19 vaccine during the pregnancy period, income and trimester had shown statistically significant association with level of perception on COVID-19 vaccine among antenatal mothers at p<0.001 and <0.01 level of significance. Thus H2 (research hypothesis) was accepted and null hypothesis was rejected.

And the other demographic variables like residence, occupation, parity, type of family, previous information on Covid-19 vaccine, source of information and any health education attended on Covid-19 vaccine had not shown statistically significant association with level of perception on COVID-19 vaccine among antenatal mothers at p<0.05 level of significance. Hence the null hypothesis was accepted and research hypothesis (H2) was rejected.

And none of the demographic variables had shown statistically significant association with level of attitude towards COVID-19 vaccine among antenatal mothers at p<0.05 level of significance. Hence null hypothesis is accepted and research hypothesis (H3) is rejected.

## DISCUSSION

The present study showed that majority i.e. 71(47%) had moderately adequate and adequate knowledge respectively whereas 8(6%) had inadequate knowledge on COVID-19 vaccine among antenatal mothers. the demographic variables age, religion, level of education and Have you taken any Covid-19 vaccine during the pregnancy period, income and trimester had shown statistically significant association with level of perception on COVID-19 vaccine among antenatal mothers at p<0.001 and <0.01 level of significance. Majority 131(87%) had desirable attitude and 19(13%) had moderately desirable attitude whereas none of the respondents have undesirable attitude towards COVID-19 vaccine among antenatal mothers. And none of the demographic variables had shown statistically significant association with level of attitude towards COVID-19 vaccine among antenatal mothers at p<0.05 level of significance. The result of the present study was in contrast with the study conducted by Battarbee AN, Stockwell MS, Varner M, Daugherty M, Vargas C, et.al. (2020) conducted a cross sectional survey study on attitude towards Covid-19 illness and Covid-19 vaccination among pregnant women in New York. Total 1185 pregnant women were included in study .The results shows that 939 pregnant women eligible for the main cohort study, 915 (97%) consented to participate. Only 41% reported they would get a vaccine. Study concluded that <50% were willing to get vaccinated during pregnancy.

## CONCLUSION

The study concludes that overall level of perception towards Covid-19 vaccine among antenatal mothers was moderately adequate and adequate with 71(47%). The mean score was 52.98. And the overall level of attitude towards Covid-19 vaccine among antenatal mothers was desirable attitude 131(87%). Through this study, the investigator concluded that majority of antenatal mothers had good perception and attitude towards Covid-19 vaccine.

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