

Perception of COVID-19 among pregnant women attending ante-natal clinic of a tertiary care hospital, West Bengal

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Abstract:

Introduction: Pregnant women are at increased risk of serious illness and complications if infected with COVID-19 than the general population. Thus, the present study was aimed to assess their perceptions regarding COVID-19 attending ante-natal clinic of a tertiary care hospital.

Materials and methods:

A cross-sectional, observational study was conducted in the ANC clinic of a tertiary care hospital. 246 pregnant women who visited clinic on the days of data collection, were included for the study. Semi-structured questionnaire was used for data collection.

Results:

Among the 243 participants, majority (55.1%) had 25-36 gestational weeks of pregnancy and 23.9% had history of previous abortion. 53.9% told they took second booster dose while 21.8% didn't receive any doses of COVID-19 vaccine. 88.5% responded yes regarding communicability of COVID-19 from person to person. 75.7% responded no when they were asked about anyone suffered from COVID-19 including them as well. More than half of the participants said they don't know whether COVID-19 can be transmitted from mother to child. 44.4% Don't know whether COVID positive mother can breastfeed her child.

Conclusion:

Some knowledge and good preventive practice like vaccination for COVID-19 were present among pregnant women but the effect of COVID-19 in pregnancy is still not clear to them. Pregnant females should be educated regarding COVID-19 in pregnancy.

Keywords: COVID-19, pregnancy, perception

Introduction

Covid 19 is an infectious disease mainly affecting the respiratory system, caused by SARS- COV-2 and is a close counterpart of SARS and MERS virus, only being more contagious than the latter.¹ Owing to the vicious nature of the virus and its extensive spread throughout the world, Covid-19 has caused unimaginable and unparalleled disruptions at varied intervals in the last two years, which led to it being declared a Pandemic by WHO on 11th March 2020.² While a chunk of healthcare services elective in nature had been conveniently rescheduled, the larger chunk of services could not be manipulated much; Mother and Child Healthcare comes in the later part. So, it is rather imperative to understand the perceptions regarding Covid 19 of those who would be the primary caregivers of new born in the coming days. A pregnant woman is naturally expected to be at higher risk than non- pregnant individuals. In pregnancy, the mother is immunologically com-

promised due to which she is more susceptible to infections like Covid 19. Pregnant women and post- partum women infected by SARS Covid 19 virus, are at increased risk of mortality or serious morbidity from obstetric complications, also neonatal complications.³

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While a lot of literature regarding this topic was found in countries like UK, Singapore, China and Ghana, any such information wasn't found based out of India. So, this study can not only indicate the ideas of pregnant women regarding the virus, but also could act as a tool to compare variations in attitudes of Indians with respect to people of other countries. Understanding the perception of Covid-19 in pregnant women is crucial for planning actions to enhance the Healthcare system for both the mother and child, spread awareness for the greater good and simultaneously eradicate the unjustified and unwarranted beliefs about the same. Thus, this study was conducted to evaluate the perception of COVID-19 among pregnant women attending ante-natal clinic (ANC) of a tertiary care hospital in West Bengal.

Materials & methods

Study type and design: It was a hospital based descriptive type of study with a cross-sectional design.

Study setting: The study was carried out in the out-patient department of antenatal clinic of North Bengal medical college and hospital, Darjeeling, West Bengal.

Study period: Study was conducted from 08/02/2022 to 28/02/2022.

Study population: The pregnant women attending out-patient department of antenatal clinic for check-up during the study period, were approached for participation. The person unwilling to participate or extremely ill were excluded from the study.

Sample size & sampling technique: Purposive sampling was done. Total 246 pregnant women were interviewed but among them three women did not respond to the questions. So, they were not included during analysis of data.

Study tools: A pre-tested, semi-structured questionnaire consisting of three parts were used for data collection. First part contained socio-demographic characteristics such as age, religion, literacy status, monthly income of family, number of family member etc. Second part contained obstetric history such as period of gestation, last menstrual period, parity, history of any abortion, complications during pregnancy etc. And third part contained questions about the perception of the mothers about covid-19. The data were collected using the google form.

Study procedures: Research topic was firstly discussed among the team members and a questionnaire was prepared for the research. Then a pilot study was conducted and some modifications of the questionnaire have been made. Then the data collection was started by the group members. After taking consent, each participant was interviewed about covid-19 perception with the questionnaire.

Data analysis: After collection of data, it was compiled and entered in Microsoft excel. Then it was checked for consistency and completeness. After that data cleaning was done and finally the data were analyzed using Microsoft excel. Then the data were presented using the principle of description statistics.

Ethical consideration: Ethical permission for the study was obtained from the Institutional Ethics Committee of the North Bengal medical college. The study participants were explained about the study and informed consent was taken. Anonymity and confidentiality were maintained.

Results

Among the 243 participants, majority (82.7%) belonged to 20 to 29 years of age-group while only 5.8% were thirty years of age or older (table 1). Majority were Hindu (61.7%) and had literacy status of secondary level (38.3%). Only 0.8% were found as illiterate/non-formal. Mostly they had socioeconomic status III and IV (35.8% and 35% respectively) according to Modified B.G.Prasad scale (AICPI June 2022).

Table 2 showed that more than half of the participants (55.1%) had pregnancy status of 25-36 gestational weeks that is third trimester. Majority had at least one child. Only 23.9% had history of previous abortion and 24.3% said they have associated complications along with the current pregnancy. When they were enquired about the COVID-19 vaccine status, 53.9% told they took second booster dose while 21.8% didn't receive any doses of COVID-19 vaccine.

Table 3 shows the perception regarding COVID-19 among the participants. 88.5% responded yes regarding communicability of COVID-19 from person to person. 75.7% responded no when they were asked about anyone suffered from COVID-19 including them as well. More than half of the participants said they don't know about transmission of COVID-19 from mother to child. Around 3 out of 10 women said that antenatal visits should be reduced due to COVID-19. 37% said yes about allowing family members during delivery for their support. 44.5% Don't know whether COVID positive mother can breastfeed her child and 32.9% said no to the question.

Discussion

COVID-19 pandemic is a serious public health emergency especially for the vulnerable populations in the community. Pregnancy is one such special at-risk group as it is already an immune-suppressive state. Literatures have found that coronavirus infection in pregnancy can lead to premature rupture of the membranes, preterm labour, fetal tachycardia, and fetal distress etc.⁴ Therefore, it is important that pregnant women should have adequate information and follow COVID-19 appropriate behaviour. The present study addressed this important issue and estimated the level of perception, knowledge level, and protective behaviours of pregnant women.

Table 1: Distribution of the study participants according to socio-demographic characteristics (n=243)

Variables	Frequency	Percentage (%)
Age-group		
< 20 years	28	11.5
20-29 years	201	82.7
>30 years	14	5.8
Religion		
Christian	6	2.5
Hindu	150	61.7
Muslim	87	35.8
Educational level		
Illiterate or non-formal	2	0.8
Primary school	4	1.6
Middle school	71	29.2
Secondary	93	38.3
Higher secondary	48	19.8
Graduation and above	25	10.3
Socio-economic status*		
SES I	7	2.9
SES II	31	12.7
SES III	87	35.8
SES IV	85	35.0
SES V	33	13.6
Total	243	100.0

*Modified B.G.Prasad scale (AICPI June 2022)

In the present study, majority of pregnant females belonged to 20-29 years, had at-least minimum basic primary education. Most of the pregnant women were house-wife and belonged to Socio-economic status III and IV. A study from Iran regarding COVID-19 perceptions among pregnant women majority had college education (36.4%), were unemployed (90.2%), had a moderate economic situation (72.9%).⁵

88.5% of the study participants knew that COVID is communicable from person to person. According to study from Iran, almost 9 out of 10 pregnant women had a high level of knowledge, along with practice of preventive measures.²The current study found that 32.5% participants think that vertical transmission of COVID-19 is possible but almost half of the participants had no idea about transmission from mother to child. 58.8% responded that they don't know if covid can cause more complications among pregnant women while 29.2% think it leads to complicated pregnancy. According to a study conducted in Singapore, 47% positively said that vertical transmission can occur in COVID but 58.8% females responded that they had no knowledge whether COVID-19 can cause any complications during pregnancy.³22.6% females were in favour of breastfeeding even mother got infected by COVID-19. In Singapore, 34.9% responded that breastfeeding should be continued. 32.9% think ante-natal visits should be

Table 2: Distribution of study participants based on obstetric characteristics & covid-19 vaccination status (n=243)

Variables	Frequency	Percentage (%)
Gestational age		
d<12 weeks	8	3.3
13-24 weeks	87	35.8
25-36 weeks	134	55.1
>36 weeks	14	5.8
Parity		
Multiparous	91	37.4
Nulliparous	60	24.8
Primipara	92	37.8
History of abortion		
No	185	76.1
Yes	58	23.9
Presence of any complications in current pregnancy		
No	184	75.7
Yes	59	24.3
COVID-19 vaccination status		
Dose 1	59	24.3
Dose 2	131	53.9
No	53	21.8
Total	243	100

Less amniotic fluid, jaundice, TORCH, white discharge

Table 3: Distribution of the study participants according to their responses about COVID-19 perception (n=243)

Sl no.	Questions	Yes (%)	No (%)	Don't know (%)	Total (%)
1.	Is COVID-19 communicable from person to person?	215 (88.5)	10 (4.1)	18 (7.4)	243 (100)
2.	Did anybody in your family suffer from COVID-19 including you?	48 (19.8)	84 (75.7)	11 (4.5)	243 (100)
3.	Can COVID 19 be transmitted from mother to child?	79 (32.5)	29 (11.9)	135 (55.6)	243 (100)
4.	Should antenatal visits be reduced due to COVID-19?	80 (32.9)	98 (40.3)	65 (26.8)	243 (100)
5.	Should family members be allowed during delivery in this COVID-19 pandemic?	90 (37.0)	70 (28.8)	83 (34.2)	243 (100)
6.	Can a COVID positive mother breastfeed her child?	55 (22.6)	80 (32.9)	108 (44.5)	243 (100)

reduced due to COVID-19 situations while 40.3% were totally against it. 37% participants want their near ones during the time of delivery because of anxiety related with COVID-19 pandemic.

COVID-19 vaccine perceptions were explored in this study. More than half of the participants (53.9%) completed their COVID-19 vaccination schedule 24.3% have taken 1st dose of COVID vaccine. A systematic review had found that vaccine acceptance rate was highest in India (>80%).⁶ The current study also found almost the same proportion. In a study from Malaysian, tertiary education, employment status, higher household income, and multiple sources of information were independent predictors of adequate maternal knowledge on COVID-19.⁷

Conclusion

A vast proportion of pregnant women were aware about communicability of COVID-19 but very few of them believed about vertical transmission and ill effect of COVID-19 in pregnancy and continuing breastfeeding even with COVID-19 infection. The practice regarding preventive measures were very good, most of them took the vaccine. Thus, it can be concluded that though they have some knowledge about COVID-19 but the effect of COVID-19 in pregnancy is still not clear to them. Pregnant females should be educated regarding COVID-19 in pregnancy, breastfeeding and regular antenatal check-ups should be encouraged.

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