

Attitude and practices related to coronavirus disease (COVID-19) pandemic among pregnant women attending family welfare clinic amid Phase-2 lock down

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ABSTRACT

Background: The antenatal period is an important landmark where the services provided to mothers through antenatal care (ANC) checkups also act as a way for additional interventions influencing maternal and child health. This study aimed to know about the perception and practice among the patients of ANC checkups (ANCs) regarding COVID-19 and what are the implications of it on their routine check-ups. **Methods:** We conducted this study from 15 April, 2020 to 03 May, 2020, Phase 2 {Country wide lockdown in India}, which was imposed for over 19 days. The sample size was kept open and we used convenient type of sampling and included all those pregnant women who attended the clinic for ANC checkup amid the countrywide lock down. Each patient of ANC checkup was interviewed by the treating doctor using a predesigned structured questionnaire containing questions based on demographic information and the perception and practices regarding corona virus infection. **Results:** The majority, 66 (79.5%) were in the age group of 26–35 years, 63 (75.9%) were in the second and third trimester of their pregnancy, 72 (86.7%) were from urban areas, 26 (31.3%) and 17 (20.5%) were having education level of bachelor's and higher, respectively. The majority 39 (47%) reported that they are worried that someone they know may have the coronavirus infection and they are unaware about it, 57 (68.7%) feel the nature of the disease as fatal, all ANCs reported that their families are taking initiatives to prevent corona virus infection and they should take extra precautions for corona virus infection, 6 (7.2%) reported that any member of their family has been quarantined during the period, 81 (97.6%) feel that primary precautions like hand washing, social distancing, wearing a face mask, and isolation and quarantine will help in the reduction of infection, 69 (83.1%) choose to report to hospital if any of their close relatives are down with symptoms of corona virus. **Conclusion:** Our study showed that the respondents had a good attitude, perception, and were following sensible positive practices regarding COVID-19 prevention.

Keywords: ANC checkups, antenatal period, attitude, COVID-19, practices

Introduction

Antenatal care (ANC) is an opportunity to promote a positive pregnancy experience and improved maternal and child survival.^[1]

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ANC services offered to mothers and unborn babies during pregnancy are an essential part of primary health care during pregnancy offering a range of services, such as prevention, detection, and treatment of risk factors affecting pregnancy state.^[2] The antenatal period is an important landmark where the services provided to mothers through ANC checkups (ANCs) also act as a way for additional interventions influencing maternal and child health. Mothers are prepared and counseled for

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immunization and breastfeeding and informed about nutritional programs and government-run maternal and child health schemes. It can be used to educate women about the possibilities of family planning and birth spacing and in addition to this, it can be used to provide care and information that is not directly related to pregnancy but can reduce the possible maternal risk factors, such as promoting healthy lifestyles, tackle malnutrition, or inform about gender-based violence. Hence, ANC checkup is a potentially important determinant in reducing maternal and child morbidity and mortality.^[2]

In 2001, the World Health Organization (WHO) conducted the Antenatal Care Trial across clinics in four countries with 22,000 women who suggested that four minimum visits were adequate to ensure good birth outcomes for both mother and baby and avoid adverse outcomes such as low birth weight and postpartum anemia.^[3,4] Updated Cochrane review published in 2015 found that in low- and middle-income countries perinatal mortality was significantly higher among those groups with reduced antenatal care visits when compared with standard antenatal care visits.^[5] The latest research has shown a lower stillbirth rate, among women with a minimum of eight antenatal visits, based on which the minimum recommended number of antenatal contacts has now been increased from 4 to 8.^[4] A secondary analysis of the WHO Antenatal Care Trial also found an increased relative risk of fetal death of 27% between 32 and 36 weeks of gestation in populations with reduced antenatal care schedules.^[6,7] The provision of antenatal care is crucial in reducing stillbirths as it is estimated that 50% of stillbirths have a maternal complication.^[3] As there are direct effects of ANC on perinatal outcomes (i.e., health benefits arising from the care itself), there may also be an indirect benefit associated with ANC checkup as women attending ANC checkup are more likely to have their delivery assisted by a professional health care provider or in a health facility.^[8] Infants of mothers who receive antenatal care services have a reduced risk of neonatal deaths.^[9] ANC is protective against neonatal mortality in the low- and middle-income countries (LMICs) studied, although differences exist across the countries and by region. There is a comprehensive overview of the association between ANC visits and neonatal mortality in nearly half of the world's LMICs.^[10]

With the detection of the first case of COVID-19 in China, within no time it has swept across all the regions of the world, and sooner it was declared as a Pandemic by WHO on 11th March, 2020.^[11] With its advent in India, the Government of India declared a nation-wide lock down on 22nd March, 2020 intending to curb the spread of this virus in the country. With the lockdown measures in place, it became tough for people to roam around freely and visit even hospitals. The effect of this lock down could be seen in these pregnant females as well. They form an important part of society. The study was conducted to know about the perception and practice among pregnant women undergoing ANC checkup regarding COVID-19 and what are the implications of it on their routine checkups.

Material and Methods

This study was a cross-sectional descriptive study conducted at the Obstetrics and Gynecology outpatient family welfare clinic of a tertiary care hospital, which is under the administrative control of the Department of Community Medicine Government Medical College, Srinagar. As there were speculations and worry among the policymakers regarding the effect of lock down imposed due to coronavirus disease among pregnant women, especially on their ANC visits and how they are following regular advisories issued by the authorities. We conducted this study from 15 April, 2020 to 03 May 2020, Phase 2 (Country wide lockdown in India), which was imposed over 19 days. The sample size was kept open and we used a convenient type of sampling and included all those pregnant women who attended the clinic for ANCs amid the countrywide lockdown. Usually, 10–12 pregnant females visit the ANC clinic on an average each day, but during the study period of 19 days, only 95 pregnant females visited our clinic. It was about a 60% decrease than the average attendance of ANC checkup at the said clinic. Ninety-five visited the clinic for ANCs, 83 of them gave informed consent to be part of this study after explaining to them the objectives and importance of this study. The nonresponse rate among the ANC visits was 12.63%. As per the protocol framed for this study, each ANC checkup was interviewed by the treating doctor using a predesigned structured questionnaire containing questions based on demographic information and their perception and practices regarding corona virus infection. The questionnaire was formulated with the help of public health specialists, epidemiologists, and obstetrician specialist doctors and was pretested on a subset of ANCs at a subcenter before the actual study. The questionnaire was formulated on Epi-collect software using an android phone and was used during the collection of data. Later data was analyzed using Microsoft Excel 2010. Variables were expressed as frequency and percentage. The study had no ethical issues related to animal or human experimentation and was approved by the institutional ethical committee on 4th April 2020. Study data will be kept confidential and will be used for this study purpose only.

Results

Sociodemographic details of the pregnant women attending the ANC family welfare clinic of a tertiary care hospital amid lockdown 2.0 are shown in Table 1. The majority, 66 (79.5%) were in the age group of 26–35 years, 63 (75.9%) were in second and third trimester of their pregnancy, 72 (86.7%) were from urban areas, 26 (31.3%) and 17 (20.5%) were having education level of bachelor's and higher, respectively, 56 (67.5%) were homemakers, 47 (56.7%) reported having more than six family members while only five (6%) had more than three family members with age more than 60 yrs living within their family.

Practice and perception among pregnant women undergoing ANCs regarding corona virus disease are described in Tables 2a and 2b. The majority i.e., 39 (47%) reported that they

Table 1: Demographic characteristics of the study participants

Characteristics		Frequency (N=83)	Percentage
Age group	<18	0	0
	18–25	15	18.1
	26–35	66	79.5
	>35	2	2.4
Trimester	First	20	24.1
	Second	31	37.3
	Third	32	38.6
Residence	Urban	72	86.7
	Rural	11	13.3
Qualification	Illiterate	07	8.4
	10 th	15	18.1
	12 th /Diploma	18	21.7
	Bachelor	26	31.3
	Postgraduate	17	20.5
Occupation	PHD	0	0
	Salaried service	20	24.1
	Business/self employed	3	3.6
	Wage earner	0	0
	Student	4	4.8
	Unemployed	0	0
Number of Family members	Homemaker	56	67.5
	<3	5	6
	3–5	31	37.3
	6–8	32	38.6
	>8	15	18.1
Number of family member above 60	0	15	18.1
	1–2	63	75.9
	3–4	5	6
	>4	0	0

are worried that someone they know may have the corona virus infection and they are unaware about it, 57 (68.7%) feel the nature of the disease as fatal, all patients reported that their families are taking initiatives to prevent corona virus infection and they should take extra precautions for corona virus infection, 6 (7.2%) reported that any member of their family has been quarantined during the period, 81 (97.6%) feel that primary precautions such as hand washing, social distancing, wearing a face mask, isolation, and quarantine will help in the reduction of infection, 69 (83.1%) choose to report to hospital if any of their close relatives are down with symptoms of corona virus, all, 83 (100%) reported washing hands regularly following their visits to ANC clinics or clinical laboratories, majority 81 (97.6%) feel that the coronavirus infection can harm them and their child.

When pregnant women were asked whether they looked for information on how this infection can harm them and their child, 29 (34.9%) reported not seeking any information. Amid lockdown, the majority 48 (57.8%) pregnant women skipped appointments due to the fear of infection while 81 (97.6%) found it difficult to come out of their home. All pregnant women 83 (100%) reported wearing a mask while going out of the hospital to avoid transmission, 43 (51.8%) wished to deliver their child in the government hospital in the future.

Discussion

Pregnancy is a joyous journey of nine months with full of emotions and has ups and downs of its own, but in recent times with the COVID-19 pandemic, it has become more downright and fear inducing, with this study we intend to look for the perception of pregnant women regarding coronavirus infection and its effect on them.

To the best of our knowledge, perhaps this is the first paper in India where pregnant women were interviewed in the clinic and it was found that:

Around 79.5% of the respondents were of 26–35 years of age. The study had more participants belonging to the urban population (86.7%) with the education qualification of bachelors and above (79.6%). The occupation of most respondents in our study varied from salaried persons (24.1%) to homemakers (67.5%). The number of family members was mostly 3–5 (37.3%) and 6–8 (38.6%) asserting a mix of nuclear/small-sized and joint families in the area. Around 54% of families have 1–2 family members greater than 60 years of age.

While 68.7% felt that the disease is fatal and 47% were worried that someone they know may have an infection and they were not

Table 2a: Practice and perception among ANCs regarding corona virus disease

Questionnaire	Frequency (n)	Percentage (%)	N (%)
Are you worried that someone you know may have infection, and you are not aware of it?			
Yes	39	47	83 (100)
No	34	41	
Sometimes	10	12	
What do you feel is the nature of the disease?			
Fatal (can kill)	57	68.7	83 (100)
Mild (like cold)	2	2.4	
Serious	24	28.9	
Don't know	0	0	
Do you think your family is taking initiatives to prevent corona are adequate?			
Yes	83	100	83 (100)
No	0	0	
Don't know	0	0	
Have anyone in your family been quarantined?			
Yes	6	7.2	83 (100)
No	77	92.8	
Do you feel there is need to take extra precautions for this infection?			
Yes	83	100	83 (100)
No	0	0	
Don't know	0	0	
Do you feel that taking precautions like hand washing, isolation, quarantine, social distancing, and wearing a mask will reduce the transmission?			
Yes	81	97.6	83 (100)
No	0	0	
Don't know	2	2.4	
If you or your close ones are having corona virus symptoms, what will you do?			
Go to hospital	69	83.1	83 (100)
Treat symptoms at home	0	0	
Do nothing	0	0	
Make them stay in quarantine or isolation	14	16.9	
Do you wash your hands with soap and water regularly, especially after coming from clinic/diagnostic lab/hospitals?			
Yes	83	100	83 (100)
No	0	0	
Sometimes	0	0	
Don't remember	0	0	
Do you feel the infection can harm you or your child?			
Yes	81	97.6	83 (100)
No	0	0	
May be	2	2.4	
Don't know	0	0	

aware of it. The step that one would take in case close one had symptoms, 83.1% would go to the hospital; 16.9% would stay on quarantine. For 7.2% had family members being quarantined. With pregnant women falling more to the vulnerable group, it becomes obvious that the attitude of family/caregivers towards pandemic matter more to them, as 100% pregnant women did not know if the initiative taken by the family was adequate, while 100% of the women feel the need to take extra precautions for this infection. ^[12,13]

Concerning the practice and related behavior among the pregnant women, a very good response was seen from pregnant women who are much more concerned and worried, 100% practiced hand washing regularly with soap and water, 100% are wearing a

mask while going out, 100% are maintaining social distancing and as 97.6% of the women feel the infection can harm them and/or their child. ^[13] Fifty-three percent have looked for information on how it harms them or their child. ^[14] With the recent lockdown and the restrictions, around 97.6% of pregnant women are finding more difficulty in coming out from home. ^[14] With a lot of fear around, 57.8% of the pregnant women have skipped their appointment. ^[12,14] The majority (95.2%) have found it difficult to go to the hospital to get your regular consultation/checkup. ^[14]

Irrespective of all the fear of contracting the virus from a COVID-19 hospital-like seen in other places, ^[15] the majority of pregnant women (around 69.9%) prefer delivering in hospitals

Table 2b: Practice and perception among ANCs regarding corona virus disease

Questionnaire	Frequency (n)	Percentage (%)	N (%)
Have you looked for information on how does it harm you or your child?			
Yes, I have	44	53	83 (100)
No, I didn't	29	34.9	
I know how to	0	0	
Partly looked for	10	12	
Do you think it was difficult to go to hospital to get your regular consultation/check-up?			
Yes	79	95.2	83 (100)
No	4	4.8	
Sometimes	0	0	
Don't know	0	0	
Have you skipped your appointments due to fear of getting the infection?			
Yes	48	57.8	83 (100)
No	35	42.2	
Sometimes	0	0	
Don't know	0	0	
Do you think you are having more difficulty in coming out from home?			
Yes	81	97.6	83 (100)
No	2	2.4	
Sometimes	0	0	
Don't know	0	0	
Are you wearing a mask while going out or to the hospital to avoid transmission?			
Yes	83	100	83 (100)
No	0	0	
Sometimes	0	0	
Don't remember	0	0	
How do you spend your time during lock down?			
Learn a new hobby	7	8.4	83 (100)
Catch on sleep	0	0	
Look on the internet for information	20	24.1	
Others	56	67.5	
Have you been maintaining social distancing?			
Yes	83	100	83 (100)
No	0	0	
Sometimes	0	0	
Don't remember	0	0	
Are you taking precautions for this infection?			
Yes	83	100	83 (100)
No	0	0	
Sometimes	0	0	
Don't know	0	0	
Where would you want to have your child's delivery?			
Govt hospital	43	51.8	83 (100)
Private hospital	15	18.1	
Home	0	0	
Haven't decided yet	25	30.1	

wherein 51.8% prefer to deliver in the government hospital and 18.1% prefer the private hospitals. The finding of this study may be helpful for primary care physicians and primary health

care institutions in designing strategies and policies for pregnant women undergoing ANC checkups. In India, the health care infrastructure may make it less likely to support initiatives like social distancing and hand washing at health care facilities due to scarce resources but the attitude and perception of pregnant women towards attending ANC clinics for ANC checkups are overwhelming as shown by this study. Primary care physicians must deliver their services as per the expectation of their patients even in times of pandemic for the health tomorrow.

Conclusion

Our study showed that the respondents had a good attitude, perception, and sensible positive practices regarding COVID-19 prevention. ANC checkups must be arranged for those at their doorstep who are unable to attend ANC clinics amid COVID-19 fear and restrictions of lockdown.

Summary of the findings

- The study details the perception and practice among ANCs regarding COVID-19 and its implications on their routine ANCs.
- Seventy-nine percent of the ANCs were in the age group of 26–35 years while 76% were in their second and third trimester of pregnancy.
- The clinic is located in the city center, 87% of the ANCs who visited during the lock down period were from urban areas.
- Forty-eight percent ANCs had an education level of bachelors or higher. Furthermore, 67% were homemakers.
- Fifty-seven percent ANCs reported having more than 6 family members while only 6% had more than 3 family members with age more than 60 years living within their family.
- Forty-seven percent ANCs reported that they are worried that someone they know may have the corona virus infection and they are unaware of it, 69% feel the nature of the disease as fatal.
- All ANCs reported that their families are taking initiatives to prevent corona virus and they should take extra precautions for corona virus infection.
- Ninety-eight percent ANCs feel that primary precautions such as hand washing, social distancing, wearing a face mask, isolation, and quarantine will help in the reduction of corona virus infection.
- All ANCs reported washing hands regularly following their visits to ANC clinics or clinical laboratories, 98% feel that the corona virus infection can harm them and their child.
- Amid lockdown, 58% ANCs skipped appointments due to fear of infection while 81 98% found it difficult to come out of their homes due to prevailing lockdown.
- All pregnant women reported wearing a mask while going out for a hospital visit to avoid transmission while 52% wished to deliver their child in the government hospital in the future.

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Declaration of patient consent

The authors certify that they have obtained all appropriate patient consent forms. In the form, the patients have given consent for their images and other clinical information to be reported in the journal. The patients understand that their names and initials will not be published and due efforts will be made to conceal their identity, but anonymity cannot be guaranteed.

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Conflicts of interest

There are no conflicts of interest.

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