IOSR Journal of Dental and Medical Sciences (IOSR-JDMS)
e-ISSN: 2279-0853, p-ISSN: 2279-0861.Volume 22, Issue 1 Ser.10 (January. 2023), PP 59-63
www.iosrjournals.org

Assessment of knowledge and awareness of COVID-19 in pregnant women: A Descriptive Study.

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ABSTRACT:
INTRODUCTION*: Noval corona virus 19 pandemic had various impacts on day to day life of people. Knowledge about it created awareness among them. COVID 19 has more psychological impact than the clinical. Hence, assessment of knowledge & attitude about the pandemic had to be assessed. Precautions which have to be taken play an important role in preventing the infection to some extent in day to day practice.*
AIM & OBJECTIVES*: The aim of the study was to assess awareness of COVID 19 in pregnant women in pandemic. Also,to study the knowledge about symptoms, methods of precaution & measures taken by them to prevent infection.*
METHODOLOGY: *A crossectional descriptive study was performed in tertiary care center from July 2021 to November 2021. Pregnant patients coming to OPD were included. Patients were asked to fill questionnaire to assess the knowledge, awareness.*
RESULTS: *A total of 130 patients were included in this study. About 88.46% of the pregnant women had misconception that breastfeeding is also a route of transmission. 67 % of women were aware of most of symptoms of COVID- 19. Preventive measures were taken by 62 % women. There was scarcity of knowledge about vaccination against COVID-19. COVID- 19 pandemic had a very less impact on mode of delivery.*
CONCLUSION*: Younger age group had more knowledge, awareness. Education, region, age were positively associated with good knowledge & awareness about COVID-19 pandemic. Preventive practices should be more mediated through mass media as it was major source of knowledge. Awareness regarding breastfeeding & measures to be taken while breastfeeding COVID-19 should be spread more.*
KEY WORD: *COVID-19, Pregnant women, Knowledge, Awareness, Preventives measures, Breastfeeding.*

Date of Submission: 12-01-2023 Date of Acceptance: 28-01-2023

I. Introduction:

COVID-19 is an infectious disease caused by severe acute respiratory syndrome corona virus (SARS-CoV-2) [1]. World Health Organization had declared COVID-19 as pandemic outbreak on 11th march 2020. There were around 3,48,04,348 confirmed cases of COVID-19 on 4th October 2020 reported to WHO.[1] After declaring pandemic by WHO, various extensive measures were taken & tested by nations and they reformed their policies from time to time accordingly. Knowledge about the disease has been used in order to syncopate the spread of disease. Attitude of people toward the contagious diseases like COVID-19 affected their emotion and created a panic situation leading to use of preventive methods beforehand [2]. Previous studies stated that around 70% of adverse pregnancy outcomes can be prevented by using primary preventive measures hence, for implementing these measures assessment of knowledge, attitude is necessary. Social burden of the disease can be reduced by increasing knowledge, understanding the attitude and altering that attitude [3].

Pregnant women are at higher risk for contracting the disease; hence the spread of knowledge regarding COVID-19 is important. To create awareness about COVID-19, assessment of their knowledge is the key. These are least explored areas in pregnant women, hence this study was conducted aiming toward the assessment of knowledge, attitude and awareness in pregnant women about COVID -19 for improving primary health care facilities in a tertiary health care center surrounded by rural are. This study also aims to assess the knowledge about symptoms, methods of precaution & measures taken by them to prevent contraction of infection.

II. Aim & Objectives:

- To assess awareness, perception of knowledge of COVID-19 in pregnant women in pandemic.
- To study the preventives measures taken by them to prevent the infection.

III. Material & Methods :

A cross-sectional descriptive was conducted from July 2021 to November 2021 i.e. during 2nd wave of COVID-19 pandemic. All the pregnant women coming to OPD of MGM medical college & hospital, Aurangabad were included. After giving verbal consent, 130 pregnant women were recruited.

A questionnaire based on Royal College of Obstetrics and Gynecology (RCOG) and WHO guidelines regarding COVID-19 were prepared & annulated. After collecting the demographic data and obstetric history, around 26 set of questions were framed for assessing the knowledge, attitude.

For assessing knowledge, questions were framed which consisted transmission, symptoms, precautionary measures, knowledge, effect on baby, mode of delivery, abortions.

IV. Results:

Total Number- 130

Table no. 1. Distribution according to age (n=130)

Age Group	No. Of Patients	Percentage
<19yr	17	13.07
19- 24	56	43.07
25-29	45	34.61
>30 yrs	12	9.23

In our study, 40% of population belonged to age group of 19-24 yrs which is commonest reproductive age.

Table no.02 Education wise distribution (n=130)

Education Particular	No. Of Patients	Percentage
Illiterate	8	6.15
Primary & secondary Education	56	43.07
High school	38	29.23
Graduate	28	21.53

In our study, 21.53 % only were graduates. Literacy plays an important role as it increases cognizance of COVID 19 due to knowledge via media and social interactions.

Table no.3 Distribution according to gravida (n =130)

Parity	Number
Primigravida	56
Multigravida	66
Grandmultigravida	8

In our study, both primigravida and multigravida were equal in number i.e. 43.75% & 51.25% respectively. Hence, gravidity doesn't play a role in knowledge as this was a recent pandemic and still lot of things had to be unraveled.

Table no.4 Distribution as per awareness of Route of Transmission (n=130)

Route of Transmission	Yes	%	No
Respiratory	120	92.30	10 (7.69%)
Fomites	56	43.07	74 (56.92%)
By touching	44	33.86	86 (66.15%)

All of them were aware of respiratory route of transmission of COVID-19.

Fomites as route of transmission was known to only 56.2% of patients but 56.15 % had misconception that touching could also spread infection.

Table no.05 Distribution according to symptoms (n=130)

Symptoms	Yes	Percentage
Fever	108	83.07
Breathlessness	98	75.38
Loss of taste & smell	33	25.38
More than 2	96	73.84

73.84% were aware of more than 2 symptoms.

Around 83.07% were aware that fever was an important symptom & 75.38% were aware of breathlessness as an important symptom. In spite of loss of taste & smell being an important symptom in COVID-19, only 25.38% were aware of COVID-19.

Table no.06 Distribution according to ANC Visits (n= 130)

Distribution	Number	Percentage
Adequate	56	43.07
Decreased	74	56.92

56.92% of patients had decreased the antenatal visits in fear of getting COVID- 19 infection which was pretty high, indicating good awareness.

Table no.07 Distribution according to effect on pregnancy (n=130)

	Yes	Percentage
Abortion	64	49.23
Preterm Delivery	78	60
Intrauterine fetal demise	28	21.53
Infection to baby	39	30
Anomalous baby	34	26.15

Around 60 % had fear that COVID- 19 may cause preterm delivery. 49.23% pregnant women thought that they might have abortion if they get infected. 26.15 % pregnant women had fear of baby having congenital anomaly in COVID infection. 30% were of the opinion that baby may get infected and 21.53% were scared of I.U.F.D.

Table no.08 Preventive methods used (n=130)

Method	Used	Not used	Didn't know about it
Sanitization	88(67.69%)	24(18.4%)	18(13%)
Hand wash	112(86.15%)	18	
Face mask	96(73.84%)	34	
Avoiding public places	72(55.3%)	58	
Dietary change	87(66.9%)		
Social Distancing	56(43.07%)	40 (30.76%)	34(26.15%)

All of them had used handwashing as a preventive method which was indicating were good awareness. 73.84% had used face masks for prevention 67.69% used sanitization with sanitizers as preventive method. Despite of knowing sanitizer usage as preventive method, 18.4% were reluctant to use it & 13 % were unaware of it.

66.9% had made dietary changes as preventive measures for COVID-19 which was a misconception. 55.3% avoided public places gatherings for precautionary measure.

Table no.09 Vaccination during pregnancy (n=130)

Particular	Yes	No	Didn't know
Knowledge about vaccine	32 (24.61%)		98 (75.38%)
Vaccination Status	14 (10.76%)	116	
Safe in pregnancy	14 (10.76%)		

98% did not have knowledge about vaccination against COVID-19 being used in pregnancy. Only 10.76% thought it was safe in pregnancy out of those who know for gaining knowledge.

Table no.10 Distribution according to media used (n=130)

Media	Yes	Percentage
Television	72	55.3
Mobile	15	11.53
Newspaper	24	18.46
Other people	19	14.16

Among these media medium, 55.3% were aware about COVID pandemic through television but only 11.53 % gained knowledge from mobile in an era of telephone. Out of all media, only 18.46% gained knowledge via newspaper. 14.16 % gained awareness from conversations with other people.

Table no.11 Mode of getting COVID infection (n= 130)

Mode	Yes	Percentage
By visiting hospital	73	53.15
During travelling to other village/ town	9	6.92
During USG	6	4.61
Blood investigation	42	32.30

53% thought that visiting hospital & 32.30% thought doing blood investigation were mode of getting infection. So, they were hesitant to go ahead. Ultrasonography was an important source as it is done A.C. room so 4.61% were afraid to undergo USG.

Table no.12 Distribution according to type of mask used (n=130)

Type of face mask	Yes	Percentage
Scarf	23	17.69
Cloth mask	76	58.46
Surgical	28	21.53
N95	3	2.30

Despite of knowledge about respiratory mode of spread of infection, only 21.53 used surgical mask for prevention. Maximum of them used cloth mask for protection which was ineffective.

Table no.13 Distribution according to effect on breast feeding (n=130)

Breast Feeding Particular	Number	Percentage
Will not breast feed baby during infection	115	88.46
Will breast feed	15	11.54

88.46% had a misconception that COVID-19 will spread via breastfeeding and so did not breastfed. Only 11.54% were ready to breastfeed if they would infected.

Table no.14 Distribution according to mode of delivery (n= 130)

Mode of delivery	Number	Percentage
Vaginal	115	88.46
LSCS	15	11.53

88.46% pregnant women chose vaginal delivery as an mode of delivery in pandemic rather than LSCS.

V. Discussion:

This study was carried out to assess the perception of knowledge about COVID 19. So, the awareness among pregnant women could be determined. In our study, most commonest age group was 19-24 yr age group whereas in study conducted in Shaanxi in 2020 was 26-30 years[3] & in study by Jhirwal et al in 2022, age group was 20-25 year [6] .

83.07 % pregnant women were aware about fever being a symptom of COVID-19 whereas study carried out by T.P. kaur et al in 2021 with mean knowledge score of 22.5 stated that 98 % were about fever as a symptom [2] .

In our study, 83.07 & 75.38% were aware of fever & breathlessness respectively for being important symptoms whereas in study analyzed by Patnaik et al in 2020 stated that fever & cough was most common manifesting symptom [4].

In our study, 88.46 % of women opted for vaginal delivery contradicting to study by Patnaik in 2020 which shows cesarean was preferred mode of delivery [4] .

In our study, 56.92% women restricted antenatal visits to hospitals due to fear of COVID-19 & in Jhirwal's in 2022 study 52% restricted ANC visits . Around 77.85% ,67.6% were aware of preventive measures such as usage of facemask, sanitizers respectively & Jhirwal's study 92% were aware of protective measures . Avoiding public places was done by 55.3 % whereas in study by Jhirwal was 81.7%. Out of all, 66.9% did dietary changes in our study and in Jhirwal's study 46.8% made dietary changes. In our study Television was main source of information i.e. 55.3% followed by mobile 11.53 % while in their study; 72% gained information via telephone. Newpaper was 2nd major source in heir study [6].

Breastfeeding is foundation for neonate's nutrition, survival & development of health. Still breastfeeding was refused by 88.46% women due to vertical transmission in our study. Study carried out by WHO shows presence vertical transmission. Despite of it, WHO recommends initiating breastfeeding during SARS-COV infection [7].

VI. Conclusion:

This cross sectional study was carried in 2nd wave of COVID pandemic.

- In our study, 34.61% belonged to 19-24 year age group who had maximum knowledge.
- Education & age were positively associated with knowledge & awareness about COVID-19.
- All the pregnant women were aware of respiratory mode of transmission of infection but 66.15% had misconception that touching is also a route of transmission.
- 83.07% & 75.38% pregnant women were aware about fever and breathlessness respectively as an important symptom of COVID whereas only 25.38% were aware of loss of smell & taste as an important symptom.

- In an era of smartphone, television was source of information to 55.3%.
- Only 67.69% used sanitizers which is an important preventive method
- Only 24.61 % had knowledge about vaccination against COVID-19 during pregnancy in an epoch of newly developed vaccines.
- Around 50-60% pregnant women were worried about effect of COVID on baby such as preterm delivery, abortion & infection transmission to baby
- 88.46% pregnant women weren't aware about breastfeeding during COVID infection & hence, were hesitant about it.

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Dr. Shivani Shinde, et. al. "Assessment of knowledge and awareness of COVID-19 in pregnant women: A Descriptive Study." *IOSR Journal of Dental and Medical Sciences (IOSR-JDMS)*, 22(1), 2023, pp. 59-63.