

# Awareness about Breastfeeding Practices among Pregnant and Postnatal Women during Covid-19 Pandemic

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## Author's Contribution

<sup>1</sup>Conception, Synthesis and Planning of the research, Data Collection, final approval of the final draft

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## ABSTRACT

**Objective:** To determine the awareness of breastfeeding practices among pregnant, and postnatal women during COVID-19 pandemic and its association with education, occupation, parity, and monthly income.

**Methodology:** The study was conducted at Sharif Medical City Hospital from June to August 2020. Data was collected on a structured proforma in Urdu language. A purposive sampling technique was used. Level of awareness was categorized as poor, average, and good based on a percentage of correct answers as ≤33%, 34-66%, and 67-100% respectively. Quantitative and qualitative study variables were analyzed by mean and percent respectively using SPSS 23. Chi square was used to determine significance of the association.

**Results:** Total number of patients were four hundred. Their mean age was 27.57±3.96 years and mean parity was 2.14±1.22. Most of the study participants were multipara in 225 (56.3%) cases, and housewives in 386(96.5%) cases. Only 28 (7.0%) were illiterate while 372 (93%) have a varying degree of education. Level of awareness about breastfeeding was good in 133 (33.3%), average and poor in 123(30.8%), and 144(36%) respectively. However, only 21% of women were aware of the fact that a mother infected with COVID-19 can feed their baby taking care of respiratory, and hand hygiene. Only 35% of study participants knew that in case a mother is severely ill with COVID-infection; breast milk can be extracted while taking precautionary measures. Similarly, 77.5% of mothers think that a mother infected with COVID-19 cannot keep her baby with her taking precautionary measures. Education status is significantly associated with awareness regarding breastfeeding practices

**Conclusion:** The awareness peculiar to COVID-19 breastfeeding practices was low, and significantly associated with the education level of women.

**Keywords:** Breastfeeding, COVID-19, Pregnancy, Practices, Postnatal.

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## Introduction

The first case of COVID-19 was diagnosed in a student in Karachi, Pakistan on 26<sup>th</sup> February 2020.<sup>1</sup> It is a viral infection caused by “novel coronavirus”.<sup>2</sup> Its common symptoms are lethargy, fever, dry cough, myalgia, headache, sore throat, breathlessness. Infection is transmitted from human to human via close contact and respiratory droplets when an infected person coughs or sneezes.<sup>3, 4</sup> Basic preventive measures recommended by the World Health Organization are hand hygiene, respiratory hygiene, and physical distancing. Its treatment is symptomatic and supportive till date however different

trials are under progress in different countries of the world including Pakistan.<sup>5</sup>

Breastfeeding is considered safe according to the available evidence till date. According to breastfeeding guidelines of the World Health Organization and UNICEF mothers should practice 3W's that are wearing a mask during feeding, washing hands with soap and water before and after touching the baby, and regularly wipe and disinfect the surfaces in contact. However, if the mother is severely ill with COVID-19 then she can express breast milk and a non-infected family member can feed that milk to the baby.<sup>6, 7</sup> On one hand breast milk boosts the immunity of the baby while on the other hand hormones released during

breastfeeding relieves maternal stress and are helpful to promote her recovery. It means continuing breastfeed is helpful for the mother to fight the virus, and also protects the baby by boosting the immunity.<sup>8</sup>

Moreover to analyze its association with education, occupation, parity, monthly income of study participants. Breastfeeding plays vital role to boost the immunity of newborns. In developing countries like Pakistan where infant mortality is high i.e. 62/1000 live births, and malnutrition being one of the major cause.<sup>9</sup> Breast milk is safe, and nutritious for newborn so mothers must be aware of the recommended practices of breastfeeding during COVID-19 pandemic. So this study was conducted to determine the awareness of breastfeeding practices among pregnant, and postnatal women in local context. It would be helpful to identify the gaps in their knowledge and to improve their knowledge regarding recommended breastfeeding practices.

## Methodology

This descriptive study was conducted in Sharif Medical City hospital, Lahore, Pakistan after approval from Institutional Ethical Review Committee from July to September 2020. All pregnant women at any gestational age presented for an antenatal visit, and women in their postnatal period were included in the study while nulliparous women were excluded. An assumed proportion of 0.50 was used with an acceptable difference of 0.05 and confidence level of 95%; the calculated sample size was 385. Software WinPepi was used to calculate the sample size. Non probability purposive sampling technique was used.

Literature regarding breastfeeding practices specifically during COVID-19 pandemic, and questionnaire development was reviewed to ensure construct alignment with existing literature.<sup>6,7,8</sup> Urdu language was selected to ensure better understanding of items of a questionnaire for study participants. A 10 item scale was developed in the form of simple, close ended questions. Response of each item was obtained in the form of nominal scale that is “yes” or “no”. For content validation subject experts were approached via email however institutional subject specialists were approached directly and hard copies were handed over for content and construct validation. The suggestions and reviews of experts were in cooperated. The relevance scores received from the nine reviewers were entered on Microsoft Excel to calculate Content Validity Index of items as well as of scale. The S-CVI/Ave

is equal to 1. For “cognitive pretesting” questionnaire was given to the pregnant ladies and were asked to debrief each item in their own phrasing to ensure the correct interpretation of the items.

Data was collected on a questionnaire comprising of three sections. Section one includes demographic characteristics of study participants like age, parity, gestational age, education, and monthly income. Second section contains a 10 item questionnaire that is based on WHO, and UNICEF recommendations of breastfeeding practices during COVID-19 pandemic.<sup>6,7,8</sup> Closed ended questions in simple Urdu language were enquired to assess the awareness about recommended breastfeeding practices during COVID-19 pandemic. Study participants responded in yes or no. Level of awareness was categorized as poor, average, and good based on a percentage of correct answers as  $\leq 33\%$ , 34-66%, and 67-100% respectively. In third section; study participants were further enquired about their source of information like doctors/nurses, family, friends, television/radio, internet/ social media or any other. Study participants could choose more than one option in this section.

After collecting data; every woman was counseled specifically about recommended precautionary measures that she lacks; to further improve their knowledge and practice regarding COVID-19 preventive measures.

Data Analysis: Data was entered and analyzed in SPSS 23. Quantitative data like age was analyzed using mean and standard deviation while percent was used to analyze qualitative variables like pregnancy status, parity, education level, monthly family income, questionnaire items regarding breastfeeding practices, and source of information. Significance of association of awareness of breastfeeding practices with study variables like education, parity, occupation, and family income was tested using Chi square.

## Results

The total number of patients were four hundred. Their mean age was  $27.57 \pm 3.96$  ranging from 16 to 40 years. Their mean parity was  $2.14 \pm 1.22$  ranging from para 1 to 6. Most of the study participants were multipara i.e. 225(56.3%), housewives i.e. 386(96.5%). Only 28(7.0%) were illiterate while 372(93%) have varying degree of education as detailed in table 1. The monthly family income of most of the women i.e. 219(54.8%) was in range of 21-50,000 as shown in table I.

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**Table I: Obstetric and Social Demographics**

Obstetric and Social Demographics			N (%)
Age groups (years)	16-20		17(4.3)
	21-30		335(83.8)
	31-40		48(12.0)
	<b>Total</b>		<b>400(100)</b>
Pregnancy status	Pregnant		367(91.8)
	Postnatal		33(8.3)
	<b>Total</b>		<b>400(100)</b>
Parity	Primi		132(33)
	Multipara		225(56.3)
	Grand multipara		41(10.3)
	Great grand multipara		2(0.5)
	<b>Total</b>		<b>400(100)</b>
Occupation	House-wives		386(96.5)
	Working women		14(1.8)
	<b>Total</b>		<b>400(100)</b>
Education	Illiterate		28(7.0)
	Primary		13(3.3)
	Middle		30(7.5)
	Matric		77(19.3)
	FA		81(20.3)
	Graduation		122(30.5)
	Masters		49(12.3)
	<b>Total</b>		<b>400(100)</b>
Monthly Income (PKR)	20,000		64(16.0)
	21-50,000		219(54.8)
	50,000-1Lac		116(29.0)
	>1 Lac		01(0.3)
	<b>Total</b>		<b>400(100)</b>

**Table II: Association among demographic characteristics and breast feeding practices**

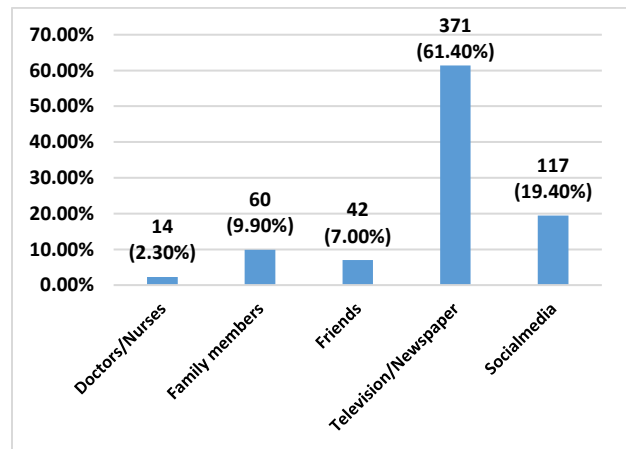
		Awareness about breast feeding practices			Chi square
		Poor	Average	Good	
Age groups (years)	13-20	7	5	5	<b>0.72</b>
	21-30	121	106	108	
	31-40	16	12	20	
	40-50	06	01	0	
	51-60	2	0	0	
Parity	Primipara	41	43	48	<b>0.68</b>
	Multipara	84	70	71	
	Grand multipara	18	10	13	
	Great grand multipara	1	0	1	
Occupation	House-wives	138	120	128	<b>0.73</b>
	Teacher	6	3	5	
	Others	0	0	6	
Education	Illiterate	18	4	6	<b>0.00</b>
	Primary	06	03	4	
	Middle	17	10	3	
	Matric	28	27	22	
	FA	30	23	28	
	Graduation	31	39	52	
	Masters	14	17	18	
Monthly Income (PKR)	20,000	29	17	18	<b>0.16</b>
	21-50,000	79	74	66	
	50,000-1Lac	36	32	48	
	>1 Lac	0	0	01	

The level of awareness about breastfeeding was good in 133(33.3%), average in 123(30.8%) and poor in 144(36%) respectively. The association of study variables was calculated using Chi-square test and results revealed that education status is significantly associated with awareness regarding breastfeeding practices as shown in table II. P-value of  $\leq 0.05$  was taken as statistically significant. The response of study participants to individual questions is detailed in Table III.

**Table III: Awareness regarding breastfeeding practices during COVID-19 pandemic**

Sr. no.	Questions	Yes N (%)	No N (%)
1	Have u heard about corona virus epidemic?	399 (99.7)	1 (0.3)
2	Can a healthy mother breast feed her baby in this epidemic?	319 (79.8)	81 (20.3)
3	Can an infected mother breastfeed her baby?	84 (21.0)	316 (79.0)
4	Is it necessary to cover the face and nose while breastfeeding the baby?	347 (86.8)	53 (13.3)
5	Is it necessary to wash hands before touching or breastfeeding the baby?	380 (95.0)	20 (5.0)
6	Is it necessary to wash hands after breastfeeding the baby?	333 (83.3)	67 (16.8)
7	Can mother express her breast milk while taking precautionary measures in case of severe infection?	140 (35.0)	260 (65.0)
8	Is it necessary to regularly clean household of you and the baby for the prevention of disease?	362 (90.5)	38 (9.5)
9	Do you know that in case of sneezing and coughing your face should be away and should be covered with your elbow?	342 (85.5)	57 (14.3)
10	Can a mother infected from corona can keep the baby with her?	90 (22.5)	310 (77.5)

Results revealed that television/ newspaper were the major source of information in 61.4% followed by social media in 19.4% as detailed in figure I.



**Figure I: Sources of Information for breast feeding practices during COVID\_19 pandemic**

\*Total number is more than 400 because of multiple responses.

## Discussion

The role and importance of breastfeeding in newborns cannot be denied or neglected. In a country like Pakistan with high infant, and under five mortality rate, it is very important to guide women, how to feed their infants in this pandemic era.<sup>10</sup>

Level of awareness about breastfeeding is good in 133(33.3%), average in 123(30.8%) and poor in 144(36%) study participants. Frequency of response to each question in the questionnaire revealed that 79.8% of females were aware that a healthy mother can breastfeed her baby. Similarly most of the study participants were well aware of the respiratory, and hygienic precautions recommended for breastfeeding during the COVID-19 pandemic. However, only 21% mothers were aware of the fact that a mother infected with COVID-19 can feed her baby taking care of respiratory, and hand hygiene. Only 35% study participants had knowledge that in case a mother is severely ill with COVID-infection; her breast milk can be extracted while taking precautionary measures. Similarly 77.5% women think that a mother infected with COVID-19 cannot room in her baby while taking precautionary measures. This may be due to the reason that study participants have information about respiratory and hand hygiene as part of general COVID-19 awareness program but the information peculiar to breastfeeding in COVID-infected mothers is lacking. Moreover, because of cultural values they may be aware of the hygienic measures in general. Current evidence shows that COVID-19 transmission occurs by close contact, and droplet infection. Vertical transmission occurs via placental blood during pregnancy and via birth canal during labour.<sup>10</sup> Infants with COVID-19 have been reported, however, none of the case studies reported transmission via breast milk. Moreover, the literature reveals that respiratory viruses can't be transmitted via breast milk.<sup>11</sup> Centers for Disease Control (CDC) and WHO has launched recommendations and protocols of breastfeeding in coronavirus pandemic. Women should continue to breastfeed their newborns. However they should continue to wear a mask, frequent hand washing, keeping the baby at safe distance of two meters after feeding baby, frequent cleaning of utensils, and in contact surfaces.<sup>12,13</sup> If the mother is severely ill that she cannot breastfeed their newborn, they must be supported to express their breastmilk and the infant should be fed by healthy attendant taking all precautionary measures. Some policies separate infants from mothers preventing or impeding breastfeeding but the American academy of pediatricians,

WHO, UNICEF, CDC recommends that mothers can breastfeed because the overall benefits of breastfeeding outweigh the risks.<sup>11</sup> Moreover separation of child from mother may have negative effect on physical, and mental health of mothers so they allow rooming in while taking all precautionary measures.<sup>14</sup> According to a case series breastfeeding initiation and skin to skin contact does not result in any fetal complication or transmission of infection to the neonate.<sup>15</sup> Literature reveals that symptomatic mothers on hydroxychloroquine and remdesivir can safely breastfeed<sup>16</sup> but the shared decision must be made depending upon the health care services, maternal condition, available resources and family support.<sup>17</sup>

The association of breastfeeding awareness was evaluated in respect to age, parity, education, occupation, and monthly income however it was significantly high in well-educated females ( $p=0.00$ ). So educating all women about breastfeeding protocols during COVID-19 pandemic can improve their breastfeeding practice during this crucial period.

It is further observed that television/ newspaper were the major source of information in 61.4% followed by social media in 19.4%. Other sources of information was family members, and friends in 9.9%, 7% respectively. Doctors and nurses were a source of information in only 2.3% cases. This may be the reason that females are more aware of the respiratory and hand-hygiene precautions which are displayed, and more talked about on electronic, print, and social media. While the spread of information peculiar to breastfeeding by COVID-19 infected mothers is lacking. The health care system must devise a strategy to educate all the health care workers at all level and information must be disseminated effectively to the target population. Concerned health care professionals must communicate the information during pre-natal, antenatal, and post-natal visits to educate the females. Multiple sources of communication such that verbal, written information leaflets, audio and video messages with special emphasis on the information peculiar to the lacking aspects of knowledge in order to maximize the level of understanding. Continued education and support by family members can be helpful in care and breastfeeding of newborn in such a different and difficult situation.<sup>18</sup>

**Strengths and Weakness:** Topic of research is very important in the era of pandemic. Sample size is good however study design is descriptive.

## Conclusion

Despite the fact that 93% study participants were literate; level of awareness about breast feeding was good in

133(33.3%), average in 123(30.8%) and poor in 144(36%) respectively. The awareness about breastfeeding practices regarding mothers who get infected with COVID-19 was low. Level of awareness was significantly associated with education level of women. Television/ newspaper were the major source of information followed by social media.

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