

## ORIGINAL ARTICLE

**Paediatric Residents' Perception of Breastfeeding amidst Covid 19**

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**ABSTRACT**

**Objective:** This study was conducted to determine paediatric residents' perception, beliefs, and attitudes towards breastfeeding particularly by COVID positive mothers and to assess the need for a breastfeeding teaching program.

**Study Design:** A descriptive cross-sectional study

**Place and Duration of Study:** This study was conducted over 1 months (15 October 2021-15 November 2021) among the paediatric residents from different hospitals in Rawalpindi/ Islamabad.

**Materials and Methods:** A total of 70 paediatric residents were included in the study. A self-administered online questionnaire was sent via email, comprising 19 items related to breastfeeding and its implications during the COVID 19 pandemic. Results were analysed on SPSS 20.

**Results:** Out of 70 residents, 63 (90%) responses were obtained. Most of the residents were supportive of breastfeeding and had a good perception as 100% of participants supported that breast milk is an ideal food for babies. However, huge uncertainty was noted in the answers to questions regarding breastfeeding in mothers with COVID-19 infection as only a few (12.7%) residents believed that mothers with active COVID 19 infection can breastfeed their baby. There was no difference among first and second year residents and third and fourth year residents (<0.5)

**Conclusion:** The participants' perception, beliefs, and overall knowledge about breast feeding is satisfactory but regarding breastfeeding in mothers who had COVID-19 infection is inadequate. The authors' recommendation is to have more emphasis on support & promotion of breastfeeding in paediatric residency programs across Pakistan.

**Key Words:** *Breastfeeding, COVID-19, Pandemic, Pediatric Resident, Perception.*

**Introduction**

Breastfeeding has a pivotal role in infant nutrition, survival, and mother-infant bonding as breast milk is a wholesome source of nutrition for new-borns and infants.<sup>1</sup> Exclusive breastfeeding for the first six months of life is recommended by the World Health Organization, American Academy of Paediatrics (AAP) and Pakistan Paediatric Association (PPA), followed by sustained breastfeeding along with suitable supplemental foods for up to two years.<sup>2,3</sup> Non-exclusive breastfeeding will double the risk of death from diarrhoea and pneumonia in infants aged

0–5 months,<sup>4</sup> which are still the leading causes of infant mortality in Pakistan with a rate of 56/1000 live births.<sup>5</sup> Educating healthcare providers to be lactation advocates could be a useful strategy for promoting breastfeeding in underserved communities. The paediatricians with their leading role in provision of healthcare to children are responsible for recognising the value of breastfeeding, campaigning for it, and motivating & helping mothers for breastfeeding.<sup>6</sup> Women who were encouraged by their perinatal care provider to breastfeed more frequently initiated breastfeeding.<sup>7</sup> According to WHO, breastfeeding should be encouraged for mothers with suspected or confirmed COVID-19.<sup>2</sup> Mothers should be reassured that the beneficial effects of breastfeeding greatly outweigh the dangers of transmission. None of the studies on the breast milk of women infected with Covid-19 to date has found the virus in the breast milk.<sup>8,9</sup> Whether they or their infants have suspected or confirmed COVID-19, WHO, UNICEF, RCPCH and PPA recommend rooming in with the practice of

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hygienic measures unless the mother is too unwell or the neonatal condition mandates intensive care.<sup>10,11</sup> Despite a thorough literature search, authors were unable to find any local studies on the knowledge of health care professionals on breastfeeding during COVID-19. In this study, in addition to paediatric residents' perception about basic concepts of breastfeeding, the authors also intended to find out their knowledge on breastfeeding recommendations in COVID-19 positive mothers.

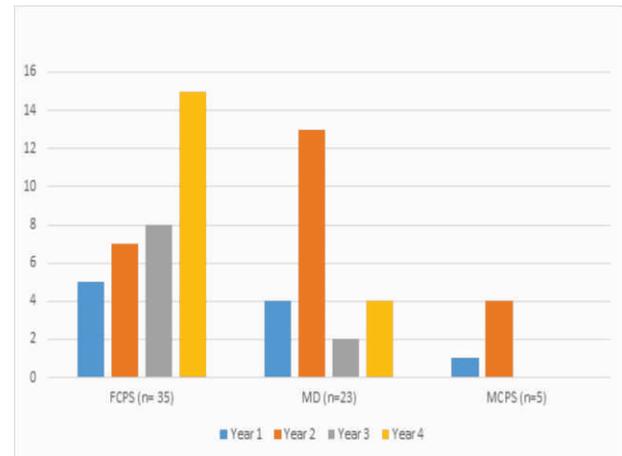
**Materials and Methods**

This cross-sectional, online survey was conducted at department of paediatrics, Islamic International Medical College/Riphah International University. Paediatric resident doctors were recruited from different training programs from teaching hospitals of twin cities of Islamabad/Rawalpindi over a period of 1 month. An online close-ended questionnaire comprising of 19 items related to perception, beliefs and knowledge about breastfeeding was designed & sent via email to the residents who agreed to participate in study. The questionnaire was validated by piloting. Study was approved by institutional review board of Riphah International University.

**Results**

Out of 70, 63 participants responded with a 90% response rate. Majority (50%) of the participants belonged to the FCPS residency programme, 40% from MCPS and 10% from MD, as depicted in table-1. Most (38%) of them were from 2<sup>nd</sup> year of residency. All of the participants are of the view that breastfeeding is the ideal food for the baby & is cheaper with 87% agreeing that breastfed babies are healthier than formula-fed babies. 84% of the residents agreed to the fact that breastfeeding is more convenient than formula feeding and 36.5 % of residents believed that working mothers should bottle-feed their babies. There is no significant relationship between the year of residency to the knowledge of breastfeeding (p-value insignificant). Responses to questions linked to knowledge & perception of breastfeeding and formula feeding of Paediatric Residents are mentioned in Table-II and table-III. Knowledge and perception of the participants on breastfeeding amidst COVID 19 is shown in Table-IV.

**Table I: Distribution of Degree Program and Year of Residency (n=63)**



**Table II: Knowledge and Perception of Breastfeeding of Paediatric Residents (Total Responses=63)**

S. No	Question	Agree	Neutral	Disagree
1.	Exclusive breastfeeding should be extended for 6 months	18 (28.6%)	43 (68.3%)	2 (3.2%)
2.	Breastfeeding increases mother-infant bonding.	63 (100%)	---	---
3.	Breast milk lacks iron.	19 (30.2%)	8 (12.7%)	36 (57.1%)
4.	The benefits of breastfeeding last only as long as the baby is breastfed.	22 (34.9%)	4 (6.3%)	37 (58.7%)
5.	Breastfed babies are more likely to be overfed than formula-fed babies.	50 (7.4%)	8 (12.7%)	5 (7.9%)
6.	Breast milk is more easily digested than formula milk.	61 (96.8%)	2 (3.2%)	3 (4.8%)
7.	Breastfeeding is more convenient than formula	53 (84.1%)	4 (6.3%)	6 (9.5%)
8.	Breast milk is cheaper than formula.	63 (100%)	---	---

**Table III: Knowledge and Perception of formula feeding of Paediatric Residents (Total Responses=63)**

S. No.	Questions	Agree	Neutral	Disagree
1.	Formula feeding is more convenient than breastfeeding.	10 (10%)	6 (9.5%)	47(76.6%)
2.	Formula feeding is a better choice if the mother plans to go back to work.	23 (36.5%)	10(15.9%)	30 (47.6%)
3.	Mothers who formula feed their babies miss the great joys of motherhood.	45 (71.4%)	11 (17.5%)	7 (11.1%)
4.	Formula milk is as healthy for an infant as breast milk.	3 (4.8%)	11 (17.5%)	49 (77.8%)

**Table IV: Knowledge and Perception of the Participants on Breastfeeding Amidst COVID 19 (Total Responses = 63)**

S. No.	Questions	Agree	Neutral	Disagree
1.	There is a risk if a baby is breastfed by a mother suffering from COVID-19.	8 (12.7%)	12 (19%)	43 (68.3%)
2.	Formula feeding is a safer option if a mother is confirmed to have COVID-19	14 (22.2%)	15 (23.8%)	34 (54%)
3.	If a mother is symptomatic for COVID-19 she can continue breastfeeding her baby	39 (61.9%)	11 (17.5%)	13 (20.6%)
4.	If a mother is suspected case of COVID-19 she must continue breastfeeding her baby	49 (77.8%)	7 (11.1%)	7 (11.1%)
5.	If a mother is confirmed case of COVID-19 she must continue breastfeeding her baby	43 (68.3%)	11 (17.5%)	9 (14.3%)
6.	If a mother is confirmed case of COVID-19 she can continue breastfeeding her baby while observing SOPs	55 (87.3%)	5 (7.9%)	3 (4.8%)
7.	If a mother is a confirmed case of COVID-19 she should isolate herself and give EBM (expressed breast milk) to the baby through a bottle	37(58.7%)	14(22.2%)	12(19%)
8.	If a mother is confirmed case of COVID-19, she should stop breastfeeding for at least 2 weeks	7 (11.1%)	10 (15.9%)	46 (73%)

Among all participants, 87.3 % were of the view that the mother can continue breastfeeding during active COVID-19 infection if she takes proper precautions and medications, while 7.9% were unsure of what to do in such a situation and 11 % had the opinion that breastfeeding is contraindicated in such mothers. Even though 58.7 % were of the view that such mothers can give expressed breast milk (EBM) to the baby, only 55% of the residents had the knowledge that breast milk protects against COVID 19.

## Discussion

This study explored paediatric resident's perception & attitudes about breastfeeding amidst pandemic Covid-19. Response rate in present study was greater (90%) as compared to 60%<sup>12</sup> & 75%<sup>13</sup> in international studies. The residents showed average knowledge about breastfeeding as is the case in the study on Spanish residents<sup>12</sup>, although questions in both studies were different. While Studies conducted on Canadian Paediatric residents showed opposite results with most residents lacking knowledge about breastfeeding.<sup>14,15</sup>

All of the participants agreed that breast milk is an ideal and healthy food for a baby, with 75% of residents disagreeing that formula feeding is more convenient and cheaper than breastfeeding. This is in contrast to the study conducted by Al-Nassaj HH et al, in which only 57 % of the residents agreed that breast milk is an ideal and healthy food for a baby.<sup>13</sup>

50% of the residents agreed that working mothers should continue breastfeeding, which is similar to the results by Al-Nassaj HH et al.<sup>13</sup> Majority (68% )agreed that exclusive breastfeeding should be extended for 4-6 months.

In the present study, most of the residents agreed that breastfeeding should be given for the first 6 months, these results are similar to the results (92%) of a study conducted in Brazil on 89 healthcare professionals.<sup>16</sup> 57.2% of residents agreed that breast milk contains sufficient iron which is similar to the perception of the doctors in a study conducted by Shaw et al.<sup>17</sup>

Residents' responses to questions about COVID-19 infection and breastfeeding revealed significant discrepancies, indicating a lack of adequate knowledge. Similar results were obtained from a study conducted in India where only 54% of the participants have adequate knowledge amidst the pandemic.<sup>18</sup> In the present study, half of the residents agreed that breastfeeding is protective against COVID -19. 12.7 % agreed that there is a risk of infection to the baby if breastfed by a mother suffering from COVID-19, which is in contrast to the perception of doctors (85%) in a study carried out in India<sup>18</sup>. 87.3 % said that the mother can continue breastfeeding during active COVID-19 infection if she takes proper precautions and medications, a response far better than the response of the participants (47%) in the above-mentioned study.<sup>18</sup> Another study carried out in Nepal on healthcare professionals about knowledge regarding COVID 19 infection revealed that only 53.6% knew that infected mothers can breastfeed.<sup>19</sup> 58.7% of residents agreed that if a mother is confirmed case of COVID-19 she should isolate herself and give EBM (expressed breast milk) to the baby. 22.2% agreed that formula feeding is a safer option in such cases, while 74.6% of Indian doctors endorsed EBM & 12% formula milk for such infants.<sup>18</sup> There is no significant difference in the knowledge among various years of

residency.

This study showed that knowledge & perception of paediatric residents about breastfeeding during COVID 19 infection is average but there is still room for improvement. SARS-CoV-2 is a rapidly evolving infection and residents should have adequate knowledge about it so that they can manage and guide the parents accordingly.

The limitations of the study are a small sample size and the fact that only paediatric residents were included. Further studies with questions targeting technique & skills of breastfeeding as well as the inclusion of residents of Obstetrics/gynaecology need to be done to identify the gaps in Paediatric as well as obstetric residency to improve the training of future consultants, which will subsequently result in the promotion of breastfeeding.

### Conclusion

The participants' perceptions, beliefs, and breastfeeding knowledge are above average and acceptable but knowledge concerning breastfeeding in mothers who had COVID-19 infection is inadequate. The authors' recommendation is to have more emphasis on support & promotion of breastfeeding amidst Covid-19 in paediatric residency programs across Pakistan. Dedicated workshops and mandatory courses on breastfeeding during pandemic COVID-19 should be offered to the residents to address this inadequacy.

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**CONFLICT OF INTEREST**

Authors declared no conflicts of Interest.

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**DATA SHARING STATEMENT**

The data that support the findings of this study are available from the corresponding author upon request.

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