

DOI: <https://dx.doi.org/10.18203/2320-1770.ijrcog20210352>

Review Article

Busting of myths and misconceptions about breast feeding during COVID-19 pandemic and its societal importance: a brisk review

Dharitri Swain^{1*}, Swayam Pragyan Parida², Hrushikesh Das¹

¹College of Nursing, ²Department of Community Medicine and Family Medicine, All India Institute of Medical Sciences, Bhubaneswar, Odisha, India

Received: 26 November 2020

Accepted: 04 January 2021

***Correspondence:**

Dharitri Swain,

E-mail: dhari79@yahoo.co.in

Copyright: © the author(s), publisher and licensee Medip Academy. This is an open-access article distributed under the terms of the Creative Commons Attribution Non-Commercial License, which permits unrestricted non-commercial use, distribution, and reproduction in any medium, provided the original work is properly cited.

ABSTRACT

COVID-19 considered as a public health emergency of International concern and thus a pandemic with the explosive increase rate of infection worldwide and at the same time, the healthcare system is struggling for survival and the government is striving to regain the trust of the population. According to the WHO, mothers with COVID-19 or suspected COVID-19 can breastfeed their babies as long as they take appropriate precautions. Although creating awareness and providing adequate information to the mother and general public about breastfeeding benefits, still people believe in several myths and misconceptions due to fear of the COVID-19 pandemic. These personal beliefs, misconceptions, myths, and cultural practices can have a negative impact on breastfeeding which may discourage breastfeeding practice among women. This brisk review intends to compile the latest available evidence about myths, cultural practices preventing breastfeeding during COVID 19 pandemic. We searched works of literature related to breast feeding during COVID -19 published between December 2019, and August 2020, in website archive of Ministry of Health and Family Welfare, World Health Organization (WHO), Centre for Diseases Control and Prevention (CDC), United Nations Children's Fund (UNICE), journal repositories such as Google Scholar, Pub Med, Science Direct, newspaper article etc. We identified 30 studies that met the search criteria for inclusion in the review. The evidence presented here related to the common believes may alleviate the potential source of anxiety related to COVID-19 breast feeding issues who are still dependant on the societal misconception not the evidence.

Keywords: Breast feeding myths, Breastfeeding practice, Breast feeding counselling, COVID-19

INTRODUCTION

The outbreak of the COVID-19 infection (novel corona virus disease in 2019) caused a plethora of challenges worldwide and has affected all aspects of human lives. The health care system has been affected the most, with the exponential rise in the number of confirmed cases and deaths per day across the World.¹ While scientists and medical experts are racing against time to invent a vaccine, the grim figures simply point to the fact that prevention is indeed the cure, at least in these circumstances.² This is especially important for the high-risk group including elderly population, those with a compromised immune

system, chronic illness and pregnant women.³ Since a woman's immune system gets compromised and is in constant flux during pregnancy, it makes them more susceptible to contracting infections. While these infections primarily pose a threat to the mother, they can also infect the fetus or the baby during pregnancy or after the delivery. The protection, promotion, and support of breastfeeding are a priority for public health and health care system continuously compiling evidence on the effect of COVID on mothers and children.⁴⁻⁶ Breastfeeding and caring for the baby is a sensitive issue to be dealt with in women who are suspected to be or confirmed to have a corona virus infection. With no prior experience of this

novel infection, general public tend to believe in misconception and myths about breast feeding practice, as some literature has contradictory statements regarding breast feeding and rooming-in of neonates in mothers with confirmed or suspected SARS-COV-2.^{2,7,8} This brisk review intends to compile the latest available evidence about myths, cultural practices preventing breastfeeding during COVID 19.

IMPACT OF MYTHS AND CULTURAL PRACTICE ON IMPLICATION OF BREAST FEEDING PRACTICE

There is no evidence of active virus in the breast milk of women infected with Covid-19 till date.⁹⁻¹³ However limited studies reported, there is possibility of virus in the milk during the incubation period and hence considered donor milk after screening for the virus rather than expressed breast milk of the mother also some studies suggested to avoid direct breast feeding as sucking at the breast presumably might increase the risk of SARS-CoV-2 transmission via aerosol due to the intimate contact during feeds.^{7,8} It is strongly recommended by the WHO, UNICEF, FOGSI and RCOG that the benefits of breast feeding outweigh the risks of transmission and morbidity of Covid-19 in neonates and vouch for breast feeding in cases of suspected or confirmed Covid-19.

There is a potential role of cultural and religious beliefs/traditions/customs/rituals, which add a flavour to the public's mindset in a particular region/country and influence the propagation or acceptance of a myth.¹⁴ Beliefs, misconception or myths related to various infections have been prevalent from time to time, and it takes a long battle to demystify the existing myths by providing a realistic evidence-based approach.^{15,16} There is still existing of several breast feeding misconception and myths in most of the culture worldwide.¹⁷⁻¹⁹ In recent times, misconception and myths regarding COVID-19 infection have taken an upper hand due to lack of complete evidence of its transmission and cure/treatment of COVID-19 infection. In this regard, various health authorities have listed some of the prevailing myths to increase awareness among general public and stakeholders about the evidence and have provided factual information about COVID-19 seek professional advice only when things go out of hand.

Understanding and addressing local beliefs, misconceptions and myths can help health care professionals to provide more culturally appropriate counselling about breastfeeding. To debunk the myths surrounding breastfeeding, various maternal and child health authorities discussed the real breastfeeding during pandemic.²⁰⁻²³ There are also many questions and concerns by mothers about implications for breast feeding due to risk of coronavirus disease 2019.^{24,25}

Although myths, misconceptions and cultural beliefs have been highlighted as among the hurdles to optimal

breastfeeding and infant feeding, moreover during this pandemic COVID situation this become more prominent to relay on the general public rumours which may affect breastfeeding practices and consequently child health and nutrition may be compromised to a large extent. These myths can be very dangerous, as these can lead to over-complacency and lead to a reduction in actually needed breast feeding practices, or following some of these myths may lead to put the baby at risk of developing other infections and illness due to low immunity by not feeding the baby with breast milk.

Despite the annual observance of the World Breastfeeding Week for 24 years now, it's astonishing how several myths still continue to surround the act of breast feeding nursing the baby. In the absence of professional guidance during this lock down crisis situation, several mothers remain unaware of what needs to be done and failing to distinguish myth from fact. Indian women, unfortunately, acts based on relevant evidence about risk of coronavirus disease 2019 on newborn health and nutrition.^{1,21,24,26}

The common believes and concerns listed in the table (Table 1) have been presented so as to disseminate knowledge and information with regard to breast feeding practice during COVID-19. The evidence presented here related to the common believes may alleviate the potential source of anxiety related to COVID-19 breast feeding issues among women who are still dependant on the societal misconception not the evidence.

DEMYSIFYING THE MYTHS ABOUT IMPLICATION OF BREASTFEEDING DURING COVID-19

There is a strong recommendation on mother-infant contact and breastfeeding must be based on a full consideration of not only of the potential risks of COVID-19 infection of the infant, but also the risks of morbidity and mortality associated with not breastfeeding, the inappropriate use of infant formula milks, as well as the protective effects of skin-to-skin contact. (WHO).

Children appear to be at low risk of COVID-19. Among the cases of confirmed COVID-19 in children, most have experienced only mild or asymptomatic illness.^{5,27} This is also the case with other zoonotic corona viruses (SARS-CoV and MERS-CoV), which seem to affect children less commonly and to cause fewer symptoms and less severe disease compared with adults.⁶

Secretory IgA (SIgA) have been detected in breast milk of mothers with previous COVID-19 infection. Although the strength and durability of SIgA reactive to COVID-19 have not yet been determined, multiple bioactive components have been identified in breast milk that not only protect against infections but improve neurocognitive and immunologic development of the child since Lars A Hanson first described SIgA in breast milk in 1961.^{28,29}

Table 1: Misconception and myths related to breast feeding during COVID pandemic (Compiled from WHO, CDC, UNICE, newspaper article)

Myths	Fact/reality evidence	Health message to mother and public
Breastfeeding is not safe during the pandemic.	Breast milk provides antibodies that give babies a healthy boost and protect them against many infections. Antibodies and bio-active factors in breast milk may fight against COVID-19 infection, if a baby is exposed.	Baby should be breastfed exclusively for 6 months and after 6 months continue breastfeeding with safe and healthy complementary foods.
Baby will be infected with COVID-19 by breastfeeding if delivered during this pandemic situation.	There is no evidence for the presence of active virus in breast milk, or transmission of virus via breast milk.	COVID-19 (the disease caused by the novel coronavirus) should be supported to breastfeed safely, with taking precautions to avoid spreading the virus to the infant.
Breastfeeding strictly avoided if mother is infected with COVID-19.	There is limited evidence for the presence of viral RNA in breast milk, while there is neither evidence for active virus in breast milk nor transmission via breast milk.	Precautions to be followed to avoid spreading the virus to the infant include washing hands before holding your baby, and wearing a face mask during direct breastfeeding. Also consult with the health care provider for correct information rather believing the unreliable source of information.
COVID-19 virus will pass from a woman to her unborn or newborn baby.	There is no evidence for the vertical transmission of COVID-19 through breastfeeding.	Consult the health care providers for undergoing safe delivery and breast feed the baby by taking precautions to avoid spreading the virus to her infant.
Mother should not practice skin to skin contact or kangaroo mother care if infected with COVID-19.	Skin-to-skin and kangaroo mother care can be practiced with taking precautions to avoid spreading the virus to the infant.	Mother and infant should be enabled to remain together while rooming-in throughout the day and night and to practice skin-to-skin contact, including kangaroo mother care, especially immediately after birth and during establishment of breastfeeding, whether they or their infants have suspected or confirmed COVID-19.
Mother with COVID-19 will give birth to pre mature baby.	Baby may born prematurely or small for gestational age because of severe maternal illness during pregnancy and no clear evidence prematurity associated with COVID-19 infection.	
Mother with flu like symptoms should stop breast feeding.	There is no evidence for the transmission of virus via breast milk.	Mother with flu to continue breastfeeding or feeding expressed breast milk to her infant while taking precautions to avoid spreading the virus to her infant.
Mothers find it difficult to produce enough milk if having COVID-19 infection	There is no evidence for less production of breast milk with COVID-19 infection. If there is issue of not producing enough milk, it could be because of faulty latch on, incorrect breast feeding position, the baby is unable to remove sufficient milk with each feeding or the frequency of breastfeeding is not right.	Proper breast feeding support counseling will help for producing enough milk. This apart, proper support, diet, rest and exercise during the breastfeeding months is also important.
Mothers infected with COVID-19 must be separated from their infants and baby should be provided with	There is no evidence on transmission of COVID-19 virus via breast milk.	It is possible for mothers with suspected or confirmed COVID-19 to room-in with their newborns when precautions are taken to protect the infants from maternal infectious respiratory secretions.

Continued.

Myths	Fact/reality evidence	Health message to mother and public
expressed breast milk instead of feeding them directly at the breast.		
Mother should stop breastfeed the baby if suspected or conformed with COVID-19 infection.	There is no evidence on transmission of COVID-19 virus via breast milk.	There is no fixed time interval to wait for breastfeeding the baby after confirmed or suspected COVID-19. Mother should continue breastfeeding or feeding expressed breast milk to her infant while taking precautions to avoid spreading the virus to her infant.
Mother should stop breastfeed the baby if she feels too unwell and fear of getting infected with COVID-19.	There is no evidence on transmission of COVID-19 virus via breast milk.	Mother should provide baby with expressed breast milk safely via a clean palladia or spoon If feeling too sick to breastfeed the baby. Expressing breast milk is important to sustain milk production so she can breastfeed her baby again when she feels well enough to do so.
Breastfeeding should not be given if the baby is sick.	Breastfeeding boosts baby's immune system, and antibodies are passed to the baby through breast milk, helping to fight infections.	Breastfeeding should be continued if the baby becomes ill. Whether the baby contracts COVID-19 or another illness, it is important to continue nourishing the baby with breast milk.
Formula feeding should be initiated if mother is infected with COVID-19.	Formula feeding is more risk compared to providing breast milk of COVID positive mother. Breast milk provides protection against many illnesses and strengthens the baby's immune function by directly transferring antibodies from the mother. Confirmed or suspected COVID-19 mothers with any symptoms who are breastfeeding or practicing skin-to-skin contact should take precautions.	Breast milk substitutes, feeding bottles, teats, pacifiers or dummies should not be given. Mothers and infants should stay together and practice skin-to-skin contact, and rooming-in throughout the day and night, especially straight after birth during establishment of breastfeeding, whether or not the mother or child has suspected, probable, or confirmed COVID-19.
Stored Breast milk may spoil if mother is infected with COVID-19.	No evidence of breast milk gets spoiled by COVID-19 virus.	If breast milk is expressed cleanly and safely, it can be stored as per the usual storage guidelines: at room temperature for 4-6 hours, in the fridge for 3-5 days, or in the freezer for 6-9 months, depending on how soon you want to use it.
Breast pumping equipment should not be used if mother is infected with COVID-19.	Sterile breast pumping equipment should be used.	When using a breast pump to express breast milk, precautions to be taken like wash hands before touching any pump or bottle parts. Recommendations encourage that someone who is not sick feed the expressed breast milk to the infant by maintaining same hygienic precaution.
Breast nipple should be washed with sanitizer before breastfeeding or expressing breast milk, if a mother is confirmed/ suspected to have COVID-19.	Mother should gently wash the breast with soap and warm water for at least 20 second prior to feeding.	Mother must practice respiratory hygiene, wash hands thoroughly before and after touching the baby, routinely clean and disinfect all surfaces around the baby.
When mother has a common cold, should not breastfeed the baby, as it	It won't affect the baby as viral infections do not get transmitted through breast milk. When the mother has a cold, she produces	Mother should continue breastfeeding or feeding expressed breast milk to her infant while taking precautions to avoid

Continued.

Myths	Fact/reality evidence	Health message to mother and public
can infect the child.	antibodies that pass through breast milk and in fact, protects the baby.	spreading the virus to her infant.
Breastfeeding should not be given after C-section, as there is chance of getting COVID-19 infection.	The mother should breastfeed the newborn with colostrum soon after the delivery, even if it's through C-section.	However, in situations when it isn't possible for the mother to nurse the child, she should still be kept in the same room with the baby, and initiate the process of breastfeeding as soon as possible mothers able to feed.
Women on medication for treatment of COVID-19 infection should not breastfeed.	Only a very small amount of most medicines can be found in a mother's milk, which is not a bother.	Mother should continue breastfeeding or feeding expressed breast milk to her infant while taking precautions to avoid spreading the virus to her infant.
The mother's diet will affect the milk composition.	A mother's diet does not directly affect the quality of milk she produces. But if the mother is severely malnourished or fails to consume a balanced diet, the quality of breast milk can be adversely affected.	Mother should continue breastfeeding or feeding expressed breast milk to her infant while taking precautions to avoid spreading the virus to her infant.

Exclusively breastfed infants, the risk of mortality is 14-fold higher in infants who are not breastfed.³⁰ Over 820 000 children's lives could be saved every year among children under 5 years, if all children 0-23 months were optimally breastfed. For mothers, breastfeeding protects against breast cancer and may protect against ovarian cancer and type 2 diabetes.³¹ On the other hand, children are at low risk of COVID-19.³²

Based on all above evidence till date all mothers and general public need to be more aware that the newborn should not to be deprived from getting all benefits of her mother's breast milk during this crisis situation. Therefore more awareness activities and messages should be delivered through all possible means such as telecommunication/mass media advertisements /distributing breast feeding information pamphlets/holding public webinars for health care workers specifically community stallholders etc. to counter the emerging misconception and believes about discouraging breast feeding. The mainstream media should also be very cautious in presenting the different information about the COVID-19 infection. Media, in its enthusiasm, should not try to discuss the studies evaluating the scientific evidence for various issues related to COVID-19 infection, until and unless these have some public message and have been proved unequivocally. The public should be made aware that they should always follow authentic websites for getting maternal and child health information such as WHO website, CDC website, UNICEF, FOGSI, IAP or Ministry of Health and Family Welfare website of India to gain knowledge and stay updated regarding breast feeding related information during COVID-19.

Further, awareness should be raised to follow the appropriate recommended hygienic practices such as wash hands frequently with soap and water or use alcohol based

hand rub especially before touching the baby, touching the pump or bottle parts and clean all parts after each use, wear a medical mask during any contact with the baby, including while feeding and breast feeding to continue if it is not possible, while CDC recommends a cloth mask. Replace medical masks as soon as they become damp and dispose them immediately. Masks should not be reused or touched in the front, Sneeze or cough into a tissue which has to be disposed immediately and hands washed again. Routinely clean and disinfect surfaces that mothers have touched, if a mother is confirmed/suspected to have COVID-19 has just coughed over her exposed breast or chest, and then she should gently wash the breast with soap and warm water for at least 20 seconds prior to feeding.¹

Role of frontline workers such as ANM, ASHA, AWWs are essential in promotion of breastfeeding during household post natal visits as per HBNC. Teleconsultation with doctors, nurses, skilled manpower and sharing of specific help line no to mothers can solve many issues faced by mothers during lockdown, shut down, containment zones. Breastfeeding support can be established by mothers who have successfully breastfed, self help group (SHG), women groups who can act as change agents for the society. Messages on usefulness of breastfeeding should be provided through messages, hosted in social media like whatsapp, twitter and facebook.

CONCLUSION

Although creating awareness and providing adequate information to the mother and general public through telecommunication and distributing health information pamphlets at hospitals, public places about breastfeeding benefits, still people believe in several myths and misconceptions due to fear of the COVID-19 pandemic. Overall this paper indicate that there is a need for dissemination of information and education regarding

optimal breast feeding practices and for protecting and promoting healthy practices during this COVID-19 situation. Involvement of pregnant and lactating mothers, elderly women in various information, education and communication (IEC) activities is desirable as they all have an important role in initiation of breast-feeding and other healthy feeding practices during this pandemic at the community level.

ACKNOWLEDGMENTS

I want to express sincere appreciation to all co-authors for review data management and drafting the manuscripts.

Funding: No funding sources

Conflict of interest: None declared

Ethical approval: Not required

REFERENCES

1. WHO Coronavirus Disease (COVID-19) Dashboard. Available at <https://covid19.who.int/>. Accessed on 28 July 2020.
2. Davanzo R, Moro G, Sandri F, Agosti M, Moretti C, Mosca F. Breastfeeding and coronavirus disease 2019: interim indications of the Italian Society of Neonatology endorsed by the Union of European Neonatal and Perinatal Societies. *Matern Child Nutr.* 2020;16(3):887-92.
3. Food safety: importance for at-risk groups. Available at <https://www.who.int/news-room/fact-sheets/detail/food-safety>. Accessed on 30 August 2020.
4. World Health Organization. Guideline: protecting, promoting and supporting breastfeeding in facilities providing maternity and newborn services. WHO. 2017;120.
5. Zimmermann P, Curtis N. COVID-19 in Children, Pregnancy and Neonates. *Pediatr Infect Dis J.* 2020;39(6):469-77.
6. Zimmermann P, Curtis N. Coronavirus Infections in Children Including COVID-19. *Pediatr Infect Dis J.* 2020;39(5):355-68.
7. Wang L, Shi Y, Xiao T, Fu J, Feng X, Mu D, et al. Chinese expert consensus on the perinatal and neonatal management for the prevention and control of the 2019 novel coronavirus infection. *Ann Transl Med.* 2020;8(3):47.
8. Favre G, Pomar L, Qi X, Saines K, Musso D, Baud D. Guidelines for pregnant women with suspected SARS-CoV-2 infection. *Lancet Infect Dis.* 2020;20(6):652-3.
9. Zhu H, Wang L, Fang C, Peng S, Zhang L, Chang G, et al. Clinical analysis of 10 neonates born to mothers with 2019-nCoV pneumonia. *Transl Pediatr.* 2020;9(1):51-60.
10. Chen H, Guo J, Wang C, Luo F, Yu X, Zhang W, et al. Clinical characteristics and intrauterine vertical transmission potential of COVID-19 infection in nine pregnant women: a retrospective review of medical records. *Lancet.* 2020;395(10226):809-15.
11. Wang S, Guo L, Chen L, Liu W, Cao Y, Zhang J, et al. A Case report of neonatal 2019 coronavirus disease in China. *Clin Infect Dis.* 2020;71(15):853-7.
12. Chen Y, Peng H, Wang L, Zhao Y, Zeng L, Gao H, et al. Infants born to mothers with a new coronavirus (COVID-19). *Front Pediatr.* 2020;8:92-9.
13. Li Y, Zhao R, Zheng S, Chen X, Wang J, Sheng X, et al. Lack of vertical transmission of severe acute respiratory syndrome coronavirus 2, China. *Emerg Infect Dis.* 2020;26(6):1335-6.
14. Morales S. Myth and the construction of meaning in mediated culture. *Kome.* 2013;1(2):75-9.
15. Sahoo S, Padhy SK, Ipsita J, Mehra A, Grover S. Demystifying the myths about COVID-19 infection and its societal importance. *Asian J Psychiatr.* 2020;54:1022-44.
16. Burns PB, Rohrich RJ, Chung KC. The levels of evidence and their role in evidence-based medicine. *Plast Reconstr Surg.* 2011;128(1):305-10.
17. Busted: 14 myths about breastfeeding. UNICEF Parenting. Available at <https://www.unicef.org/parenting/food-nutrition/14-myths-about-breastfeeding>. Accessed on 28 August 2020.
18. Breastfeeding rates. Available at <https://www.cdc.gov/breastfeeding/data/reportcard.htm>. Accessed on 28 August 2020.
19. 11 Myths and facts about breastfeeding-Slurrr Farm. Available at <https://slurrrfarm.com/blogs/blog/myths-and-facts-about-breastfeeding>. Accessed on 28 July 2020.
20. Mythbusters. Available at <https://go.discovery.com/tv-shows/mythbusters/>. Accessed on 28 July 2020.
21. MoHFW, Home. Available at <https://www.mohfw.gov.in/>. Accessed on 28 August 2020.
22. Carbone M, Green JB, Bucci EM, Lednický JA. Coronaviruses: facts, myths, and hypotheses. *J Thorac Oncol.* 2020;15(5):675-8.
23. Detail Question and Answers on COVID-19 for Public. Available at <https://www.mohfw.gov.in/pdf/FAQ.pdf>. Accessed on 28 August 2020.
24. European paediatric association (epa / unepsa). Available at <http://www.epa-unepsa.org/?q=page/epa-unepsa-meetings>. Accessed on 28 August 2020.
25. Breastfeeding during the COVID-19 pandemic | UNICEF East Asia and Pacific. Available at <https://www.unicef.org/eap/breastfeeding-during-covid-19>. Accessed on 30 July 2020.
26. Faff vs fact: 9 popular breastfeeding myths debunked - health and fitness - Hindustan Times. Available at <https://www.hindustantimes.com/health-and-fitness/faff-vs-fact-9-popular-breastfeeding-myths-debunked/story-las7xWNiOhtJUKa9KMV51H.html>. Accessed on 29 July 2020.
27. Formica S, García C, Senoussi M, Brass M. Neural oscillations dissociate between maintenance and proceduralization of novel instructions. *BioRxiv.* 2020;1-43.

28. Hanson LA. Comparative immunological studies of the immune globulins of human milk and of blood serum. *Int Arch Allergy Immunol.* 1961;18(5):241-67.
29. Bardanzellu F, Peroni DG, Fanos V. Human breast milk: bioactive components, from stem cells to health outcomes. *Curr Nutr Rep.* 2020;9(1):1-13.
30. Sankar MJ, Sinha B, Chowdhury R, Bhandari N, Taneja S, Martines J, et al. Optimal breastfeeding practices and infant and child mortality: a systematic review and meta-analysis. *Acta Paediatr.* 2015;104:3-13.
31. Victora CG, Bahl R, Barros AJD, França GVA, Horton S, Krasevec J, et al. Breastfeeding in the 21st century: epidemiology, mechanisms, and lifelong effect. *Lancet.* 2016;387(10017):475-90.
32. WHO Scientific Brief. Breastfeeding and COVID-19. Available at [https:// apps. who. int/ iris/ handle/10665/332639](https://apps.who.int/iris/handle/10665/332639). Accessed on 27 August 2020.

Cite this article as: Swain D, Parida SP, Das H. Busting of myths and misconceptions about breast feeding during COVID-19 pandemic and its societal importance: a brisk review. *Int J Reprod Contracept Obstet Gynecol* 2021;10:818-24.