



The Essential Bond: Nurturing Newborns through Breastfeeding

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Introduction

In the intricate dedication of motherhood, breastfeeding emerges as an art form and a scientific marvel. This editorial seeks to explore the nuanced interplay between the artistic elements of nurturing and the scientific foundations that underpin breastfeeding. It delves into the exquisite balance of nature and nurture that defines the journey of breastfeeding and its profound impact on both the physical and emotional well-being of newborns.

The biological symphony

Breastfeeding is not merely a mechanical process; it is a biological symphony orchestrated by nature. This biological symphony not only fuels the physical growth of newborns but also acts as a fortress, arming them with immune defenses that lay the foundation for a resilient and healthy life. Breast milk, often hailed as “liquid gold,” epitomizes the harmonious interplay of biological intricacies. Its composition, a meticulously balanced blend of proteins, fats, and antibodies, unfolds as a testament to nature’s precision in providing newborns with a tailored nutritional elixir. This biological symphony not only nurtures physical growth but also lays the groundwork for robust immune systems, fortifying infants against infections and diseases.

Breastfeeding offers significant advantages for infants, as indicated by systematic reviews and meta-analyses, with strong evidence supporting reduced risks of Nutritional adversity i.e. Malnutrition as well as Obesity, Respiratory and Gastrointestinal infections, SIDS, AOM, NEC, dental caries, malocclusion, and leukemia.

Breastfeeding lowers the risk for the incidence of NEC for pre-term infants. In neonatal intensive care units where the parent’s expressed milk or donor human milk is used with preterm infants, NEC is significantly decreased [3-5]. Breastfeeding is protective against respiratory infections. Any breastfeeding (exclusive or partial) reduced the risk of hospitalization and mortality [2].

Breastfeeding provides protection against several Gastrointestinal and respiratory infections such as against bacterial and viral diarrheas caused by *E coli*, *Rota virus* and SARS-CoV-2 (COVID-19). Breast milk is known to have antibacterial and antiviral properties. The lactoferrin in breast milk prevents the COVID-19 cell from interacting with the host cell. Oligosaccharides act as a barrier to pathogens, including COVID-19. Breast milk transfers maternal immune cells to the infant.

Breastfeeding may be associated with a reduced risk for developing asthma. One meta-analysis of three prospective cohort studies of fair-quality evidence concluded that any breastfeeding for at least 3 months was associated with a reduced risk for asthma [3].

The art of empowerment

Beyond its biological significance, breastfeeding is an art that empowers mothers. The act of nourishing a child through breastfeeding is a celebration of maternal strength and resilience. It transforms the maternal experience into a tapestry of empowerment, where mothers connect with their innate abilities, fostering a sense of confidence and fulfillment that echoes through the entire journey of motherhood [3-5].

Exclusive breastfeeding protects mental health because it up-regulates the oxytocin system, which down-regulates the stress/inflammatory response system [22].

Emotional Intelligence and Bonding

Breastfeeding is an emotional dialogue between mother and child, transcending the nutritional exchange. The physical closeness, the rhythmic heartbeat, and the exchange of gazes during breastfeeding contribute to the development of emotional intelligence in infants. This emotional bonding lays the groundwork for secure attachments, nurturing not only physical health but also emotional well-being.

- **The Emotional Tapestry:** Breastfeeding extends beyond a simple nutritional exchange; it weaves an emotional tapestry between mother and baby. The skin-to-skin contact, the rhythmic lull of suckling, and the release of bonding hormones create an intimate connection that goes beyond the physical nourishment. Skin to skin contact promotes proximity through the sensory experience of touching, holding and gazing at the newborn. This emotional foundation not only fosters a secure attachment but also contributes to the development of emotional intelligence in infants, influencing their future interactions and relationships.
- **Cognitive Development:** Research suggests a correlation between breastfeeding and enhanced cognitive development in infants. The unique composition of breast milk, including omega-3 fatty acids and other crucial nutrients, supports brain growth and neurodevelopment. There might be a correlation between breastfeeding and enhanced performance on intelligence tests during childhood and adolescence. Findings from several meta-analyses either provide conflicting results and/or do not adjust for maternal factors such as maternal intelligence, maternal education, and cognitive stimulation provided by mothers to their infants [12].

The results of several observational studies may not provide enough evidence to determine how greatly breastfeeding impacts a child's cognitive abilities [13]. In a meta-analysis that controlled for maternal intelligence, children who were ever breastfed scored an average of 3.4 points higher on intelligence tests than children who were never breastfed [10].

In a study that controlled for socioeconomic status, children who were breastfed for more than 12 months scored 3.65 points at

5 years old compared to those children that breastfed for less than 2 months [11]. Long-term studies indicate that breast-fed babies may have cognitive advantages, showcasing the enduring impact of early nutritional choices.

Long-term health benefits

The benefits of breastfeeding extend well into the future, reducing the risk of chronic diseases for both mother and child. Breast-fed infants are less prone to obesity, diabetes, and certain allergies. Mothers who breastfeed experience a decreased risk of postpartum depression, breast cancer, and ovarian cancer. This underscores the profound and lasting impact that breastfeeding can have on the health trajectories of both parties involved. There could be a connection between breastfeeding and a decreased risk of childhood obesity. Longitudinal cohort study surveyed 3,006 women between 2009 and 2014 regarding feeding methods and infant height and weight at 6-, 12-, and 24-month interviews. Longer duration of breastfeeding was associated with a decreased incidence of overweight and obesity of infants [14].

Breastfeeding lowers the risk for the incidence of developing childhood leukemia. Breastfeeding for longer than 6 months was associated with a reduced risk of acute lymphocytic leukemia [3,15,16].

There might be an association between breastfeeding and a reduced likelihood of developing Crohn's disease and ulcerative colitis. The protective factor of breastfeeding was reported to be dose dependent, with the greatest protective effect for infants who were breastfed for at least 12 months as compared to or 6 months. Breastfeeding lowers the risk for the incidence of dental caries. Children who are breastfed have less risk of developing dental caries than children who are fed nonhuman milk from a bottle [24].

Breastfeeding lowers the risk for the incidence of malocclusion. Breastfeeding is believed to influence the development of the infant craniofacial anatomy through the peristaltic movement of the tongue during the suckling at the breast. Bottle feeding results in less engagement of the oral structures, resulting in suboptimal development.

Breastfeeding decreases the risk of Sudden Infant Death Syndrome (SIDS). Any breastfeeding is associated with a significantly reduced risk of SIDS [3,6,7]. The protective effect of breastfeeding

against SIDS is strongest with exclusive breastfeeding [7]. Breastfeeding provides greater protection against SIDS when the infant is 2-4 months of age [8].

Moderate evidence suggests a reduced risk of type 2 diabetes and cardiovascular disease with breastfeeding. Further research is needed for a comprehensive understanding.

Health benefits of breastfeeding for lactating mother

Immediate benefit of Breast feeding to mother is prevention of postpartum hemorrhage, by virtue of release of vasopressin, which helps in contraction of uterus and thereby significant reduction in postpartum per vaginal bleed. Breastfeeding is also associated with lactational amenorrhea or a delay in the return of menses after birth. Exclusive breastfeeding for 6 months or longer is associated with lactational amenorrhea and increased spacing of Pregnancies [17-19].

Community support and collaboration

Communities play a vital role in elevating the art and science of breastfeeding. Providing robust support systems and embracing inclusivity create an environment where breastfeeding is not just an individual choice but a communal celebration. Collaborative efforts within communities foster an atmosphere where every mother feels supported, paving the way for healthier outcomes for both mothers and infants.

Championing inclusivity

Acknowledging the diversity of maternal experiences is integral to championing inclusivity. Whether navigating workplace challenges or societal expectations, addressing these aspects is vital for creating an inclusive space where every mother can embark on the breastfeeding journey without judgment. Inclusivity promotes not only individual well-being but contributes to the broader societal fabric [20,21]. Returning to work has a negative impact on breastfeeding initiation, exclusivity, and duration rates. Full-time employment is more likely to shorten breastfeeding outcomes, and taking a maternity leave of 13 weeks or less is also associated with shorter breastfeeding duration. Alternatively, paid maternity leave has a positive impact on breastfeeding rates. More than half of countries worldwide offer at least 14 weeks of paid maternity leave, and 48% of countries now offer paternity leave. The numbers are higher in more developed countries. Many mothers in India face social barriers and stigmas associated with breastfeeding in public. Estab-

lishing clear information about feeding rooms not only facilitates a comfortable and private space for mothers but also works towards dismantling societal taboos surrounding breastfeeding. Government and private institutions play a pivotal role in this initiative. By incorporating details about feeding rooms in public spaces, such as malls, airports, and railway stations, authorities contribute to creating a breastfeeding-friendly environment. This, in turn, encourages mothers to embrace and continue breastfeeding, promoting the health and well-being of both infants and mothers. Cultural sensitivity should be a key consideration in disseminating information about feeding rooms. Recognizing and respecting diverse cultural norms is essential for the successful implementation of breastfeeding-friendly spaces across India.

Empowering working mothers

The Need for Breastfeeding-Friendly Crèches-Balancing career aspirations with the demands of motherhood is a challenge faced by many women in India. The article highlights the crucial role that breastfeeding-friendly crèches can play in easing this transition for working mothers, enabling them to continue breastfeeding while pursuing their professional goals. Breastfeeding-friendly crèches go beyond mere childcare; they offer a supportive environment that recognizes the significance of breastfeeding in infant nutrition and maternal well-being. The article emphasizes the need for these crèches to have designated spaces where mothers can comfortably and discreetly breastfeed or express milk. Update in January 2022, specific national guidelines for crèches in India were outlined in the Maternity Benefit (Amendment) Act, 2017 Some general aspects that were covered in the guidelines.

- Establishment and Registration: Crèches were required to be established for workplaces with 50 or more employees. Employers were mandated to register the crèche with the appropriate authorities.
- Facilities: Crèches were required to have certain facilities, including a safe and clean environment, age-appropriate toys, a sleeping area, and provisions for nursing mothers to breastfeed or express milk.
- Staffing: Trained personnel were to be appointed to manage the crèche, and there were guidelines on the ratio of staff to children.
- Working Hours: The crèche was expected to be operational during working hours, and nursing breaks were to be provided to mothers for breastfeeding or expressing milk.

- Amenities for Mothers: Adequate provisions for mothers to breastfeed or express milk in privacy were required, ensuring a supportive environment for working mothers. Successful lactation support in the workplace includes a clean, private space to express milk comfortably, access to a high-quality breast pump, time to express milk, a secure place to store expressed milk, access to support and assistance from lactation professionals, and education about company policies and resources.

Global economic impact of breastfeeding

The economic impact of suboptimal breastfeeding is significant worldwide. An estimated 823,000 lives could be saved annually in low- and middle-income countries worldwide if breastfeeding practices were optimal⁹.

Conclusion

In conclusion, breastfeeding is an intricate tapestry woven with the threads of biology, art, and science. It is a journey that transcends the functional aspects of nourishment, encompassing the emotional, societal, and empowering dimensions of motherhood. Recognizing the art and science of breastfeeding is a call to action for societies to support, celebrate, and embrace this natural and fundamental practice, ensuring that every newborn's beginning is nurtured with the richness of both artistry and scientific precision. In conclusion, breastfeeding is not merely a biological process but a multifaceted experience that nurtures the physical, emotional, and cognitive aspects of a newborn's life. As healthcare providers and communities strive to support breastfeeding mothers, acknowledging and promoting the significance of this natural bond is paramount for the holistic well-being of our youngest generation. As we strive to nurture the essential bond through breastfeeding, we pave the way for healthier generations and a society that cherishes the fundamental connection at the heart of early childhood

Development.

Increasing breastfeeding to optimal levels, as defined by the World Health Organization, would have a significant impact on lives and healthcare do money saved.

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