



BREAST FEEDING EDUCATION AND SUPPORT IS AN INTEGRATED ISSUE OF FAMILY MEDICINE PRACTICE: SIMPLE REVIEW

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Abstract:

Promoting the advantages of breastfeeding for both the mother and the child, disseminating evidence-based information on nursing practices and techniques, addressing common issues and worries of nursing mothers, and providing continuous support and guidance throughout the breastfeeding journey are the goals of integrating breastfeeding education and support into family medicine. Healthcare professionals may empower moms to make educated decisions about breastfeeding and ultimately enhance the health of mothers and infants by placing a high priority on breastfeeding education and support in family medicine. In this review it was highlighted that, breastfeeding education and support are essential components of family medicine, as they have a significant impact on the health and well-being of both mothers and infants. Breastfeeding has been proven to save lives and reduce disease burden for infants worldwide, as well as for mothers. Initiating breastfeeding within the first hour of birth and exclusively breastfeeding for the first 6 months of life are recommended practices to protect infants from mortality and disease. It is also recommended to introduce complementary foods at 6 months of age and continue breastfeeding up to two years and beyond. Despite efforts to promote early and exclusive breastfeeding in low- and middle-income countries (LMICs), there are still challenges to increasing uptake rates.

Keywords: breastfeeding, lactation, postpartum weight retention, obesity, maternal health, infant health

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Introduction:

Breastfeeding plays a crucial role in the early stages of a child's life, providing essential nutrition and fostering a strong emotional connection between the baby and the breastfeeding parent [1]. It is recommended that infants rely exclusively on breast milk for their nutritional needs from birth up to at least six months of age, as maternal milk is vital for their development [2]. Unfortunately, in 2017, 2.5 million neonatal deaths occurred globally, with a significant portion of these deaths being preventable and concentrated in low- and middle-income countries (LMICs) [2].

Expanding breastfeeding practices on a global scale could potentially prevent approximately 823,000 annual deaths in children under five years old, with a majority of these benefits being seen in infants under six months of age [3]. Despite the well-documented advantages of breastfeeding, only 42% of newborns worldwide initiate breastfeeding within the first hour of birth, and just 37% of infants under six months in LMICs are exclusively breastfed [4]. The period surrounding delivery and childbirth is critical, as the health and well-being of both mother and baby are intricately linked [5]. Healthcare providers should aim to minimize the separation between the newborn and the mother during this period to support successful breastfeeding.

While various healthcare professionals play a role in supporting breastfeeding, midwives are particularly important in providing care to pregnant women, new mothers, and infants due to their expertise in managing the complexities of the mother-infant dyad [6]. However, there is a gap in knowledge and training among midwives regarding effective breastfeeding management strategies. Many midwifery education programs do not adequately equip graduates with the most up-to-date and evidence-based information on breastfeeding, leading to potential issues such as premature supplementation or early cessation of breastfeeding during the postpartum period [6].

Objectives:

The objectives of incorporating breastfeeding education and support in family medicine include promoting the benefits of breastfeeding for both the mother and the baby, providing evidence-based information on breastfeeding techniques and practices, addressing common challenges and concerns faced by breastfeeding mothers, and offering ongoing support and guidance throughout the breastfeeding journey. By prioritizing breastfeeding education and support in family medicine, healthcare providers can empower

mothers to make informed decisions about breastfeeding and ultimately improve maternal and infant health outcomes.

Protective effect of breast feeding for infant:

Breast milk, as highlighted in [7], plays a crucial role in providing optimal nutrition, immune defense, and regulation of growth, development, and metabolism for infants. It serves as a vital source of compensation for immune system delays in newborns and helps in reducing intestinal permeability to prepare the infant for life outside the womb [8].

The primary antibody found in breast milk, secretory IgA (sIgA), offers immune protection by preventing pathogens from adhering to or penetrating the gastrointestinal tract through mechanisms such as phagocytosis or cytotoxicity [9]. sIgA is more abundant in colostrum compared to mature milk, remains resistant to digestion, and offers essential and lasting immune protection. Furthermore, acquired secretory antibodies like IgM and IgG, which are influenced by the mother's previous exposure to pathogens, provide the infant with specific immune protection tailored to their environment [10].

Breastfeeding fosters a beneficial gut microbiome that shields infants from harmful bacteria and has been linked to lower rates of asthma and obesity in children [11]. This microbiome is shaped by the interplay between the microbiota present in human milk, such as Bifidobacteria and Lactobacilli, and the oligosaccharides that act as a food source for these bacteria. These components resist digestion and exhibit potent antimicrobial properties, promoting the integrity of the intestinal barrier and inhibiting pathogen binding to prevent inflammatory reactions [12]. Additionally, the gut microbiota play a role in regulating genes that impact fat metabolism and storage [14].

The microbiota in the infant's gastrointestinal tract, nourished by breast milk, demonstrate the functional efficiency of breast milk by providing both immune protection and essential nutrients, including vitamins B12, B6, folate, and vitamin K. Lactoferrin, another vital component, aids in iron absorption, contributes a significant portion of digested amino acids, and supports immune defense by promoting epithelial growth and limiting bacterial access to iron [15]. Furthermore, digested milk fat globules yield antimicrobial monoglycerides and fatty acids, while undigested fat globules serve as carriers for small amounts of sIgA [16].

Moreover, breast milk contains hormones, neuropeptides, and growth factors that influence

growth, development, and the regulation of food intake, leading to observed disparities between breastfed and formula-fed infants [17]. For instance, leptin, which suppresses appetite, shows a positive correlation between maternal and infant serum concentrations. On the other hand, ghrelin, a hormone that stimulates appetite, is found in higher levels in foremilk compared to hindmilk [18]. This variance in concentration may contribute to the enhanced self-regulation of food intake seen in breastfed infants versus formula-fed infants, potentially explaining the increased tendency for bottle-emptying behavior in formula-fed infants [19].

Maternal health outcomes of breast feeding:

The benefits of breastfeeding for mothers have not been as extensively researched as those for infants. However, there is sufficient evidence to suggest that women who breastfeed experience improved health in the short term and are at a reduced risk of developing future diseases. Pregnancy often leads to long-term weight gain [20], and retaining weight postpartum has been linked to negative outcomes in subsequent pregnancies [21]. In contrast, breastfeeding has been associated with postpartum weight loss [22]. A comprehensive study by Baker and colleagues [23] demonstrated that higher intensity and longer duration of breastfeeding were correlated with greater weight loss at 6 and 18 months postpartum across all body mass index (BMI) categories. Additionally, breastfeeding is frequently cited as promoting bonding between mother and infant [24], with many women identifying bonding as a motivating factor for breastfeeding [25]. While potential hormonal and social mechanisms may contribute to bonding, a systematic review by Jansen et al. [26] noted limited empirical evidence supporting this connection. Recent research suggests a biological link between breastfeeding and bonding, as breastfeeding mothers exhibited heightened brain responses to their infants' cries and displayed more sensitive behavior compared to formula-feeding mothers [27].

Moreover, exclusive breastfeeding naturally suppresses ovulation, serving as a form of natural birth control for up to 6 months (or until the woman exclusively breastfeeds and her menstrual cycle resumes). However, caution is advised when using lactation as a family planning method for women who do not exclusively breastfeed or do so for a short period. Women who breastfed their children were found to have a lower likelihood of developing hypertension, diabetes, hyperlipidemia,

and cardiovascular disease even after adjusting for various socio-demographic and lifestyle factors [28].

During pregnancy, alterations in glucose and lipid metabolism occur to support the developing fetus, which can have adverse effects on the mother's health. Conversely, breastfeeding is associated with favorable metabolic changes. The "Reset Hypothesis" suggests that these beneficial metabolic alterations during lactation persist post-weaning, leading to long-term reductions in the risk of chronic diseases among women who have breastfed [29].

Counselling for maternal and newborn health in family medicine:

Breastfeeding education and support are vital components within the realm of family medicine, playing a pivotal role in promoting maternal and infant health [30]. Consultations within this domain are dedicated to furnishing new mothers with comprehensive information regarding the advantages of breastfeeding, teaching them proper techniques, and addressing common challenges that may arise.

Family medicine practitioners, owing to their enduring relationships with patients, are well-placed to dispense evidence-based counsel and assistance to families throughout the breastfeeding journey [30]. By providing consultations on breastfeeding education and support, these practitioners can enhance breastfeeding rates, foster a stronger bond between mother and child, and contribute to improved health outcomes for both parties. It is imperative for family medicine practitioners to stay abreast of the latest research and guidelines pertaining to breastfeeding education and support to deliver optimal care to their patients [31]. Through effective consultations, these practitioners can empower mothers to make well-informed decisions regarding breastfeeding and aid them in achieving their breastfeeding objectives. The discourse on breastfeeding should commence during pregnancy, by inquiring about the mother's feeding plans for the baby [32]. Initiating skin-to-skin contact immediately after birth, ideally within the first hour, is crucial for all mothers. This contact facilitates bonding between mother and baby and enhances the likelihood of successful breastfeeding initiation. Demonstrations are instrumental in teaching mothers the proper breastfeeding positions, as breastfeeding is a skill that mothers acquire, and having access to demonstration dolls is beneficial. Encouraging exclusive breastfeeding until the baby reaches six months of age is paramount. Exclusive

breastfeeding entails providing the baby solely with breast milk, without any additional food or liquids [33].

Numerous women encounter challenges with breastfeeding, such as engorgement or sore nipples. Engorgement may occur a few days post-birth or when there are alterations in the baby's feeding schedule. Engorgement leads to the breasts becoming overly full with milk and tissue fluid, impeding milk flow and causing tightness in the skin, particularly around the nipple. This condition hampers the baby's ability to latch on properly. Symptoms may include redness and fever, which typically subsides within 24 hours. Recommendations for alleviating engorgement include applying warm compresses to the breasts, taking warm showers, and expressing sufficient milk to alleviate discomfort and facilitate attachment. Subsequently, cold compresses can be used to reduce inflammation. Cracked or sore nipples often result from improper attachment by the baby [34].

Conclusion:

In conclusion, providing breast feeding education and support in family medicine is vital for the health and well-being of mothers and infants. Family physicians play a crucial role in empowering new mothers with information on the benefits of breast feeding, as well as practical tips on proper techniques and positioning. Ongoing support and encouragement throughout the breast-feeding journey can help address challenges and lead to improved outcomes and increased maternal satisfaction. Integrating breast feeding education into family medicine practice is essential for optimal maternal and infant health and should be a priority in comprehensive primary care services. By recognizing the importance of breast feeding and investing in resources and training, family physicians can have a significant impact on the overall health of their patients.

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