Residência RP Pediátrica
Publicação Oficial da Sociedade Brasileira de Pediatria

Submitted on: 11/27/2021
Approved on: 01/03/2022

REVIEW PAPER

Benefits of exclusive breastfeeding during the newborn's first months of life

Ian Xavier Paschoeto dos Santos[1], Aline de Freitas Fleury Curado[1], Anna Raquel Ribeiro Sa Freire[1], Beatriz Arruda de Oliveira Martins[1], Rebeca Magalhães Barros[1], Maria Augusta de Macedo Wehbe[2]

Keywords:
Child Development. Family Health Strategy, Disease Prevention, Breast Feeding.

Abstract

To have breastfeeding only until the ideal age is still an important challenge in Brazil. There are several factors that play a role in interrupting exclusive breastfeeding, from false information to difficulties in offering breast milk. However, it is up to healthcare professionals to have full mastery of aspects related to the benefits of breast milk for the health and well-being of infants and nursing mothers for better care in their follow-up. As a result, we undertook a narrative literature review, with emphasis on the main aspects and benefits of breast milk for infant health, based on 17 papers found in the Medline and SciELO databases. We selected studies that dealt with the purpose of the review, based on assessing the respective abstracts. From the review of selected studies, we found that Exclusive Breastfeeding has benefits beyond the nutritional field and offers a lower risk of developing chronic diseases such as diabetes, hypertension, obesity; and provides protection against different types of cancer to the mother. There was also a discussion that Primary Healthcare plays a key role in ensuring that infants receive breast milk for the proper amount of time. On the other hand, there are still obstacles in the promotion of quality breastfeeding, especially for mothers and infants in situations of greater social vulnerability, an aspect that must be considered in healthcare.

[1] Volta Redonda University Center, Medical School - Volta Redonda - RJ - Brazil.
[2] Dr. Munir Rafful Municipal Hospital, - Volta Redonda - RJ - Brazil.

Correspondence to:
Ian Xavier Paschoeto dos Santos.
Institution:Centro Universitário de Volta Redonda. Address:Av. Dauro Peixoto Aragão, 1325 - Três Poços, Volta Redonda - RJ, Brazil. CEP: 27240-560. E-mail: ianxavierr@gmail.com

DOI: 10.25060/residpediatr-2022.v12n4-773

This work is licensed under a Creative Commons Attribution 4.0 International License.

INTRODUCTION

Exclusive Breastfeeding (EBF) is the best and most efficient source of nutrition for the infant and is defined by offering only breast milk to the child, directly from the breast or taken from it. According to the World Health Organization, endorsed by the Ministry of Health, it is recommended that breastfeeding be initiated in the first hour of life and be the exclusive source of food until 6 months, being continued after this period, up to 2 years of age, with the adequate and timely introduction of complementary feeding[1].

Breast milk has nutrients such as proteins, lactose, calories and lipids. In addition, it has numerous immunological factors that protect the child against infections, such as macrophages, neutrophils, B and T lymphocytes, bifid factor, among others. Among the immunoglobulins present in breast milk, the main one is IgA, since it was previously produced by the puerperal woman when exposed to infectious agents, mainly enteric and respiratory antigens, thus providing protection to the child against microorganisms prevalent in the environment where the mother lives[1].

There are countless benefits of EBF for the child, especially in relation to development, which tends to be healthier and faster compared to infants who receive other forms of food. The infant also has benefits of protection against diseases that may occur due to lack of breast milk and/or its replacement by milky forms and foods not indicated for children younger than six months[2].

According to the Pan American Health Organization/World Health Organization (PAHO/WHO), children are more resistant to infections, diarrhea and allergies, grow healthier, gain weight more quickly and are less susceptible to hospitalizations[3].

Breastfeeding also offers benefits to nursing mothers, such as reducing anxiety levels, raising their personal and social esteem, as well as strengthening the bond between breastfeeding mother and infant. Physiologically, with the nipple suction stimulus, the maternal body produces prolactin, which stimulates milk production, and oxytocin, which favors milk secretion and promotes uterine contraction, reducing bleeding, which is common in the puerperium. In addition, the protective effects of breastfeeding, especially when exclusive, reduce the risk of estrogen-dependent neoplasms, especially of the breast and ovaries[2].

Thus, it is extremely important to understand the mechanisms by which breast milk is a complete food for human nutrition in the first six months of life. Thus, this review aims to investigate the benefits of exclusive breastfeeding during the first six months of life, both for the mother and for the infant, as well as to discuss the main difficulties faced by lactating women in the breastfeeding process.

METHODOLOGY

This is an integrative literature review, in which a search for Brazilian papers from between 2004 and September 2020. As inclusion criteria, we searched for papers that dealt with the themes: I) Breastfeeding; II) Importance of Breastfeeding in the first years of life; III) Benefits for the nursing mother and IV) Difficulties related to breastfeeding, published in Portuguese and available in full text. Texts available on official websites of healthcare institutions and the Brazilian government were also included.

As for exclusion criteria, we considered: I) theses, dissertations, articles and monographs with the full text unavailable; II) studies that were not carried out in Brazil; III) studies carried out in Brazil, but not published in Portuguese. After applying the inclusion and exclusion criteria, 17 references were selected. The small number of publications with an emphasis on the subject was a limitation for this study.

The study was carried out from August to October 2021, using the keywords in health sciences keywords (HSKW): "breastfeeding", "breastfeeding" and "Benefits of EBF", in the online databases Medical Literature Analysis and Retrieval System Online (Medline) and Scientific Electronic Library Online (SciELO) with the filter "Brazil".

Based on the pre-regulated inclusion and exclusion criteria, the selection of papers was made based on the reading of: (i) title; (ii) abstract; and (iii) keywords. The results were exposed after reading and interpreting the complete texts with compilation of the data and information obtained.

REVISION

Importance of breastfeeding in the first months of life

Childhood is the phase in which a large part of human potential is developed, such as motor, emotional, psychological and social skills. Given this, EBF, especially during the first six months of life, contributes positively to the child's development, transcending its nutritional qualities and involving immunological and social aspects. Thus, it is the most complete natural strategy for bonding, affection, protection and nutrition for the child[4].

The impact of EBF reflects in several situations, being proven by several studies its superiority in relation to milk from other species and the importance of its exclusivity. In this sense, its role in reducing the infant mortality rate, incidence of diarrhea and respiratory infections, reducing the risk of developing allergies, hypertension, dyslipidemia, obesity and diabetes, in addition to favoring the development of the oral cavity and promoting a positive effect in cognitive development[4].

According to Thaynara et al. (2017), the practice of exclusive breastfeeding for up to six months can prevent the death of 823,000 children under five years old annually[5], corroborating the idea of Jones (2003), who estimate that EBF could prevent 13% of deaths from preventable causes in children under five years of age worldwide[4]. This practice alone achieves a reduction that no other action has been able to promote in reducing infant mortality, due to the numerous factors existing in breast milk that protect against various infections.

It is a consensus in the literature that one of the benefits of EBF is protection against diarrhea, a condition considered a serious public health problem, being the second cause of hospitalization for children in Brazil. In this sense, statistics show that, between 2000 and 2010, 29,491,078 cases of acute diarrheal diseases were reported in Brazil. Furthermore, the early introduction of comple-

mentary foods, such as teas, water and other milks, can contribute to the development of this condition[6].

The Upper Respiratory Tract Infection (URTI) is the most common group of diseases among children seen with acute respiratory involvement[8]. EBF provides proven protection against or decreases the severity of respiratory infection episodes. In Pelotas (RS), the chance of a non-breastfed child being hospitalized for pneumonia in the first three months was 61-fold higher than those in exclusive breastfeeding[4].

URTIs are also a risk factor for Acute Otitis Media (AOM). In this sense, there are indirect benefits of EBF for the prevention of this condition, since, during sucking on the mother's breast, the anterior region of the soft palate is anteriorized and lowered, with an elevation of its vertical part, allowing the closure of the oropharynx. By this mechanism, there is little possibility of milk entering the Eustachian tube, which does not occur when the infant is fed milk formulas through bottles[7].

According to the Ministry of Health (2015), it is estimated that there is a 50% reduction in AOM episodes in children who are exclusively breastfed for three or six months, when compared to children fed only with milk from another species[1].

According to Wendy H Oddy (2017), the secretion of IgA (s-IgA) is passed from the mother to the infant through breast milk or colostrums, and it can provide passive protection to the infant's immune system. In this sense, low levels of IgA in the breast milk are associated with a greater risk for developing allergy to cow's milk protein in this age group[8]. In agreement with Oddy, the Pequeno Príncipe Hospital points out that about 99% of children breastfed with breast milk do not acquire such allergy[9].

According to the WHO, breastfed individuals have lower systolic and diastolic blood pressures (-1.2 mmHg and -0.5 mmHg, respectively), lower levels of total cholesterol (-0.18 mmol/L) and a 37% lower risk of developing type-2 diabetes. In addition, exposure to cow's milk before the baby is four months of life is considered an important determinant for the development of type 1 diabetes mellitus, which may increase the risk of its occurrence by 50%. In this sense, it is estimated that 30% of cases could be prevented if 90% of the children aged up to three months did not receive cow's milk[4].

In a WHO review on evidence concerning the long term effect of EBF, that breastfed individuals have a 22% lower chance of developing overweight/obesity, since breast milk, by itself, contains all the necessary nutrients for full growth and development during the first six months of life. The Ministry of Health (2015) also points out the possible dose/response relationship with the duration of EBF, that is, the longer the breastfeeding period, the lower the risk of developing overweight/obesity[4].

Breastfeeding has positive effects on the development and physiological integrity of the baby's oral cavity. Therefore, studies indicate that breastfed infants have better oral and dental health compared to artificially fed infants[10].

Anatomically, the movement that the child performs to obtain milk from the breast promotes the adequate development of their oral cavity, since it provides a better conformation of the hard palate, which is fundamental for the correct alignment of the teeth and a good dental occlusion[4]. Corroborating this statement, Charles E Anyanechi and collaborators (2017) point out that the exercise of sucking breast milk can reduce up to 50% of cases of dental malocclusion[10].

According to studies by Mandy B Belfort et al (2016), EBF in the first 28 days of life was associated with a greater volume of deep nuclear gray matter at term-equivalent age and better intelligence quotient, academic performance, working memory and motor function at age 7 among extremely premature infants[11]. Despite science not sparing efforts to investigate the possible association between breastfeeding and better cognitive development, the mechanism is still not fully elucidated[4].

Breastfeeding: benefits for the nursing mother.

For REA (2004) the benefits can be seen in the immediate postpartum period. During labor, oxytocin is released, responsible for stimulating uterine contraction and accelerating labor. Its action is stimulated and enhanced by breastfeeding, as the sucking process stimulates its release by the pituitary gland[12].

The secretion of oxytocin reduces the uterine size, assists in the release of the placenta and decreases postpartum bleeding, reasons that support the importance of breastfeeding in the first hour of the newborn's life. In addition, it promotes menstruation delay and prevents red blood series fall. Thus, breastfeeding plays an important role in increasing the interdelivery interval, with studies demonstrating that breastfeeding, especially exclusive and on demand, confers longer periods of amenorrhea[12].

The return to the pre-pregnancy weight is something desired by women, since during pregnancy energy reserves accumulate and most pregnant women end the process overweight. Breastfeeding requires an additional amount of about 500 calories, causing the body to spend the energy accumulated during pregnancy. However, the recovery of pre-gestational weight occurs in a variable time, being associated with the breastfeeding period, with long-term studies demonstrating a 1% decrease in mean BMI for each six months of breastfeeding[13, 14].

Information on the relationship between breastfeeding and long-term adiposity is still inconclusive. There is evidence to prove the inverse association between breastfeeding and breast cancer, with each 12-month increment of breastfeeding impacting a decrease of approximately 4.3% in the incidence of invasive breast cancer. The explanation for this fact would be the composition of breast milk, rich in defense cells, mainly macrophages, which are responsible for the destruction of neoplastic cells[12].

Breastfeeding also confers protection against ovarian cancer, considering that one of the mechanisms of its development is secondary to consecutive ovulation traumas and proliferation of malignant cells, due to the fact that breastfeeding inhibits ovulation. There are still some studies that associate breastfeeding as a preventive factor in the development of type 2 diabetes in mothers, with mechanisms not yet elucidated[14].

The act of breastfeeding can be physically and mentally exhausting for the mother, culminating in sleep deprivation and

tiredness, factors that can lead to early weaning. This situation can lead to conflicting situations: the desire to breastfeed against the burden that this act represents in the woman's life[13]. However, with the support of family members and professionals, this situation can be overcome. When breastfeeding is established, mothers have a lower degree of postpartum anxiety and depression and improved self-esteem, with the woman who breastfeeds establishing closer bonds with her child[12].

Difficulties in establishing breastfeeding

According to Juliana de Almeida Costa and collaborators (2018), the first difficulties presented related to EBF are breast complications, such as the appearance of nipple injury, prevalent in 54.5% of mothers. In addition, 46.2% of the mothers had difficulty with their correct positioning, in relation to the correct positioning of the child, this prevalence was 30.8%. Difficulties in prehension were also mentioned in 39.1%, in suction in 30.4% and in swallowing in 47.4%[15].

The low production of breast milk is a common report in the first weeks of breastfeeding, being a factor usually associated with the woman's concern about the need to complement food with water and teas, which occur due to lack of information and which culminate in giving up exclusive breastfeeding[17]. This difficulty ends up being solved as exclusive breastfeeding is maintained, considering that the stimulation of breastmilk sucking promotes the progressive increase in milk production[15].

The main physiological difficulties presented are related to non-exclusive breastfeeding. They are mainly: low milk production, no manual milk extraction and low milk flow. Intercurrences during the neonatal and postpartum period of the mother or child can negatively influence the breastfeeding process[15].

In an attempt to inhibit ablation, the Brazilian government created policies such as the Baby-Friendly Hospital, Kangaroo Method, paid maternity leave of four to six months, Basic Unit Friendly to Breastfeeding, Breastfeeding Support Rooms, Law for the commercialization of food for infants and the largest network of Human Milk Banks (r-BLH) in the world. The adopted measures, despite having increased EBF to 41%, were not enough to fight more than 50% of early weaning[15].

Considering the growing role of women in the labor market, a maternity leave of 120 days was instituted[16], a period that normally begins at the end of pregnancy. However, for the infant to have all the benefits of exclusive breastfeeding up to six months, this phase should be equal to or greater than 180 days, creating a gap between the correct period of breastfeeding and the maximum time of maternity leave, leaving the mother neglected by public policies.

Moreover, it is during this interval that other foods are introduced early, such as milk formula, cow's milk, teas and juices. In addition, the lack of structure in the workplace for the adequate withdrawal and storage of breast milk[15] contributes to the difficulties faced in this period, contributing to early weaning.

The Family Health Program (PSF) has an important action to promote health and prevent a series of injuries to the child, mother and family, where it has been reorted that the team's interaction with pregnant women contributes to improving the practice of breastfeeding motherhood and facilitate its acceptance and continuity. Thus, it is important to improve reception, with the aim of gaining the woman's trust and, through communication and the help of the multidisciplinary network, establishing solid bonds, for the deconstruction of myths and promotion of important information[4].

FINAL REMARKS

This study highlights the benefits promoted by breastfeeding in its entirety, such as reducing infant morbidity and mortality, maternal weight loss, prevention of new pregnancies, and protection against ovarian and breast cancer. Thus, breastfeeding should be maintained exclusively and preferably until the first six postpartum months, with its practice reinforced by healthcare professionals.

In this context, the Family Health Strategy plays an important role, exposing and discussing the benefits of breastfeeding for both mother and newborn. Nevertheless, the Strategy professionals must monitor the growth and development of the child and meet the needs of the nursing mother during the postpartum period, in order to reduce or avoid the chances of her abandoning EBF, so that this can occur naturally and safely, as expected results.

BIBLIOGRAPHIC REFERENCES:

1. Ministério da Saúde, Saúde da criança: Nutrição Infantil, 2009.
2. Muniz MD. Benefícios do aleitamento materno para a puérpera e o neonato: a atuação da equipe de saúde da família. [trabalho de conclusão de curso] Minas Gerais: Universidade Federal de Minas Gerais; 2010.
3. Organização Pan-Americana da Saúde. OPAS reconhece política de aleitamento materno do Brasil como referência mundial. 2016. Organização Mundial da Saúde. [acesso 13 set. 2021] Disponível em: https://www.paho.org/bra/index.php?option=com_content&view=article&id=5011:opas-reconhece-politica-de-aleitamento-materno-do-brasil-como-referencia-mundial&Itemid=820.
4. Brasil. Ministério da Saúde. Secretaria de Atenção à Saúde. Departamento de Atenção Básica. Saúde da criança: aleitamento materno e alimentação complementar / Ministério da Saúde, Secretaria de Atenção à Saúde, Departamento de Atenção Básica. – 2. ed. –Brasília: Ministério da Saúde, 2015. 184 p.: il. – (Cadernos de Atenção Básica; n. 23).
5. PEREIRA, Thaynara Alves de Miranda. FREIRE, Agna Kellen Gomes. GONÇALVES, Vivian Siqueira Santos. Amamentação exclusiva e subpeso em crianças menores de seis meses monitoradas em cuidados de saúde primário no Brasil, 2017. Revista Paulista de Pediatria, São Paulo, vol. 39, agosto, 2020.
6. SANTOS, Floriacy Stabnow. SANTOS, Felipe César Stabnow. SANTOS, Leonardo Hunaldo dos. et al. Aleitamento materno e proteção contra diarréia: revisão integrativa da literatura. Einstein, São Paulo, vol. 13, no. 3, junho, 2015.
7. NADAL, Lais Fernanda. RODRIGUES, Alcir Humberto. COSTA, Cintia da Conceição. et al. Investigação das práticas maternas sobre aleitamento materno e sua relação com a infecção de vias aéreas superiores e otite média. Rev. CEFAC. 2017. 19(3): 387-394.
8. ODDY, Wendy H. Amamentação, asma infantil e doenças alérgicas. Ann Nutr Metab. 2017. 70(2): 26-36.
9. HOSPITAL PEQUENO PRÍNCIPE. Leite Materno é Fundamental Para Combater Alergia à Proteína da Vaca. Disponível em: http://pequenoprincipe.org.br/hospital/noticia/leite-materno-e-fundamental-para-combater-alergia-a-proteina-leite-de-vaca/. Acesso em: 05 out. 2021.

10. ANYANECHI, Charles E. EKABUA, Kufre J. EKPENYONG, Ansa B. et al. Conscientização e Percepção das Parturientes sobre os Benefícios do Aleitamento Materno na Prevenção de Doenças Bucais e Odontológicas Infantis. Gana Med J. 2017: 51(2): 83-87.
11. BELFORT, Mandy B. ANDERSON, Peter J. NOWAK, Victoria A. et al. Alimentação com leite materno, desenvolvimento cerebral e resultados neurocognitivos: um estudo longitudinal de 7 anos em bebês nascidos com menos de 30 semanas de gestação. J Pediatr. 2016; 177: 133-139.
12. REA, Marina F. Os benefícios da amamentação para a saúde da mulher. Jornal de Pediatria, Rio de Janeiro, 2004; 80(5 Supl): S142-S146.
13. TOMA, Tereza S.; REA, Marina F. Benefícios da amamentação para a saúde da mulher e da criança: um ensaio sobre as evidências. Cad. Saúde Pública, Rio de Janeiro, 24 Sup 2: S235-S246, 2008.
14. VICTORA, Cesar G.; BARROS, Aluísio J. D.; FRANÇA, Giovanny V.A; BAHL, Rajiv; ROLLINS, Nigel C. ; HORTON, Susan et al. Amamentação no século 21: epidemiologia, mecanismos, e efeitos ao longo da vida. Epidemiologia e Serviços de Saúde, Brasília, 2016.
15. CARREIRO, Juliana de Almeida et al. Dificuldades relacionadas ao aleitamento materno: análise de um serviço especializado em amamentação. Acta paul. enferm., São Paulo, v. 31, n. 4, p. 430-438, jul. 2018 .
16. MORAIS, Ana Márcia Bustamante de et al. Vivência da amamentação por trabalhadoras de uma indústria têxtil do Estado do Ceará, Brasil. Rev. bras. enferm., Brasília, v. 64, n. 1, p. 66-71, Feb. 2011.
17. Gaúcha AMARAL, Luna Jamile Xavier et al. Fatores que influenciam na interrupção do aleitamento materno exclusivo em nutrizes. Rev. Gaúcha Enferm, Porto Alegre, v. 36, n. spe, p. 127-134, 2015.