

MATERNAL AND NEONATAL BARRIERS OF BREAST-FEEDING: A SYSTEMATIC REVIEW

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ABSTRACT

Background and Purpose: Breast milk (mother's milk) is the most natural and valuable nutrient that can be provided easily and comfortably for the infant. Although breast-feeding at the beginning is often done without any problems, the continuation of that, especially the exclusive form of mother's milk, is underestimated in many cases by some factors. Studies aimed at identifying effective factors that can be useful in planning for breastfeeding promotion. Therefore, considering this important issue made the researcher carry out this study with the purpose of identifying the factors affecting the lack of continuity of breastfeeding in mothers based on review of literature and experts standpoints in this regard. **Methodology:** The present studies under consideration were conducted between 2001 and 2018. These were searched using the exclusive keywords. Mag Iran, SID, Med lib, were examined and data were analyzed by using the meta-analysis method (random effect model). **Findings:** About 30 articles were identified and examined regarding the effective factors that affected the continuation of successful breastfeeding in infants aged between 0 and 6 months. Finally, a variety of factors influencing the lack of continuous breastfeeding have been classified and discussed in order of maternal, neonatal and environmental factors (in order of effect). **Conclusion:** In order to investigate the factors effecting breastfeeding continuity by mothers, all nurses must take steps to promote breast-feeding and spread awareness regarding the benefit of breast feeding for children along with recommending avoidance of unnecessary cesarean deliveries, advertisements about the benefits of normal vaginal delivery (NVD) for mother and infant, as well as training for breast-feeding and encouraging it during pregnancy and postpartum, especially in mothers with cesarean deliveries.

Keywords: Exclusive Breastfeeding, Continuous Nutrition, Affective Factors in Breastfeeding

INTRODUCTION

Having healthy children requires the observance of health principles and betterment of their nutrition, especially during infancy (Safari *et al.*, 2018; Sharifirad *et al.*, 2018). Breast milk is the most natural and valuable nutrient that can be provided easily and comfortably for the infant (Allahkarampour *et al.*, 2015; Hasan, 2016). Breast-feeding prevents the death of 7 million children in the world yearly (Victora *et al.*, 2016). So, the probability of mortality due to the gastrointestinal infections, especially diarrheal diseases are 25 times lower among infants fed with mother's milk than those who were fed with dried milk (Rollins *et al.*, 2016). Successful breastfeeding also reduces the incidence of breast cancer and osteoporosis in mother and the risk of

diabetes and obesity in the baby and in addition to meeting the emotional needs, it reduces unnecessary costs in family and society (Kramer & Kakuma, 2012). Throughout the world, especially in Iran, baby-friendly hospitals try to train and promote breastfeeding (Montgomery *et al.*, 2012). This policy and program have been implemented in most countries, and the beginning of breast-feeding have been very successful in most countries and studies. But in our country, on the contrary, however, beginning of breastfeeding is often done without any problems, the continuation of that, especially the exclusive form of mother's milk is underestimated in many cases so the rate of exclusive breastfeeding in the world that is 36%, and this figure in Iran is only 23.1%. The available information indicates that about 80% of Iranian infants over the age of 15

months enjoy (possess) the breastfeeding, but this rate is between 50% and 60% for those aged between 20 and 23 months (Stuart-Macadam, 2017).

According to literature, nourishment among infant is a complicated decision and influenced by many factors that affect the infant's breastfeeding (Hauck *et al.*, 2011). The full range of breastfeeding varies from one country to another even from one culture to another. Considering this important issue made the researcher carry out this study with the purpose of identifying the factors affecting the lack of continuity of breast-feeding in mothers with a review of researchers and experts standpoints in this regard.

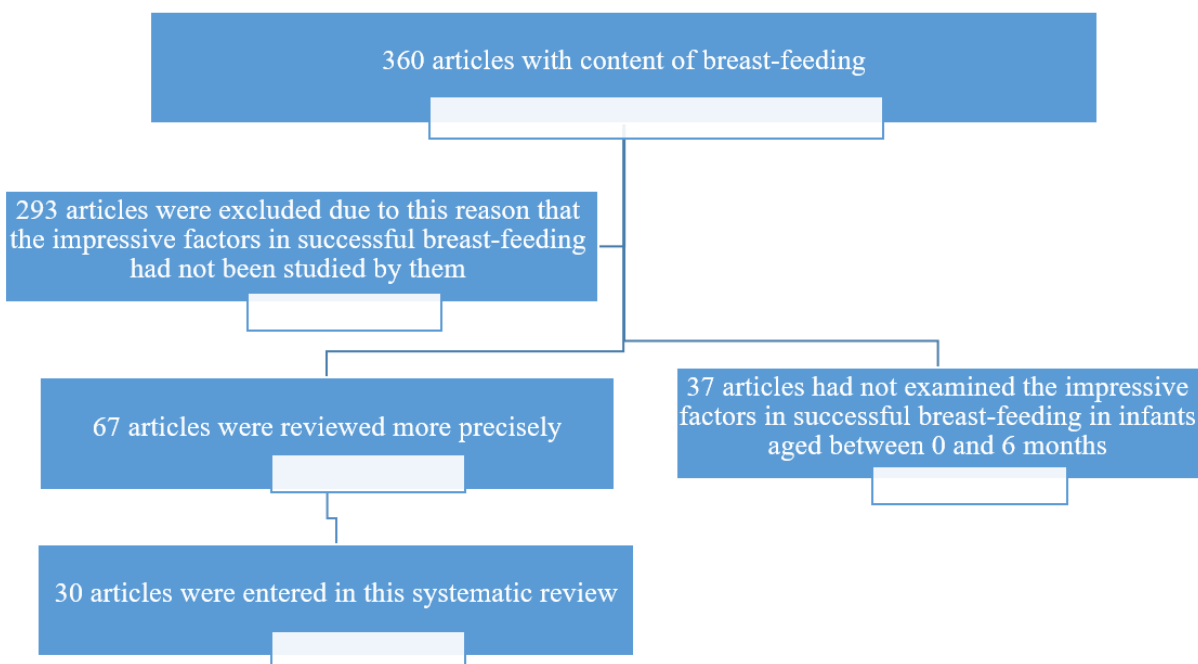
METHODOLOGY

In this structured review, all domestic studies conducted between 2001 and 2018 by using the keywords “breastfeeding”, “mother's milk”, “continuation of breastfeeding”, “length of breastfeeding continuity”, “factors affecting breastfeeding” and “meta-analysis of the country's databases” “breastfeeding”, “mother's milk”, “continuation of breastfeeding”, “length of breastfeeding continuity”, “factors affecting breastfeeding” and “meta-analysis of the country's databases”. Mag Iran, SID, Med lib, Iran Medex were examined and data were analyzed by

using the meta-analysis method (random effect model). The data of the selected articles were collected. After reviewing and collecting all the searched articles; repeated and unrelated articles were excluded. In the next step, the received articles were examined based on the criteria for entering the study which included articles which examined the variety of impressive factors in successful breastfeeding in the first six months of the infants. Moreover, exclusion criteria included data from case reports, posters, conferences, and review articles. All the required ethical issues for the correct use of extracted articles and related rules of publication have been observed.

RESULTS

After searching the databases and extracting a large number of articles based on the title and abstract, 360 articles were reviewed, in which 293 were excluded due to the reason that the factors in successful breastfeeding had not been studied by them. About 67 articles were reviewed more precisely, in which 37 articles had not examined the impressive factors in successful breastfeeding in infants aged between 0 to 6 months. Finally, 30 articles were entered in this systematic review (PRISMA chart).



Finally, variety of factors influencing the lack of continuity of successful breastfeeding have been

classified and discussed on the basis of maternal, infantile and environmental factors (in order of effect).

Table 1: Some details of the reviewed studies

Author	Title	Year and place	Target population	Study type	Outcome criteria	Restrictive factors
Pakpour <i>et al.</i> ,	Predictive factors associated with breastfeeding initiation and duration behaviors of 6 -months postpartum mothers referred to health centers in the city of Qazvin based on theory of planned behavior	2016 Iran	1445 mothers with six months old child referring to health centers	Descriptive-cross sectional	Questionnaire of factors associated with the continuation of breastfeeding according to planned behavior theory	Mother's age, income, employment, being primipara and inappropriate education
Amirshahi <i>et al.</i> ,	Relationship between duration of breastfeeding and some maternal and neonatal factors	2013 Iran	460 mothers with premature neonate	Descriptive-analytic	Questionnaire of factors associated with the continuation of breastfeeding	Age, labour history, type of delivery, gender and birth weigh
Amini <i>et al.</i> ,	The reasons of breastfeeding cessation in children under the age of 1 in Women Referring to Health Centers	2012 Iran	130 mothers with lack of breast-feeding in the case group and 149 mothers with continuous breast-feeding in the control group	Case-control	Questionnaire of factors associated with the continuation of breastfeeding	Distance between workplace and home, shortage of breast milk, shortage of weight gain and being twins
Shahri <i>et al.</i> ,	Relationship between maternal and breastfeeding patterns and their continuity	2012 Iran	150 mothers of children aged between 6 to 12 months old referring to health centers	Analytic - cross sectional	Questionnaire of factors associated with the continuation of breastfeeding and interview	The frequency of breast-feeding in 24 hours, type of delivery, and the initiation of postpartum breast-feeding
Safari <i>et al.</i> ,	The effect of mother and newborn early skin-to-skin contact on initiation of breastfeeding, newborn temperature and duration of third stage of labor.	Iraq, 2018	108 mothers	Quazi-expermental study	Skin-to-skin contact provides an appropriate and affordable yet high quality alternative to technology. It is easily implemented, even in small hospitals of very low-income countries, and has the potential to save newborns' and mothers' lives. It is necessary to prioritize training of health providers to implement essential newborn care including SSC.	Direct skin to skin contact of baby affects on body tempreture and duration of foruth stage of labor.

DISCUSSION

According to what have mentioned, a variety of factors affecting the lack of continuous successful breastfeeding have been classified and discussed based

on maternal, infantile and environmental factors (in order of effect). The articles in relation to the mentioned factors were analyzed. The table below shows some details about the mentioned studies (Table 1).

Maternal Factors

The maternal factors associated with the lack of breast-feeding continuation of breastfeeding analyzed in the studies are as follows (Talebi *et al.*, 2005; Almasi *et al.*, 2006; Ekhtiari *et al.*, 2008; Shiva *et al.*, 2008; Hajikazemi *et al.*, 2009; Khoshtarash *et al.*, 2010; Azimi *et al.*, 2010; Hamidi *et al.*, 2011; Raisi Dehkordi *et al.*, 2012; Amini *et al.*, 2012; Shahri *et al.*, 2012; Amirshahi *et al.*, 2013; Mokhtary *et al.*, 2014; Gafari *et al.*, 2014; Ansari Jaber *et al.*, 2015; Heidari *et al.*, 2016; Pakpour *et al.*, 2016).

Mother's negative attitude towards breastfeeding, previous unsuccessful breastfeeding, short interval between two offspring, family disputes, mother's psychological status, a separation between mother and her child, sexual dysfunction due to lactation such as milk secretion during intercourse or fatigue caused by breast-feeding, lack of breast-feeding during the night, insufficient milk in mother's breasts, mother's belief that a short period of breast-feeding will suffice, unintended pregnancy, breast diseases such as fissure, abscess and ulcer, the use of inappropriate methods of contraception, such as hybrid methods that negatively affect the breast-feeding process, inexperienced primiparas, smooth breast or nipple deformity, getting pregnant again, early onset of supplemental nutrition. All these causes the child to be reluctant towards breast milk, fear of breast deformity and slimming and frequent use of pacifier.

The demographic factors affecting the successful breast-feeding include education, mother's occupation, weight and delivery type. The effect of the aforementioned factors is that mothers with higher education and those who are working would terminate the exclusive breast-feeding earlier. According to the reviewed studies, about 83% of mothers with physical occupations have used dried milk 1-6 times a day. Overweight mothers opt for cesarean delivery more, therefore they have terminated breastfeeding indirectly.

The type of delivery is one of the significant maternal factors in successful breastfeeding process. According to the studies, mothers with cesarean section was more likely to be unsuccessful in nursing their infants. Regarding the mechanism of secretion of oxytocin and dilation of the female genital tract during labour and the effect of the pain on the secretion of this hormone, it can be stated that in normal vaginal delivery (NVD), in comparison with cesarean section, especially in elective cases where the mother are unable to tolerate

the labor pain, oxytocin secretion is more; also, anaesthetics and analgesics that are used in cesarean section are effective on the secretion of oxytocin. So, it has been shown that morphine sulfate stops releasing the breast milk.

One of the variables that are constantly associated with the positive results of breast-feeding are self-assured nursing of the mother, in other words, self-efficacy of breast-feeding. Low assurance of breast-feeding can be associated with the mothers' perception of inadequate milk supply, which results in the use of formula and shortage of nursing continuity. It seems that the mothers' unawareness of the lactation and its relation with breast milk consumption by the infant, as well as the mothers' concern about the use of contraceptive pills were the most frequent reason for the lack of breast-feeding continuity. Therefore, maternal periodic assessment should be emphasized and recommended for proper and correct nursing and the elimination of possible problems, especially during the first six months of infant's life.

Also, for further studies, it is recommended that mothers' performance and self-efficacy in exclusive breastfeeding and its continuation should be examined. The effect of psychological factors on mothers' nursing behaviours has been studied in different literatures. The consequences of these researches indicate that there is a significant relationship between maternal depression and patterns of emotional regulation and their social functions. So mothers with mental disorders, did not respond adequately to the infant's needs and do not have enough energy to take care of their child; also, they show less positive interactions with their child and show less sensitivity when they are interacting with them.

Neonatal Factors

In the reviewed studies, the neonatal factors affecting the continuation of breastfeeding is related to cases such as crying and the restlessness of the child, polytocus, no sucking of mother's breasts, pediatric diseases such as cleft lip or palate or reflux and gastroenteritis, child incompatibility with breast milk, birth order and birth weight in sequence (Barak *et al.*, 2005; Esfarjani *et al.*, 2008; Abasikakruodi *et al.*, 2008; Ekhtiari *et al.*, 2008; Khoshnevisasl *et al.*, 2010; Mirmohammadali *et al.*, 2011; Noohi *et al.*, 2011; Tarvij *et al.*, 2014; Sakkaki *et al.*, 2013; Hasan, 2016).

The birth order effect breastfeeding continuity by the mother. Ascending in birth order increases the

possibility of breastfeeding continuity, which is due to the increase in self-confidence of mother in nursing. Thus the first-born children are exposed to the possibility of not receiving the breast milk exclusively. Also, the birth weight is another important factor in this regard. So, the newborns and the infants who are underweighted, in comparison with their peers, receive other nutritional supplements that affect successful breast-feeding, because of their more special cares.

Environmental Factors

According to the studies, some of the factors affecting the lack of successful breastfeeding continuity was not associated with maternal and neonatal factors. So they were classified into environmental factors which include inappropriate economic situation of the family, lack of adequate support by government and healthcare workers, access to the dried milk in well-off families, physician's advice, lack of support by relatives and poor culture (Emami *et al.*, 2007; Mojalli *et al.*, 2010; Mohammadpour *et al.*, 2015; Akaberian *et al.*, 2015; Hasan, 2016; Arshad *et al.*, 2017).

It is evident that the reasons identified from the data regarding the start and stop of breastfeeding are the factors like advice about breastfeeding that was useful or not useful, and cultural issues related to breastfeeding that were perceived to be unique among African Americans (Lewallen & Street, 2010). Poor culture and lack of educational support by health centres seem to be the most dominant factors in this classification. Baby's nourishment should be continued by cow's milk. Also, the physicians are not familiar with the educational materials of the health centres, the lack of coordination between physicians and healthcare centres, the private sector's performance and the public (state) sector instructions, the lack of employees information and the inappropriate behaviour of the staff towards the

mothers, heavy workload for the health staff are some of the other factors responsible for the discontinuation of breast feeding among mothers. Healthcare staff does devote enough time to consult the mothers. Therefore lack of educational support by health centres is an important factors that lead to the discontinuity of breastfeeding by mothers..

CONCLUSION

Having healthy children requires the observance of health principles and betterment of their nutrition, especially during infancy. According to the reviewed studies it is evident that the onset of nutrition is often the mother's responsibility, but the continuation of breastfeeding, especially the exclusive breast feeding in many cases, is influenced by maternal, neonatal and environmental factors. The amount of exclusive breast-feeding and its controlling factors in the current study indicate that more attention is required for conducting further studies in this regard. Attitude and awareness of mother's and health staff's and their continuous education process about nutrition is necessary. In order to solve this problem nurses must take steps to promote breast-feeding for the benefit of the children from this great blessing. Unnecessary cesarean deliveries must be avoided and more advertisements about the benefits of normal vaginal delivery (NVD) for mother and infant is required. As well as training of mothers regarding breast-feeding and encouraging it during pregnancy and postpartum, especially in mothers with cesarean deliveries is essential.

Conflict of Interests

The authors declare that they have no conflict of interest.

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