UNIVERSITY OF GÄVLE

FACULTY OF HEALTH AND OCCUPATIONAL STUDIES
Department of Health and Caring Sciences

NURSING DEPARTMENT,
MEDICINE AND HEALTH COLLEGE

Registered nurses' Work to Promote Mother's Self-efficacy of Breastfeeding

A descriptive review

Yang Hanyi （Jessica）
Xu Yu （Vita）

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Supervisor: Zhu Kewen (Keelia)
Examiner: Bernice Skytt

Abstract

Background: Breastfeeding has many benefits for both mothers and children, but the current rate of breastfeeding is low. So, it's critical to increase the self-efficacy of breastfeeding. Registered nurses have a responsibility to take effective measures to improve the self-efficacy of breastfeeding for mothers.

Aim: The aim of the literature review is to describe what registered nurses can do to improve mother's self-efficacy of breast-feeding.

Methods: A descriptive literature review was used in this review. Two databases PubMed, CINAHL were used in searching. 12 relevant articles were finally selected according to the requirements of the bachelor's degree thesis.

Results: The authors summarized four kinds of nursing intervention measures: education intervention, psychological support, individualized protocol formulation and behaviour support, and explored the effectiveness of the intervention methods. Registered nurses used these interventions to improve the mother's self-efficacy of breastfeeding and prolong duration of breastfeeding.

Conclusion: Registered nurses play an important role in improving the self-efficacy of breast-feeding, registered nurses can take effective measures to improve the low self-efficacy of breastfeeding for new mothers and change the situation of low breastfeeding rate.

Key words: breastfeeding; nursing; self-efficacy;

摘要

背景:母乳喂养对母亲和孩子都有很多好处，但目前母乳喂养的比率很低。因此，提高母乳喂养的自我效能至关重要。护士有责任采取有效措施提高母亲母乳喂养的自我效能。

目的: 文献综述的目的是描述护士可以采取措施提高母亲母乳喂养的自我效能。

方法: 本综述采用描述性文献综述。在搜索中使用了两个数据库 PubMed、CINAHL。根据学士学位论文的要求，最终选择出 12 篇相关的文章。

结果: 此综述总结了 12 篇论文，作者总结出四种护理干预措施：教育干预，心理干预，计划制定，行为支持，并探究干预方法是否有效。护士运用这些干预方法来提高母亲母乳喂养自我效能与延长母乳喂养的持续时间。

结论:护士在提高母乳喂养自我效能方面发挥着重要作用，护士可以采取有效措施提高母乳喂养的低自我效能感 为新妈妈提供母乳喂养，改变母乳喂养率低的状况。

关键字: 母乳喂养;护理; 自我效能感

Content

1. Introduction

1.1 Background

1.1.1 Definition of breastfeeding

Breastfeeding is an ideal way to provide healthy growth and nutrition for infants. World Health Organization （WHO） recommends breastfeeding until the baby is six months old (WHO, 2018). Exclusive breast feeding means infants only have breastmilk without any other food, not even water, and don't use bottles, teats or pacifiers (WHO, 2018). If WHO' recommends are achieved, the goal of Healthy People 2020 (HP2020) will increase the rate of breast-feeding children to 81.9% (Joshi, Amadi, Meza, Aguirre, & Wilhelm 2015). However, fewer than half of all newborn babies in the world are exclusively breastfed six months after birth, compared with 15.8 percent for infants under six months of age in mainland China (Yang, Gao, Ip, & Chan, 2016). Breastfeeding is now defined as a good way that suitable for the needs of the baby and to promote the best physical and emotional health of the child. Therefore, the mother is increasingly forced to choose "the right path", regardless of circumstances such as pain and discomfort, limited independence, or return to work (Kestler-Peleg, Shamir-Dardikam, Hermoni, & Ginzburg, 2015).

1.1.2 Advantage of breastfeeding

Breast-feeding reduces child mortality in the 12 months after birth (Joshi et al. 2015). Breastfeeding also supports the infant's mental and physical development, providing balanced nutrition for the infant. Breast milk has been shown to prevent a variety of infections, including gastrointestinal diseases, otitis media and respiratory infections, especially in childhood. This is due to the immunological and antimicrobial components of breast milk (Joshi et al. 2015). Breastfeeding can also have an impact on improving maternal postpartum recovery and reducing the incidence of breast and ovarian cancer and diabetes (Kestler-Peleg et al. 2015).

1.1.3 Definition of self-efficacy

Self-efficacy is the belief that individuals have the ability to organize and execute to achieve specific accomplishments. It is not a skill, but a subjective feeling of an

individual's ability (Brockway, Benzies, & Hayden, 2017). Breastfeeding Self-efficacy (BSE) reflects the mother's confidence in breastfeeding, which is a changing factor that can improve breastfeeding rate. The self-efficacy of breastfeeding determines how much energy the mothers will spend on breastfeeding, how long they will persist in the face of obstacles, and how much resilience they will have in the face of adverse condition (Yang et al. 2016). It is suggested that women with higher self-efficacy will have better breastfeeding outcomes such as high success rate of breastfeeding (Brockway et al. 2017; Yang et al. 2016).

1.1.4 The connection of breastfeeding self-efficacy and breastfeeding

Breastfeeding is a standard for infant and child feeding, which is similar to that in many countries in the world, where many mothers prematurely stop exclusive breastfeeding, which violates their intention to breastfeed. The study found that breastfeeding self-efficacy as an important psychological measure to improve breastfeeding effectiveness was valued (Brockway et al. 2017; Yang et al. 2016). Generally speaking, mothers have higher self-efficacy of breastfeeding, they will more likely to start breastfeeding and takes breastfeed longer (Brockway et al. 2017; Yang et al. 2016). In order to address the time and low proportion of breastfeeding it is necessary to recognize that self-efficacy of breastfeeding is a variable factor (Brockway et al. 2017; Yang et al. 2016).

1.2 The nurse's role

1.2.1 Caregiver

As a professional caregiver, registered nurses master professional medical knowledge, so the most important function of registered nurses is to raise direct professional care for the sick population (ICN, 2018).

1.2.2 Researcher

As a nursing researcher, registered nurses need to take part in research, investigated the current situation about their research questions, increase their understanding of the problem, develop new nursing techniques to improve the quality of nursing (ICN, 2018).

1.2.3 Planner

Nursing is complicated and the unique role of registered nurses in caring for individuals, illness or health is to assess patients response to patients own health and to assist them in carrying out activities that contribute to the health or recovery or dignity of death, so the nurse needs to develop a special care plan for different people (ICN, 2018).

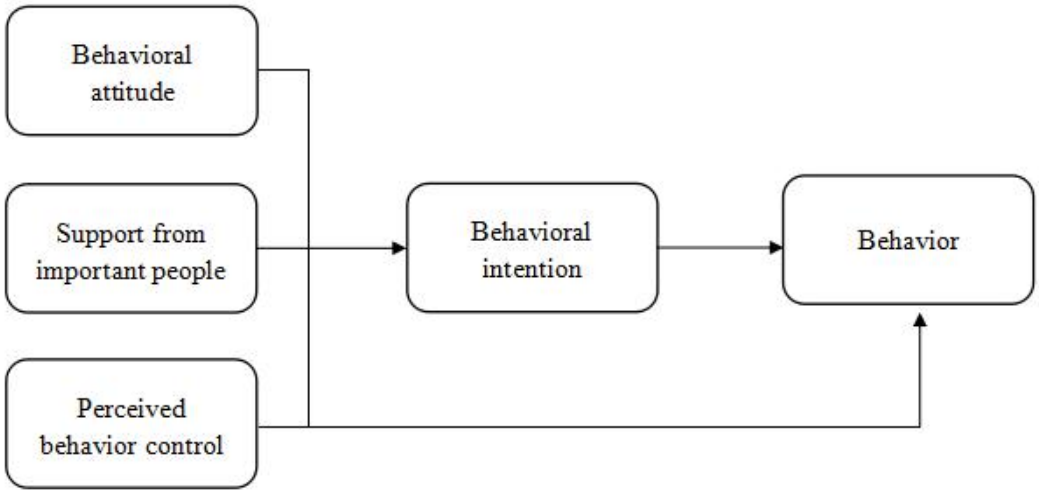
1.2.4 Educator

Educators also play a key role in nursing. Most of the patients lacking knowledge of their illness, depending on their level of knowledge, registered nurses should strive to communicate with them in order to popularize basic medical knowledge and improve people's self-care knowledge (ICN, 2018).

1.3 Nursing theory- planned behavior theory

The core of planned behavior theory is that behavior is determined by behavior intention, and the latter is determined by behavior attitude, subject norm and perceived behavior control. At the same time, perceived behavioral control can also act directly on behavior (Ajzen, 1991; McMillan, et al., 2008). The theoretical framework is based on the theory of planned behavior, which includes 5 elements: behavioral attitude, support from important people, perceived behavioral control, behavioral intention and behavior. The theory holds that behavioral attitude, support from important people, perceived behavioral control have positive effects, which can promote the production of positive behavior. The theoretical framework is Figure 1.

Figure 1. Schematic diagram of the theory of planned behavior



1.4 Literature review on related area

Breastfeeding is the focus of all mothers. For mothers, whether they desire to breastfeed determines their behavior to promote breastfeeding (McMillan et al., 2008). Some researchers have done some research on this area 15 years ago and some good results were achieved (Blyth et al. 2002; Ekstro¨m, Widstro¨m, & Nissen, 2003; Porteous, Kaufman, & Rush, 2000). Blyth et al. (2002) made telephone interviews with the mothers in 1-week and 4-months after their delivery. Breastfeeding self-efficacy scale was used to assess infant feeding practice and breastfeeding confidence. The results showed that mothers with high breast feeding self-efficacy had higher breastfeeding rate at the first week ($p = 0.01$) and the fourth month ($p = 0.01$) of delivery (Blyth et al. 2002). In Ekstro¨m et al.'s (2003) research, network support systems from mothers, relatives and professional caregivers are important for the success of breastfeeding, mothers who received breastfeeding support were more active in breastfeeding ($p<0.01$). With registered nurses providing education to the families of new mothers, helping mothers form a complete support system, as a result mothers' confidence in feeding was improved and breastfeeding time was prolonging (Ekstro¨m et al. 2003). Porteous et al's research found that mothers who received professional support from registered nurses had longer breastfeeding time than with professional support mothers ($p=0.005$).

Targeted care operations greatly increased mothers' breastfeeding time (Porteous et al. 2000). That was how researchers studied 15 years ago, now the authors want to look for some latest nursing intervention measures in the articles, thus, to provide newest evidence to promote breastfeeding.

1.5 Problem description

Medical institutions and health care providers all make efforts to increase breastfeeding rate (Yang et al. 2016). However, the rates of breastfeeding in many countries are still below the recommendations of agency (Yang et al. 2016). The authors found Hannula and Tarkka (2008) published their review, it described how mothers receive professional support for breastfeeding from prenatal to post-natal, assess and identify effective interventions to improve breastfeeding. In the article, Hannula and Tarkka (2008) unlike our concerns, rarely refer to the self-efficacy of breastfeeding, the interventions they found are aimed at increasing breastfeeding rates, and our research is directed at improving the self-efficacy of breastfeeding by intervention, thereby increasing the rate of breastfeeding.

1.6 Aim and research question

The aim of the literature review is to describe what registered nurses can do to improve mother's self-efficacy of breast-feeding with the following question.

-What can registered nurses do to promote mother's self-efficacy of breastfeeding?

2. Method

2.1 Design

The authors conducted a descriptive review (Polit & Beck, 2012).

2.2 Search strategy

Articles were being found by searching in two databases: PubMed and CINAHL with the limits see table 1. Authors used "breastfeeding (MeSH) AND self-efficacy AND nursing" to find articles, some search terms were selected one by one and combined in different forms. In the initial search, the author skimmed the titles and abstracts of 172 articles and used limitations to limit the articles within ten years. It must be full text and

English literature in University of Gävle. When combining search terms, the Boolean term AND would be used. Indexed search terms would be fetched from MeSH. During the selection process, the authors finally selected 31 articles related to the subject of the study (see table 1 and Figure 2).

2.3 Selection criteria

Only empirical, scientific articles (primary sources) were used.

Inclusion criteria for the study were as following: 1) participants were first mothers (Including pregnant and postpartum mothers) 2) quantitative studies published between May 24, 2008 and May 24, 2018 3) the outcome focus on the self-efficacy in breast-feeding.

Exclusion criteria which were applied by the authors were articles that 1) newborn mothers had twins or with some disease or premature infants, 2) mothers who had sick newborn infants 3) the article focused on the method and influencing factor of breastfeeding. 4) studies were not from May 24, 2008 to May 24, 2018, not about breastfeeding, self-efficacy and nursing. see Table 2.

Table 1. Results of database searches

Database	Limits and search date	Search terms	Number of hits	Possible articles (excluding doubles)
Medline via PubMed	2018-5-24	"Breast Feeding"[Mesh]	16866	
Medline via PubMed	Full text; published in the last 10 years, 2018-5-24	"Breast Feeding"[Mesh]	8038	
Medline via PubMed	Full text; published in the last 10 years, 2018-5-24	"Breast Feeding"[Mesh] AND self-efficacy(Free Text)	172	
Medline via PubMed	Full text; published in the last 10 years, 2018-5-24	"Breast Feeding"[Mesh] AND self-efficacy(Free Text) AND nursing(Free Text)	172	21
CINAHL	Linked full text, published in the last 10 years, 2018-5-24	"Breast Feeding"[headings] AND nursing[All text]	22	6
CINAHL	Linked full text, published in the last 10 years, 2018-5-24	self-efficacy[headings] AND nursing[All text]	11	4
			total	31

2.4 Selection process and outcome regarding possible articles

First the title and abstracts of articles were firstly skimmed to determine whether it might be useful with our aim and would answer our research question. Then, researchers read the potential articles carefully to judge if they were relevant to the literature review. By making flowcharts, the authors explained every step for selected potential articles detailed (see figure 2).

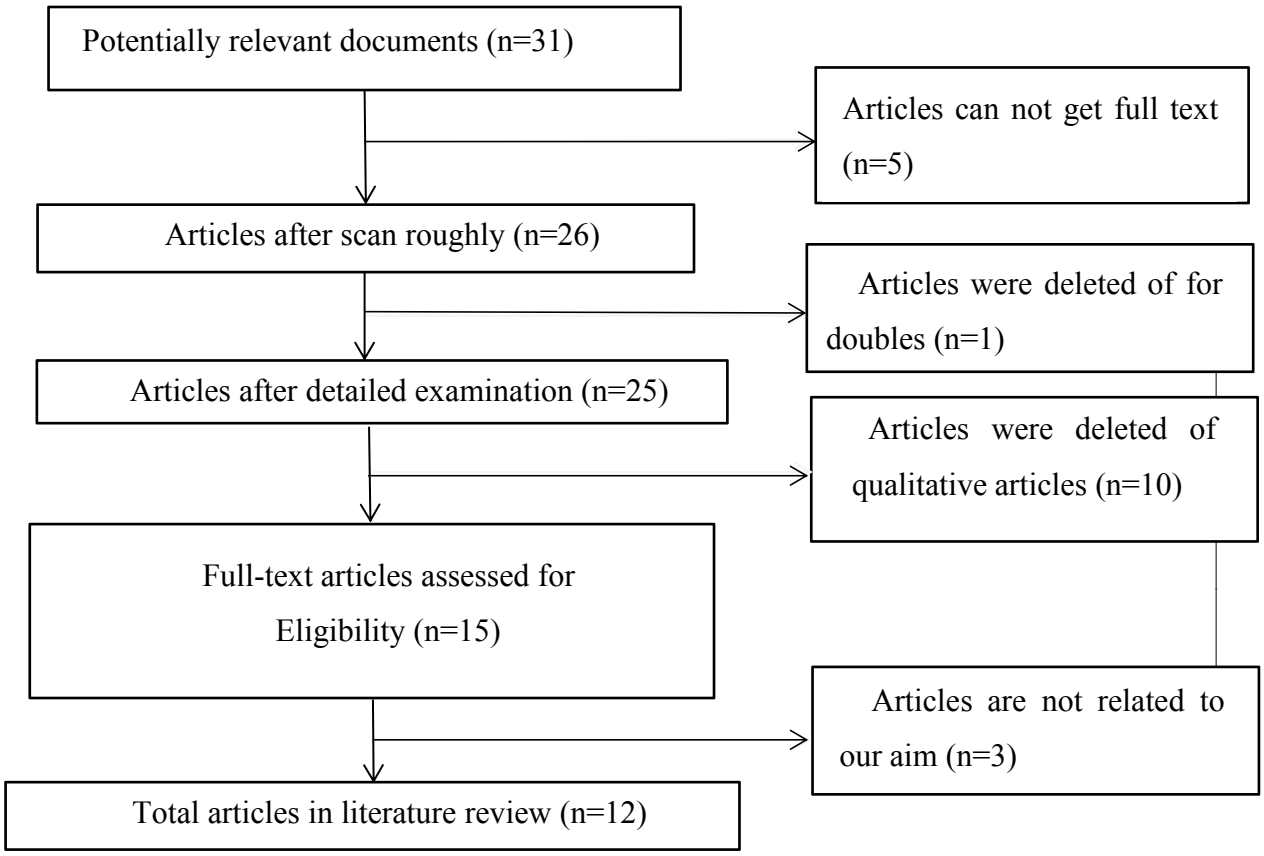


Figure 2. Selection process and outcome of potential articles

2.5 Data analysis

The authors read the selected articles several times and paid attention to results sections. Information on the authors, title, design, approach, participants, data collection method(s), data analysis method(s) in every article were collected and then listed in the table (matrix). The other table included the aim and results. The text of every measure that registered nurses do was sorted according to its specific content. According to the collected results in a table, the authors judged whether the registered nurses' work can

improve self-efficacy of breastfeeding effectively, and finally integrated all nursing work that can support mothers' self-efficacy of breasting.

This data synthesis process preserved the essential results of primary studies. At the same time, how the data were collect in each article was processed, as were what methods used all summarized and written into the corresponding table.

2.6 Ethical considerations

The authors search for articles that were reviewed, published, and ethically recognized, so the probability of ethical problems in this article is very low. The authors read the articles fairly and objectively without any personal subjective feelings and presented all the results in every article. Degree programs did not plagiarize, authors provided a reference to the source when citing from websites and articles. This is a prerequisite for the authors do research (Polit & Beck, 2012). Under the guidance and supervision of the supervisors, any view against the subjective will of the original author will be amended.

3.Results

The articles draw results based on 12 articles. These articles specifically elaborate how registered nurses can influence the self-efficacy of breastfeeding by taking a number of different measures. Specific interventions are listed as headings in the following paragraphs and are presented in Figure 3. Results are presented in tabular form at the end of the article, see Table 2, Table3. The articles based on the result is marked with an asterisk (*) in the reference list.

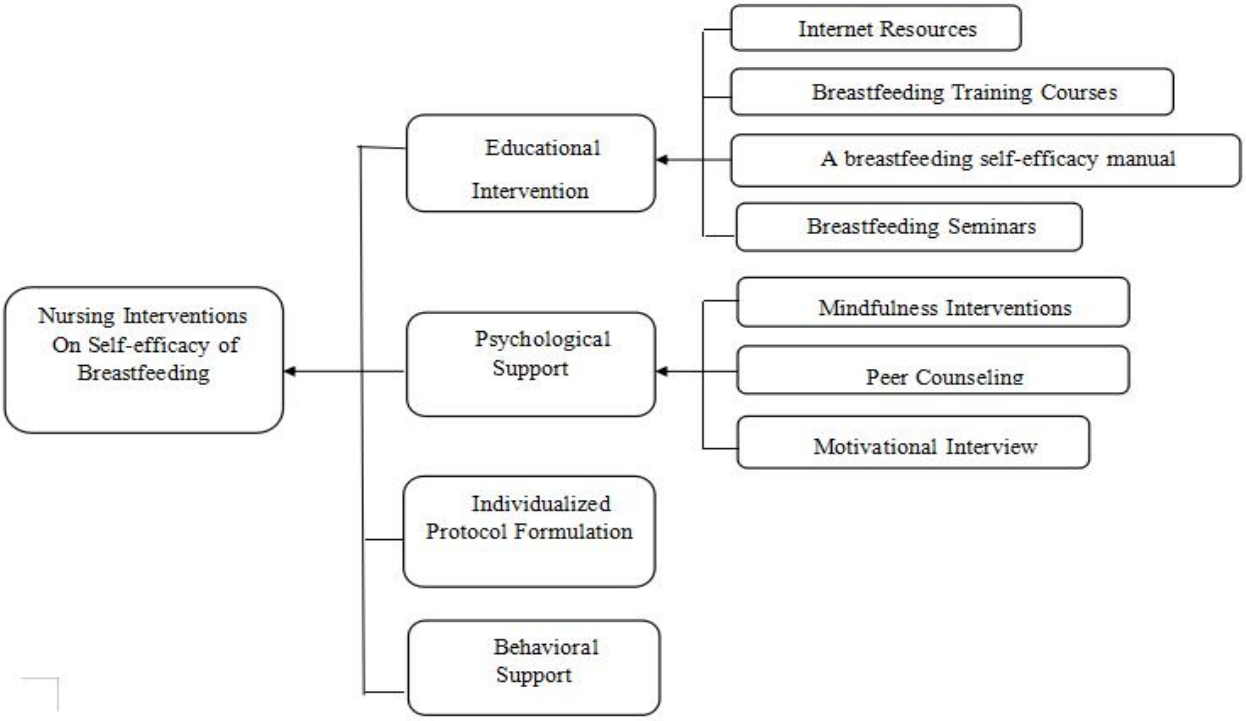


Figure 3. Specific interventions

3.1 Nursing intervention

After searching and selecting, the authors classified the intervention methods of twelve articles into four types. (1) Educational intervention (7 articles) (2) Psychological support (3 articles) (3) Individualized protocol formulation (1 article) (4) Behavioral support (1 article). In the literature sought by the authors, most articles were related to educational intervention, few researches on individualized protocol formulation and behavior support, which were new direction of research (Abbass-Dick et al. 2017; Aghdas, Talat, Sepideh, 2013; Dodt, Joventino, Aquino, & Ximenes, 2015; Kronborg, Maimburg, & Væth, 2012; Liu, Zhu, Yang., Wu, & Ye, 2017; McQueen, Dennis,

Stremler, & Norman, 2011; Perez-Blasco, Viguer, & Rodrigo, 2013; Otsuka et al. 2014; Srinivas, Benson, Worley, & Schulte, 2015; Wilhelm, Aguirre, Koehler, & Rodehorst, 2015; Wu, Hu, McCoy & Efired, 2013; Yi, Yim, & Chow, 2016).

3.1.1 Educational intervention

In an article by Abbass-Dick et al (2017), the participants included fathers and mothers who were over 19 years old. The nursing staff used a prototype eHealth breastfeeding co-parenting resource. By collecting feedback on the needs of fathers and mothers involved in the study, resources were constantly improved, and users' breastfeeding knowledge, attitudes and self-efficacy were improved. Research data showed that parents thought that prototype eHealth breastfeeding co-parenting resource were easy to understand, informative, and easy to use. Parents who adopted the electronic health resources had richer breastfeeding knowledge, higher attitude score, higher sense of self-efficacy and higher exclusive and persistent breastfeeding ($p<0.05$) (Abbass-Dick et al. 2017).

Dodt et al. (2015) described the flip chart of "I can breastfeed my children" to study educational interventions. They choose the new mothers older than or equal to 18 in Brazil. The Breastfeeding Self-Efficacy Scale were used to assess at admission, discharge and in the second month postpartum by telephone. By comparing the outcomes of the 1st, 2nd and 3rd contacts, the result showed at any point in time, mothers in the intervention group had higher BSES-SF scores ($p=0.332$), they wanted to continue to breastfeed, and insisted on breastfeeding for longer periods of time, while mothers in control group, had lower intention to continue exclusively breastfeeding ($p=0.332$) (Dodt et al. 2015).

In a research by Kronborg et al. (2012), nursing staff conducted antenatal courses, which included (1) the delivery process, pain relief, and coping strategies, (2) infant care and breast feeding, and (3) the parental role and the relationship between the woman and her partner to inform parents of the importance of breastfeeding, questions were raised about breastfeeding, increasing their sense of responsibility as parents, enriching knowledge and experience of feeding their babies. Data collected showed that the course did not significantly affect the duration of mother's breastfeeding and the

self-efficacy scores, the self-efficacy scores of intervention group and control group were nearly the same (p=0.48) (Kronborg et al. 2012).

In Liu et al. (2017) article, mothers all from China, in Fujian, Wuhan were included. In addition to regular care, the mothers of the intervention group were programmed to participate in a prenatal breastfeeding workshop. They were taught about breastfeeding techniques and proper breastfeeding practices, to understand the importance of breastfeeding, and asked questions about breastfeeding. The breast-feeding self-efficacy scale-short scale and infant feeding method were used for evaluation at discharge, 4 weeks and 8 weeks postpartum respectively. Researchers compared the mean scores of BSES-SF in two groups over time and found that the intervention group had higher BSES-SF scores and exclusive breastfeeding rates at any point in time (Liu et al. 2017). At hospital discharge, the BSES-SF scores of mothers in intervention group were higher (P=0.046), the number of mothers who exclusively breastfed were more in the control group (p=1.000). At 4 weeks postpartum, the BSES-SF scores for intervention group also higher ($p<0.0001$), and there were higher exclusive breastfeeding rates in the intervention group ($p<0.0001$). At 8 weeks postpartum, the BSES-SF scores in intervention group were much higher than in the control group ($p<0.0001$), and by comparing exclusive breastfeeding rates for two groups, mothers in intervention group scored higher ($p<0.0001$) (Liu et al. 2017).

In Otsuka et al (2014) study, 781 pregnant women, who were older than 16 years, were recruited from two "baby-friendly" accredited hospitals (BFH) and two non-infant Friendly Hospitals (nBFH) in Japan and assigned to intervention or control groups. Researchers assessed the effect of self-efficacy intervention on breast-feeding self-efficacy and exclusive breastfeeding, and further evaluated the difference of its effect according to hospital routine types. Subjects were selected from the BFHs and nBFHs, then divided into the control group or the experimental group respectively. Participants in the intervention group received a breastfeeding self-efficacy manual during the third month of pregnancy, comprising the following six sections, (1) “Explore the aspects of confidence”; (2) “Mastery”; (3) “Build confidence by learning from others”; (4)“Use encouragement”；(5) “Explore how we deal with stress”；(6) “Keep driving” (Otsuka et al. 2014). This information provided solutions that could contribute to a positive cognitive assessment. The results showed that there was a change in the BSES-SF scores between the intervention and the control group from the beginning to the

postpartum 4 weeks. The BESE-SF scores of each group increased with the prolongation of time, and the increase in the intervention group was greater than that in the control group (p=0.037). After controlling the potential confounding factors and time, the intervention resulted in an increase in the total BSES-SF score of BFHs 4 weeks after delivery, but had no effect on the self-efficacy of breastfeeding in nBFHs. In the study by Wu et al (2013), 74 pregnant women were randomly recruited as reference samples in obstetrics and gynecology at a level three hospital in Wuhan, China. The intervention was divided into three occasions after childbirth; for the first time after the postnatal day, the second after the first day after childbirth, and the third after a week of discharge by telephone (Wu et al. 2013). At these three occasions one-on-one interviews, the self-efficacy of breastfeeding and general physical and psychological conditions were assessed through individualized interventions and breastfeeding training courses. The average BSES-SF scores of mothers in the intervention group at 4 weeks ($p<0.001$) and 8 weeks ($p<0.001$) were significantly higher than those in the control group (Wu et al. 2013). After three interventions, mothers' breastfeeding self-efficacy was effectively improved, the duration of breastfeeding also increased. Yi et al (2016)' study was conducted in Hong Kong. It demonstrated a positive impact of the positive effects of self-efficacy-based breast feeding educational programme（SEBEP）based on self-efficacy on breast feeding rates and the duration of breastfeeding (Yi et al. 2016). Women 28-38 weeks of pregnancy were randomly selected for 2.5-hour breastfeeding seminars, and 30-60-minute telephone counseling at 2 weeks postpartum, and the Breast-feeding Self-Efficacy Scale-Short Form (BSES-SF) was completed by telephone interview (Yi et al. 2016). Mothers reported the time and manner of breastfeeding at 2 weeks, 4 weeks, 8 weeks and 6 months after childbirth, based on an analysis of the hypothesis of intentional treatment, the result was that mothers who received SEBEP breastfeed for a longer time than mothers who did not accept SEBEP. The results showed that the rate of exclusionary breastfeeding in the intervention group was higher than that in the control group at two weeks after delivery. However, there was no statistically significant difference in total breastfeeding rates between the two groups (p=0.14). At 4 weeks after delivery, the breastfeeding rate in the intervention group was higher than in the control group. But the difference was not significant (p=0.06). In the 8 weeks after delivery, the rate of exclusive breastfeeding in the intervention group was higher than

that in the control group, and the difference was statistically significant (p=0.02) (Yi et al. 2016).

3.1.2 Psychological support

In Perez-Blasco *et al* (2013) study, researchers recruited mothers whose average age required are 23.5. The intervention group received mindfulness interventions, mothers imagined themselves in contact with babies, taking care of babies, or playing with their babies every day. The Parental Evaluation Scale was used to measure feelings of satisfaction and self-efficacy，and the subscales of the Depression, Anxiety, and Stress Scale were employed to measure the dimensions depression, anxiety, and stress. Through the comparison of scores, the intervention group had higher scores of self-efficacy (p=0.004) and lower scores of anxiety (p=0.012) and psychological stress (p=0.004) (Perez-Blasco et al. 2013). The psychological support was a form of intervention that was regarded as urgently needed in the post-natal feeding; it as was the first time for women to become a mother, the maternity and they were presumed to need someone to tell “you can do it”.

According to Srinivas et al (2015), a low-intensity peer counseling intervention beginning prenatally had significantly increased breastfeeding rates, which support the goal of breastfeeding for mothers with low self-efficacy. The definition of breastfeeding companion consultant: A mother who has breast-fed her baby to the age of 1, or women who are breast-feeding their babies for up to six months as recommended (Srinivas et al. 2015). This intervention provides psychological support through regular postpartum or antenatal contact with the mothers. Regardless of the intervention, the rate of which the mothers with positive attitude began breastfeeding at 1 months and 6 months was slightly higher than for mothers with negative attitudes (p=0.73). After adjusting for self-efficacy, breastfeeding rates increased significantly at 1 month for women who received peer counseling. Compared with the control group, the initiation rate of breastfeeding (p=0.34), exclusive breastfeeding before discharge (p=0.95), Breastfeeding for 1 months (p=0.14) or 6 months, without significant difference. There was no difference in the initiation of breastfeeding between the intervention group and the control group (p=0.32) among those who did not decide at the time of admission or

planned to feed. Women in the peer counseling group tended to achieve their individual breastfeeding goals, but the difference was not statistically significant (p=0.73). Although most Hispanic mothers start breastfeeding, the duration and exclusivity of breastfeeding remains low. Authors explored whether motivational interview interventions could help Mexican-American rural mothers to continue breastfeeding. Authors used two sets of repetitive measurement experimental designs. Assessment and intervention were performed 3 days, 2 weeks and 6 weeks after delivery (the moment when the mother is particularly vulnerable to stopping breastfeeding), with a final telephone evaluation at 6 months after delivery. Authors collected demographic data and measured the intent of breastfeeding, self-efficacy, and collected information on breastfeeding (Wilhelm et al. 2015). The results showed that despite the mothers' intention to breastfeed for 6 months and their confidence in their ability to do so, most mothers did not breastfed for 6 months. In the 6_{th} week, only a few mothers still participated, and because of the decrease in the number of samples, they did not find any significant differences between the result variable groups: the intention to breastfeed for 6 months ($P_{baseline}$=0.44, $P_{week\ 6}$=0.43), breastfeeding self-efficacy ($p_{baseline}$= 0.57, $P_{week\ 6}$ =0.18) and 6 months breastfeeding duration ($P_{month\ 6}$=0.53) (Wilhelm et al. 2015).

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3.1.3 Individualized protocol formulation

Nursing staff in McQueen et al. (2011) research designed a standardized, individualized nursing intervention, which including three steps (1) assessment, (2) strategies to increase breastfeeding self-efficacy, and (3) evaluation identified problems. Authors raised further targeted solutions, such as encouragement, giving advice and psychological cues. Then BSES-SF, Infant Feeding Questionnaire were used to measure the changes of maternal self-efficacy and breast-feeding duration and exclusivity before and after intervention (McQueen et al. 2011). The results showed that at 4 weeks postpartum, mothers had higher scores of self-efficacy and longer duration of breastfeeding in the intervention group (p=0.08). At 8 weeks postpartum, more mothers in the intervention group insisted breastfeeding than in the control group but not significantly (p=0.56) (McQueen et al. 2011).

3.1.4 Behavioral support

In Aghdas et al. (2013) article, the researches wanted to investigate whether skin-to-skin contact between mother and child affects mothers' self-efficacy. Mothers included in the study were 19 years and Spanish women. The researchers used infant Breast-Feeding Assessment tool (IBFAT) to measure 'success in first breastfeeding' and accomplished. The score of self-efficacy table was also completed, then given feedback to nursing staff. The result showed that the self-efficacy score of the intervention group was significantly higher than that of the control group (p=0.0003). It was assumed that there was skin contact between mothers and children, the mother provided the newborn with tactile and olfactory stimulation, which enhanced the mother's confidence and ability of breast-feeding. Further the authors concluded that also increased feeding time and prevents early weaning (Aghdas et al. 2013).

4. Discussion

4.1 Main results

A final total of 12 articles were included in the review. Four types of intervention methods were summarized from the articles: educational intervention, psychological support, plan formulation and behavioral support. The increase of breast-feeding rate is of great significance to mother and child as well as to society. Therefore, how to take appropriate measures to improve the self-efficacy of breast-feeding needs further study.

4.2 Results discussion

4.2.1 Educational intervention

Seven of the twelve articles used educational intervention to improve self-efficacy in breastfeeding. The education intervention by professional registered nurses was the first step to improve the self-efficacy of breast-feeding of new mothers. The purpose of education was to change the cognition and attitude of new mothers to breast-feeding, and then to improve their confidence in breast-feeding. According to the theory of planned behavior, educated mothers had a more positive attitude towards breastfeeding, and they persisted in breastfeeding for longer periods of time (McMillan, 2008). In the authors' opinion, registered nurses, as clinicians at the frontline, were most exposed to

patients every day. Therefore, registered nurses carry out health education for patients, it is of great significance to the success of breastfeeding.

In this literature review, the intervention methods of seven articles were included into: (1) Internet resource (2) Breastfeeding training course (3) A breastfeeding self-efficacy manual (4) Breastfeeding seminars. The above forms of intervention are different, but the essence was to teach mothers the knowledge of breastfeeding to improve the confidence of breastfeeding.

When educational practice influenced people's belief in their abilities, they were considered to be effective (Dodt et al. 2015). Although mothers were willing to and strived to improve breast-feeding self-efficacy, some objective factors can hinder the development of breast-feeding self-efficacy. Therefore, when a breast-feeding self-efficacy intervention was implemented to improve exclusiveness of breast-feeding, external forces were needed to promote the implementation of educational intervention, like optimize hospital practices beforehand (Otsuka et al. 2014). A review about antenatal breastfeeding education expounded that nursing staff providing education intervention support can increase the enthusiasm of breast-feeding and lay the foundation for the success of postpartum breast-feeding (Jacobsen 2019). These results are consistent with the findings of Dodt et al. (2015) and Otsuka et al. (2014) that are presented in this review.

Considering the different stages of the mother's status (prenatal and post-natal), the focus of the nurse's educational intervention was different. For prenatal mothers, the interventions took the form of individual tutoring, eHealth breastfeeding, co-parenting resource, etc. The aim was to make pregnant women fully aware of the importance of breastfeeding, corrected their inappropriate breastfeeding concept, promoted their awareness that breastfeeding was conducive to the healthy development of young children, and laid the foundation for breastfeeding in the future (Abbass-Dick et al. 2017). For postpartum mothers, the researchers were used postpartum follow-up to further understand mother's current situation. Interventions carried out health education, correctly guided scientific breastfeeding, and to effectively solved the problems encountered in the lactation process, such as insufficient milk, poor discharge (Abbass-Dick et al. 2017). Results in the present review showed that prenatal and postpartum health education not only raises the level of maternal awareness of breastfeeding, but also fully recognized the importance of breastfeeding (Liu et al. 2017). Prenatal and

postnatal breastfeeding interventions also had higher influence than either a prenatal breastfeeding intervention or a postnatal breastfeeding intervention alone (Liu et al. 2017). This finding is consistent with the result of Alebel et al' (2018) suggesting that it is strongly recommend that registered nurses pay special attention to encouraging mothers to participate in prenatal and postnatal care as an opportunity to teach mothers the importance of exclusive breastfeeding, and increasing the provision of breastfeeding counseling services for infants and young children (Alebel, Tesma, Temesgen, Ferede, & Kibret, 2018).

Six of the seven articles covered both the prenatal and by that postnatal period and by that emphasized the continuity of intervention. After discharging of hospital, mothers should be provided information and guidance by family support systems (Dodt et al. 2015). Dodt et al (2015) study found that an increased educational intervention by a flip chart called "I Can Breastfeed My Child" provided positive results on improving the mother's self-efficacy. It pushed new mothers to more and longer periods of adherence to breastfeeding for two months after childbirth. Therefore, for authors' point, it was very important for registered nurses to use sustained health education strategies, for new mothers, it increases the length of breastfeeding.

When breast-feeding self-efficacy intervention was implemented to improve exclusiveness of breast-feeding, it may be necessary to optimize hospital practices beforehand (Otsuka et al. 2014). Baby-Friendly hospitals had a higher rate of breastfeeding than non-Baby-Friendly hospitals, because they paid more attention to the situation and ways of breastfeeding, then they would provide more effective support to new mothers (Otsuka et al. 2014).

The result of Kronborg et al. (2012) showed there was no statistical significance in the improvement of self-efficacy before and after intervention ($p=0.48$). However, through antenatal training courses, more and more mothers recognized the importance of breastfeeding and the breastfeeding time prolonged in the intervention group (Kronborg et al. 2012). This finding contradicted with the review of Alebel et al (2018), mothers who attended antenatal training were more likely to breastfeed exclusively. But in the study by Kronborg et al' (2012) study, prenatal training helped to maintain the mother's confidence in breastfeeding during pregnancy, but it did not actually improve the self-efficacy of the mother after childbirth due to some objective factors, such as mother's education level, the individual's ability to accept, the compliance, and so on. This

difference can be explained by the socio-economic and cultural differences of the participants (Kronborg et al. 2012; Alebel et al. 2018). Prenatal education, although low cost and faced most new moms, but it's not the most effective way to intervene. So postpartum stalking of the new mother and provided support for breastfeeding was also important (Kronborg et al. 2012).

4.2.2 Psychological support

Planned behavior theory shows breastfeeding was the focus of attention throughout society and postpartum mothers, and the intention to breastfeed determines whether breastfeeding can be promoted, while breastfeeding intentions were influenced by whether the mother was properly aware of breastfeeding and the surrounding environment, such as family, friends, and professional registered nurses. These were the consciousness control parts of the plan behavior theory (McQueen et al. 2011). Authors read a lot of articles, found that the birth of a child put great pressure on the novice parents and breastfeeding was a serious challenge, the timely psychological support provided by the professional nursing staff was particularly important.

During pregnancy, the mood of pregnant women fluctuates greatly, and it is easy to produce negative emotion like anxiety, worry, and caused psychological pressure for future breast-feeding (Perez-Blasco et al. 2013). By mindfulness interventions, mothers imagined in advance the way mother and infant got along with each other, the scene of breast-feeding, they could prepare for the difficulty of breast-feeding ahead of time. Mothers who received the intervention showed significantly lower anxiety, stress and psychological pain (Perez-Blasco et al. 2013). In the study by Blyth et al (2002), breastfeeding self-efficacy was an important predictor of breastfeeding duration and level. Compared with the study by Perez-Blasco et al (2013), Blyth et al (2002) has not applied this finding to clinical practice (Blyth et al. 2002). It can effectively improve the well-being and maternal self-efficacy of breastfed women and reduce mental distress. Jager, Skouteris, Broadbent, Amir and Mellor (2013) in their suggested review that psychological factors were not only associated with exclusive breast-feeding time, but can also be altered through intervention and experience, which was consistent with Perez-Blasco's findings (Jager et al. 2013). Registered nurses could give guidance to pregnant women in the process of imagination. With the development of society and economy, it was wrong to make breastfeeding obsolete because of the diversification of

breast-milk substitutes (Perez-Blasco et al. 2013). It was considered that artificial feeding was modern and scientific. Young mothers, however, pursued body beauty and mistakenly believed that breast-feeding affected somatotype, so on. According to the articles by Perez-Blasco et al (2013) and Jager et al (2013), registered nurses could correct mothers' psychological activities, tell pregnant women that breastfeeding was the best, most scientific, and most effective way of feeding.

Peer counselling can pass on breastfeeding experience and knowledge to mothers through information support and communication. The measure effectively improves the effectiveness of health education. Gained the trust of the mothers and achieved the goal of increasing the breastfeeding rate. Peer counseling also worked well in helping mothers accept the right idea, received the right assistance and encouragement, thus promoting success in breastfeeding (Srinivas et al. 2015).

Motivational interview interventions also were a part of psychological support. Motivational interview interventions can reduce research participants' ambivalence and improve self-efficacy by emphasizing individual choice and control in decision-making and confirming research participants' decision-making. Pregnant women should prepare psychologically well during pregnancy (Wilhelm et al. 2015). Wilhelm et al. (2015) suggested that when pregnant women first visited the hospital, in addition to routine examinations, nursing staff should promote knowledge and benefits of breastfeeding among pregnant women and their families, patiently answered questions raised by the pregnant women and their families and to generated greater interest and confidence in breastfeeding.

4.2.3 Individualized protocol formulation

Nowadays, the advantages of breastfeeding were becoming increasingly prominent, but the situation of breastfeeding was not satisfactory. Many mothers ended breastfeeding early (McQueen et al. 2011). The theory of planned behavior held that support from others would change the intention of breast-feeding, thus it had a positive effect on the mother's breastfeeding behavior (McMillan, 2008).

Nursing staff in McQueen et al. (2011) provided professional guidance to mothers with low self-efficacy scores and answered their questions in breast feeding, which changed mothers' perceptions of breastfeeding. It was found that the mother who received professional guidance and support had higher breast-feeding rate and duration time, and

higher satisfaction (McQueen et al. 2011). The finding in Lau's review was similar to McQueen et al.' (2011) resulted. By targeting mothers' different psychological needs, special breastfeeding support or interventions can be developed to help women with different backgrounds and personality traits, thus delaying early termination of breastfeeding (Lau, Zhu, Yang, Wu, & Ye, 2018). Nursing staff carried out regular monitoring of mother's problems in the process of breastfeeding, assessment; planning and implementation of each mother's breastfeeding situation can avoid the difference in the effect of breast-feeding (McQueen et al. 2011). According to the different conditions and needs of the mothers, giving individualized guidance and care. This had not only strengthened the communication with mothers, improved the satisfaction of the mothers and their families, but also prevented the problems arising from breastfeeding, and increased the breastfeeding rate (Lau et al, 2018). The findings by Porteous et al also illustrated that personalized guidance had a direct impact on breastfeeding time. However, there was no correlation between breastfeeding self-efficacy and breastfeeding time (McQueen et al. 2011; Porteous et al. 2000).

4.2.4 Behavioral support

Aghdas et al. (2013) found that mothers improved breastfeeding rates through direct skin contact with their babies, which corresponded to changes in behavior in planned behavior theory, and the mother's behavior were controlled by behavioral intent. The behavior intention was influenced by the mother's attitude (McMillan, 2008). Immediate skin-to-skin contacted between mother and child had a significant positive effect, which promoted maternal and infant affection, fostered good feeding attitude of mother, thus improved self-efficacy of mother's breast-feeding, and also increased the satisfaction of mother to breast-feeding. Although this was a simple intervention, it was very effective, so new mothers needed to spend more time with their children's skin-to-skin contact after birth. For mothers, it can reduce postpartum negativity, fatigue, reduce happening of postpartum depression, increase pride of being a new mother. For a baby, it can increase its sense of security by its mother's side, and it can establish sucking reflex as soon as possible. Getting more immunologic substance from breast milk helped the baby grow (Aghdas et al. 2013). Similar results have been reported in the review by Karimi, Sadeghi, Maleki-Saghooni and Khadivzadeh (2015), direct skin contact between mother and child after birth had a beneficial effect on mother's breastfeeding

rate. The views of the article by Karimi et al. (2015) were consistent with Aghdas et al. (2018), showing that increasing mother-to-child communication was also conducive to emotional development, and ultimately to improve self-efficacy of breastfeeding (Karimi et al, 2015).

The study by Aghdas et al. (2013) had only targeted new mothers themselves. However, Ekstro¨m et al. (2003) suggested that for new mother's supports from family members and professional caregivers in breastfeeding were important (Ekstro¨m et al. 2003).

4.3 Methods discussion

This is a descriptive review of qualitative literature on nursing intervention in self-efficacy of breastfeeding. The authors chose descriptive design because the aim of the study was to describe measures for nurses to improve their self-efficacy in breastfeeding. A literature review was an effective way to track and absorb the latest achievements of academic thought and research both at home and abroad, to understand the frontiers of scientific research and to obtain new information (Polit & Beck, 2012). According to Polit and Beck (2012), literature review can help the author to get inspiration from the existing research, to help the author find new methods and clues for the in-depth study of the thesis, and to concretize the related concepts and theories. And it can provide abundant and persuasive facts and data for scientific argumentation of one's own views, so that the research conclusions can be based on reliable materials (Polit & Beck, 2012). In order to find new research methods and strong argumentation basis and support the viewpoint of the article, the authors searched a large number of documents, provided factual basis for further theoretical research, and studied the future development trend on the basis of clear recognition of the present situation. To study the topic in-depth thinking, put forward different points of view. The results also provided valuable insights for registered nurses and identified some potential areas for future research and intervention development. These articles should be published between 2008-05-24 and 2018-05-24, limiting search results to ensure that perspectives were at the forefront of development (Polit&Beck, 2012). The author identified three keywords (breastfeeding; nursing; self-efficacy) to highlight the key content of the article.

One of the limitations was the review is the use of English literature. Since English is not the author's first language, it makes it more difficult for the author to understand the literature, and it is easy to misunderstand the views expressed in the literature. The

inclusion of only English literature also limits the scope of the study. (Polit&Beck, 2012).

One of the inclusion criteria of this article is that the object of study was the new mother, which is an advantage to clarify the object of our study and enable the author to screen out the articles that are really needed. Through two different databases: Cinahl and Medline, the authors had searched for related articles, which were seen as an advantage. According to Polit and Beck (2012), the search scope of the two databases was more extensive, the data obtained was more abundant, and the authenticity is higher, which makes the results of the author's research more comprehensive and has higher research value.

4.4 Clinical implications for nursing

Registered nurses can improve breast-feeding self-efficacy of new mothers through different measures, so registered nurses can systematically teach mothers breastfeeding and find concrete ways to improve breastfeeding self-efficacy of new mothers. Registered nurses can also provide psychological counselling to mothers, develop mothers own personal care plans, and encourage behaviors that improve breastfeeding self-efficacy. The authors summarized four kinds of intervention methods. Educational intervention is the easiest to implement, and the effect is obvious. The use of psychological support, individualized protocol formulation, behavioral support and other measures had gradually increased. The authors suggested registered nurses to use scientific methods to educate and support new mothers, and to supervise and evaluate the breastfeeding of new mothers in the process of guidance.

4.5 Suggestions for future research

The author’s study was limited to new mothers, only one article included fathers. The future research could include the other family members like fathers. When the new mother was included, some articles did not have a clear understanding of the new mother's educational level and ability to accept the understanding, which had a certain impact on the results of the study. Therefore, coming studies could be conducted to understand the background of the new mothers and to provide appropriate nursing interventions according to their different acceptability. In some studies, follow-up time

is short when we know about the breastfeeding situation of the new mother after childbirth. Future studies longer duration of follow-up time would be extended.

4.6 Conclusion

Based on planned behavior theory, this study discussed the relationship between nursing intervention and breastfeeding self-efficacy of new mothers. Registered nurses play an important role in improving self-efficacy among breast-feeding mothers. The improvement of self-efficacy can promote the prolongation of breast-feeding time. Breastfeeding has a positive effect on mothers, children and society, and in the context of low breastfeeding rates, registered nurses can take different measures to improve the low self-efficacy of breastfeeding for new mothers.

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Table 2. Overview of selected articles.

Authors+ year/country of publication	Title	Design (possibly approach)	Participants	Data collection method(s)	Data analysis method(s)
1 Abbass-Dick J *et al*, 2017 Canada	The Development and piloting of a Health breastfeeding resource targeting fathers and partners as co-parents	A quantitative approach A randomized control trial	Total(n=147) Mothers n=73, Fathers n=74 Phase 1: Mothers (n=16), Fathers(n=15) phase 2: Mothers(n=31), Fathers(n=35) phase 3: Mothers(n=26), Fathers(n=24) Age:≥ 19 Sex: male/ female Condition of participants: pregnant or new mothers and their partners, English speaking Research time: June 2014 to March 2015	Questionnaire: BSES-SF; IIFAS； Breastfeeding knowledge questionnaire	1.open–ended questions: pre-test questionnaire 2.T-tests
2 Aghdas k *et al*,	Effect of immediate and continuous mother–infant skin-to-skin contact on	A quantitative approach	Total(n=114) Intervention group(n=57)	Questionnaire: Infant Breast Feeding Assessment tool (IBFAT);	1. (1) t-test

2013 Australia	breastfeeding self-efficacy of primiparous women: A randomized control trial	A randomized control trial	Control group(n=57) Age:18-35 Condition of participants: primiparous, Iranian, healthy, full term mothers, normal vaginal delivery, intended to be breastfeeding. Research time: 1st April 2012 to 31st July 2012	Breastfeeding Self-Efficacy Scale (BSES)	(2) chi square 2. Mann–Whitneytes
3 Dodt R. C. M..*et al*. 2015 Latin	An experimental study of an educational intervention to promote maternal self-efficacy in breastfeeding	A quantitative approach An experimental study	Total(n=96) Intervention group(n=54) Control group(n=42) Age:>=18 Condition of participants: hospitalized mothers, in the immediate postpartum period (1-10 days), healthy, be able to breast feeding; Research time: October 2010 to May 2011	Questionnaire: BSES-SF; Socio-demographic; Clinical-obstetrics questionnaires; Telephone contact	(1) chi-squared test (2) Student's t-test or the Mann-Whitney test (3) Snedecor's F-test
4 Kronborg H. *et*	Antenatal training to improve breast feeding: a	A quantitative approach	Total(n=1193)	Questionnaires	1. The Pearson x^2 test

al. 2012 Denmark	randomised trial	a randomised controlled trial.	Intervention Group (n=603) Control Group (n =590) Age:≥18 Condition of participants: pregnant women who were enrolled from weeks 10±0 day to 21±6 days of gestation. Singleton pregnancy, Danish speaking Research time: May 2006 to 2007	(1) questionnaire about baseline information; (2) questionnaire about information on the service and a question about self-efficacy in going through with breast feeding until 4 months following birth; (3) questionnaire about the experience of the first breast-feeding period and the breast-feeding status; (4) questionnaire about the duration of breast feeding.	2. A Cox regression analysis. 3. Schoenfeld residuals.
5 Liu L. Y. *et al.* 2017 China	The Effect of a Perinatal Breastfeeding Support Program on Breastfeeding Outcomes in Primiparous Mothers	A quantitative approach, comparative, and quasi-experimental research design.	Total(n=150) Intervention Group (n=75) Control Group (n =75) Age:≥ 19 Condition of participants: expecting a single, healthy, term birth child, planning to breastfeed. Can speak Mandarin Research time: November 2013 to June 2014	Questionnaire: Hong Kong Chinese version of the BSES-SF and a demographic questionnaire at registration	1. the chi-square and Fisher's exact tests 2. least square difference (LSD) post hoc analysis 3. The t test

6 McQueen K.A. *et al.* 2011 Canada	A Pilot Randomized Controlled Trial of a Breastfeeding Self-Efficacy Intervention with Primiparous Mothers	Pilot randomized controlled trial (RCT).	Total (n=150) Intervention group(n=69) control group(n=81) Age: Not mentioned Condition of participants: In child-bearing period, English speaking, have a single, healthy, term infant, planning on breastfeeding Research time: March 2008 to July 2008	Questionnaire: baseline questionnaire; BSES-SF; the Infant Feeding Questionnaire; form; Self-Efficacy Intervention Questionnaire	1.T test 2. chi-square tests
7 Perez-Blasco *et al*. 2013 Spain	Effects of a mindfulness-based intervention on psychological distress, well-being, and maternal self-efficacy in breast-feeding mothers: results of a pilot study	A quantitative approach A randomized controlled trial	Total(n=26) Intervention Group (n=13) Control Group (n =13) Age: 34.33 (average) Condition of participants: Healthy, breast feeding women Research time: January 2012 and April 2012	Questionnaire: the Parental Evaluation Scale； the Self-Compassion Scale;DASS-21;SWLS	1. Pearson's chi-square test 2. t test
8	Effectiveness of a	A quantitative	Total(n=925)	Questionnaire: Questionnaire to assess baseline	1. Chi square

Otsuka, *et al.* 2014 Tokyo	Breastfeeding Self-efficacy Intervention: Do Hospital Practices Make a Difference?	approach. individual randomization	Intervention Group (n=455) Control Group (n =470) Age: 16 years of age or older Condition of participants: pregnant women, Japanese reading and writing, expect singleton birth and breastfeeding Research time: August 2010 and January 2011.	breastfeeding self-efficacy	or Fisher's exact tests 2. t tests 3. a multivariate generalized estimating equation (GEE)
9 Srinivas *et al.* 2015 USA	A Clinic-Based Breastfeeding Peer Counselor Intervention in an Urban, Low-Income Population: Interaction with Breastfeeding Attitude	A quantitative approach A randomized controlled trial	Control (n = 53) Peer Counseling (n = 50) Condition of participants: new mother, Puerto Rican or Puerto Rican descent who can be able to read or speak Spanish or English; Research time: February 2015 through February 2016	Questionnaire: IIFAS; BSES-SF	1. Breslow-Day test
10 Wilhelm S.L. *et*	Evaluating motivational interviewing to promote breastfeeding by rural	A two-group repeated measures experimental	Total (n=53) Intervention group(n=27)	Assessment questionnaires; phone survey;	1. Mann Whitney U non-parametric

al 2015 USA	Mexican-American mothers: the challenge of attrition	design	control group(n=26) Sex: female Age: 15-50 Condition of participants: Mexican American mothers, have a healthy, singleton birth infant . Research time: December 2008 and March 2010	A single intent question developed following Fishbein and Ajzen's (2010) guidelines and scored using a 7-point Liker; 14-item Breastfeeding; Self-Efficacy Scale-Short Formt-type scale;	tests 2. t-tests
11 Wu. D.S., *et al* 2013 China	The effects of a breastfeeding self-efficacy intervention on short-term breastfeeding outcomes among primiparous mothers in Wuhan, China	A quantitative approach An experimental pre-test and posttest, two-group design;	Total (n=74) Intervention group(n=37) control group(n=37) Age: >=18 Condition of participants: Wu Han in China, primiparous mothers. Research time: June–October 2012	baseline questionnaire; BSES-SF; Infant Feeding Questionnaire	1. t-tests and chi-square 2. Logistic regression analysis 3.Mann–Whitney U-test
12 Yi C. M. *et al*,	The effect of a self-efficacy-based educational programme on maternal	A quantitative approach	Total(n=71) Intervention group(n=35)	Socio-demographic questionnaire A post-partum questionnaire	1. .intention-to-treat (ITT)

2015 China	breast-feeding self-efficacy, breast feeding duration and exclusive breast-feeding rates: A longitudinal study	A randomized control trial	Control group(n=36) Age:>=18 Sex: female Condition of participants: primigravids who were married, with normal breast and nipple. Research time: July 2013 to June 2014.		2. Pearson's chi-squared test

Table 3 . Overview of selected articles' aims and main results

Author(s)	**Aim**	**Results**
1 Abbass-Dick J	to design and pilot test an interactive eHealth breastfeeding co-parenting resource developed to target both mothers and fathers.	Maternal and paternal breastfeeding self-efficacy($P<0.05$) and knowledge and infant feeding attitude scores all increased from pre-test to post-test. However, there was no difference in the co-parenting relationship scores from pretest to post-test.
2 Aghdas k *et al*	To evaluate the effect of mother–infant immediate skin-to-skin contact on primiparous mother's breastfeeding self-efficacy	A total of 92 mother–infant dyads were monitored and analyzed. In skin-to-skin contact group, breastfeeding self-efficacy was 53.42 ± 8.57 SD as compared to 49.85 ± 5.50 SD in routine care group which is significantly higher in skin-to-skin contact group ($p = 0.0003$).
3 Dodt R. C. M. .*et al*.	to build, validate and assess an educational intervention using the flip chart titled "I Can	the intervention was beneficial because mothers in the intervention group had higher

	Breastfeed My Child.”	self-efficacy scores(P=0.003), in control group(P=0.267) more mothers continued breastfeeding and mothers had a longer duration of exclusive breastfeeding, both at the time of hospital discharge and at the second month postpartum, with statistically significant associations.
4 Kronborg H. *et al.*	to assess the effect of an antenatal training programme on knowledge, self-efficacy and problems related to breast feeding and on breast-feeding duration.	no differences were found between groups according to duration of breast feeding, self-efficacy score, or breast-feeding problems, but gestation women in the intervention group reported a higher level of confidence (p=0.05) because they participate in the course.
5 Liu L. Y. *et al.*	to examine the effect of a self-efficacy intervention on primiparous mothers’ breastfeeding behaviors.	This result showed that both the time at which breastfeeding interventions were assessed and the intervention itself had effects on the mean score of the Hong Kong Chinese Version of the BSES-SF over time(P<0.001).

6 McQueen K.A. *et al.*	To pilot test a newly developed breastfeeding self-efficacy intervention, assess this pilot trial was to evaluate the feasibility, compliance, and acceptability. To identify any trends among the mothers receiving the self-efficacy intervention versus usual care in terms of breastfeeding self-efficacy, duration, and exclusivity.	Findings suggest that the intervention was feasible. Mothers in the intervention group had higher rates of breastfeeding self-efficacy, duration, and exclusivity at 4 weeks(P<0.08) and 8 weeks (P<0.56) postpartum. However, the differences between groups were not statistically significant.
7 Perez-Blasco *et al*.	To examine the effectiveness of a mindfulness-based intervention in breast-feeding mothers.	ANCOVA results indicated that, compared to the control group, mothers in the treatment group scored significantly higher on maternal self-efficacy, some dimensions of mindfulness (observing, acting with awareness, non-judging, and non-reactivity), and self-compassion(P=0.04)
8 Otsuka, *et al.* 2014	To evaluate the effect of a self-efficacy intervention on breastfeeding self-efficacy and exclusive breastfeeding, and further assessed	the intervention improved both breastfeeding self- efficacy through 4 weeks postpartum (p = 0.037) and the exclusive breastfeeding rate at

Tokyo	the difference in its effect by hospital-routine type	4 weeks postpartum. In nBFHs, however, no positive effect was observed on breastfeeding self-efficacy ($p = 0.982$) or on the exclusive breastfeeding rate at 4 weeks postpartum; The intervention improved breastfeeding self-efficacy and exclusive breastfeeding at 4 weeks post- partum only in BFHs.
9 Srinivas *et al.*	To improve rates of any and exclusive breastfeeding at 1 and 6 months using a low-intensity peer counseling intervention beginning prenatally. Authors also planned to study the interaction of breastfeeding attitude and self- efficacy with the intervention.	Women with positive attitudes had significantly higher rates of initiation (93% vs 61%) and breastfeeding at 1 and 6 months (79% vs 25% and 12% vs 0%, respectively) than those with negative attitudes, regardless of intervention. After adjusting for self-efficacy, women who received peer counseling had significantly higher breastfeeding rates at 1 month (odds ratio = 3.2; 95% confidence interval, 1.02-9.8). The intervention group was marginally more likely to achieve their breastfeeding goal (43% vs

		22%, P = .073)
10 Wilhelm S.L. *et al*	To explored whether a motivational interviewing (MI) intervention could help rural Mexican- American mothers continue breastfeeding.	After MI, authors did not detect any significant differences between groups for any of the outcome variables: intent to breastfeed for 6 months, breastfeeding self-efficacy(P<0.18), and duration of breastfeeding at 6 months
11 Wu. D.S., *et al*	To evaluate the effects of a breastfeeding intervention on primiparous mothers' breastfeeding self-efficacy, breastfeeding duration and exclusivity at 4 and 8 weeks postpartum.	Participants in the intervention group showed significantly greater increases in breastfeeding self-efficacy (P=0.004), exclusivity and duration than participants in the control group at 4 and 8 weeks postpartum (except for duration at 4 weeks). High baseline breastfeeding self-efficacy predicted higher breastfeeding self-efficacy later and more exclusive breast-feeding.
12	to investigate the effectiveness of a self-efficacy-based breast-feeding educational	1.results of analyses based on an intention-to-treat (ITT) assumption showed a significant

Yi C. M. *et al*	program (SEBEP) in enhancing breast feeding self-efficacy, breast feeding duration and exclusive breast-feeding rates among mothers in Hong Kong.	difference ($p<0.01$) in the change in BSES-SF mean scores between the mothers who received SEBEP and those who did not receive SEBEP at two weeks post-partum. 2. From research, the exclusive breast-feeding rate was 11.4% for the intervention group and 5.6% for the control group at six months post-partum.