

REVIEW ARTICLE

Breastfeeding Education: A Scoping ReviewFaizatul Ummah¹, Luluk Rosida², Aulia Kurnianing Putri¹¹ Faculty of Health Science, Universitas Muhammadiyah Lamongan, Indonesia² Faculty of Health Science, Universitas Aisyiyah Yogyakarta, Indonesia**ABSTRACT**

The aim of this scoping review was to explore the evidence related to breastfeeding education in postpartum mothers from relevant databases (PubMed, Science Direct, and Wiley). There were nine eligible studies in which all of them used quantitative design. The data was organized into seven themes including targets, materials, methods, media, officers and places, time, and the effect or influence of breastfeeding education. Almost all (8/9) articles informed breastfeeding education targets. There were 5/9 articles that reported the methods, 6/9 articles discussed the media, 8/9 articles talked about the officers and places, 7/9 articles concerned about the time of implementation, and all studies reported the effect of breastfeeding education. Breastfeeding education included at least 5 existing components. Breastfeeding education must be planned properly and must be carried out continuously from the antenatal until the postnatal period.

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INTRODUCTION

Exclusive breastfeeding (EBF) for six months to two years has been shown to have a positive impact on both the mother and baby's health as well as on the baby's "foundation of life" (1,2) In addition to containing complex nutrients to meet the baby's nutritional needs, breastmilk contains immune substances that protect infants from various diseases such as digestive tract infections, respiratory infections, reducing the risk of asthma, eczema, allergic rhinitis, overweight and obesity, and type 2 diabetes (1–5) and thereby reducing the risk of child mortality(6). Breastfed babies also show better intelligence test results (5). WHO has recommended EBF for six months but its coverage in various countries is still low. It only reaches 44% worldwide (2). In Indonesia, the proportion of EBF for infants aged 0-5 months is 37.3%(7) and slightly more than 5% of children are still breastfed at the age of 23 months. The low number of exclusive breastfeeding mothers is possibly due to the lack of knowledge and BE(8), as well as the widespread promotion of formula milk (9).

Breastfeeding Education (BE) is one of the efforts to increase the success of breastfeeding. EBF requires good

knowledge. Education about EBF is an important factor that influences mother's knowledge (10). The average value of knowledge increases after health education(11). Knowledge has a significant effect on the practice of EBF (12). Education accompanied by antenatal and postnatal support increases six-month maternal breastfeeding (13). Therefore, all health practitioners including nurses, midwives, pediatricians, and lay counselors should actively stimulate and train breastfeeding mothers so that they can carry out correct breastfeeding practices. However, how BE is implemented effectively must be considered specially to shape the expected behavior. An effective BE must pay attention to the scope of health education including the targets, the places, the levels of service, and the appropriate methods or media (14). Various media have been developed to convey health education messages. The variety of media can influence and improve a person's knowledge, attitudes, and actions so that they behave in a healthy life. BE can be in the form of audio-visual knowledge (10), visual or printed materials, and video (15). Besides media, health education methods are expected to increase motivation and activity. The lecturing method is very useful but often boring (14).

The timing of giving BE is also an important point to consider. BE is highly required for postpartum mothers while they are still in the hospital (16). However, BE and support for mothers is more effective if it starts from the antenatal period and continues in the postnatal

period (13). Moreover, comprehensive information about breastfeeding is necessary. Not only myths about breastfeeding, problems experienced by mothers such as babies who do not want to breastfeed or how to provide correct breastfeeding techniques must be delivered (8). Unfortunately, BE has not been administered thoroughly. Sometimes mothers who have difficulties in breastfeeding will receive wrong information from other people. On the other hand, good family support is very important for mothers to exclusively breastfeed (17).

There are few reviews about breastfeeding education. The previous review emphasized more on methods, media, and effects of breastfeeding education (18,19). Ugurlu and Yavan (20) did not explain the targets, materials, and timing of breastfeeding education. In this review, breastfeeding education covers targets, materials, methods, media, officers and places, time, and effects of breastfeeding education. This review is a complement to the previous review and concern on breastfeeding education more comprehensively. This scoping review aimed to review the evidence related to BE in postpartum mothers.

METHODOLOGY

The scoping review process consists of 5 stages (Arksey and O'Malley): identifying review questions, identifying of relevant studies, selecting the studies, charting data, and compiling, summarizing, and reporting results (21). The question of this review is "how was the implementation of effective breastfeeding education for postpartum mothers?". To develop a review focus and search strategy, the researchers used the Population Context and Content (PCC) Framework. P: Postpartum Women; C: Breastfeeding education; C: Breastfeeding method, Breastfeeding media, Breastfeeding content, and Breastfeeding model.

The identification of relevant studies was based on inclusion and exclusion criteria. The inclusion criteria were articles written in English, were original articles/peer-reviewed articles published in Journals, and the respondents were related to postpartum/postnatal mothers. The exclusion criteria were opinion articles, commentaries, reports, review articles, book reviews, on-going research, unclear method (population, sampel, study design), and outcome. The evidence search databases were PubMed, Science Direct, and Wiley Online Library using the following keywords: 1. Postpartum* OR Postnatal* 2. Breastfeeding education*. Add the Boolean operators OR and AND after that.

RESULTS

The search had resulted in 300 relevant articles from all databases (Pubmed 38, Science Direct 135, Wiley Online Library 127). After screening the title, abstract, and full text-reading, nine articles were obtained that met

the criteria. The article selection process is transparently described in Figure 1 (22).

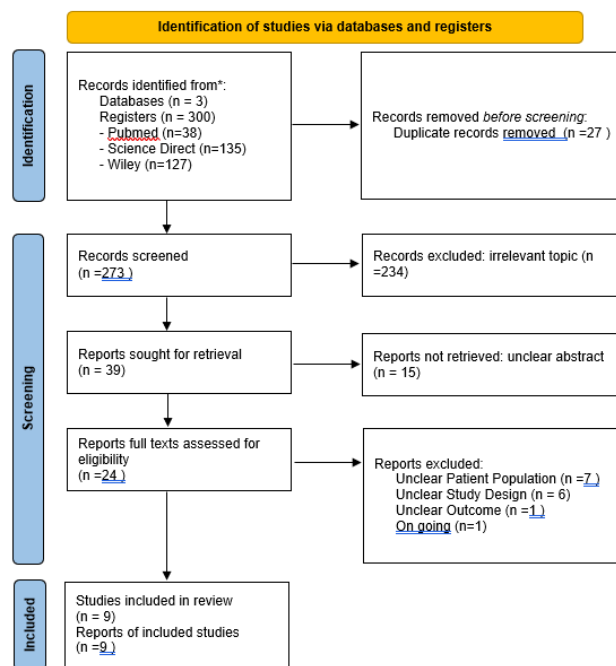


Figure 1: PRISMA flow diagram for selecting the studies

The results a critical appraisal using Hawker tools obtained 8 (88.89%) Grade A (Good) articles and 1 (11.11%) Grade B (Fair) article. Charting data from all selected articles were recorded Table I, and the last step was compiling, summarizing and reporting the results.

Of the nine articles reviewed, all of them used quantitative research methods: randomized control trial (n=4), quasi-experimental (n=2), cross-sectional (n=1), cohort study (n=1), and descriptive observational study (n=1). Seven articles were from developing countries (23–29) and two articles were from developed countries (30,31).

Mapping data from article reviews is organized into seven themes as follows:

Breastfeeding Education Targets

Eight of the nine articles informed about the targets of BE who are divided into three categories: pregnant women (24,26,28–31), pregnant women with fathers (27), and pregnant women with grandmothers (23).

Pregnant women are the main targets of BE because they will breastfeed their babies (24,26,28–31). However, breastfeeding mothers require a lot of support from both their spouse and other family members such as grandmothers. BE that promotes paternal involvement is essential in supporting women to implement early breastfeeding initiation and EBF practices. Interventions involving fathers in breastfeeding promotion have given positive results for early breastfeeding initiation and EBF. In addition to being personally involved at home

Table I: Data Charting

No	Author/ Year/ Country	Title	Type of Research/ Method	Result
1.	Gharaei et al., 2020 Teheran, Iran (23)	The effect of breastfeeding education with grandmothers' attendance on breastfeeding self-efficacy and infant feeding pattern in Iranian primiparous women	Quantitative Study (quasi-experimental two groups). Sample: 64 primiparous women. BSES-SF and telephone contact. Independent sample t-test, Chi-square and Fisher's test.	Primiparous mothers who attended BE with the presence of their maternal grandmother had a higher BSE and EBF at the time of hospital until 8 weeks after delivery.
2.	Tan et al., 2020 Penang, Malaysia (24)	Postpartum women's perception of antenatal breastfeeding education: a descriptive survey	Quantitative Study (observational descriptive) Sample: 421 primiparous and multiparous postpartum mothers Questionnaire and verbatim. Proportion, chi square/fisher exact test, univariate logistic regression test and multivariate logistic regression test.	Almost all women perceived the information received about the benefits of breastfeeding, baby's position during breastfeeding, and how to recognize right attachment. They wanted to be informed about techniques for expressing and storing breast milk and overcoming a low milk supply. ANBE had a significant effect on EBF.
3.	Zielińska et al., 2017 Polandia (25)	Breastfeeding Knowledge and Exclusive Breastfeeding of Infants In First Six Months Of Life	Quantitative study (cross-sectional) Sample: 446 mothers of babies less than 2 years old. Online questionnaire using the Computer-Assisted Web Interview (CAWI) method. Chi-square, U Mann-Whitney test and regression analysis.	Mother's knowledge of breastfeeding increased the likelihood of EBF significantly.
4.	Huang et al., 2019 China (26)	Individualized intervention to improve rates of exclusive breastfeeding	Quantitative Study (randomised controlled trial). Sample: intervention (148), control (145). Interventions: face-to-face individual Antenatal Breastfeeding Education (ANBE) and postnatal lactation support by a lactation consultant. Breastfeeding rating scale and breastfeeding knowledge scale. Chi-square test and analysis of variance.	EBF rates when hospital discharge and 4 months postpartum were higher in the intervention group.
5.	Bich et al., 2019 Vietnam (27)	Community-based father education intervention on breastfeeding practice—Results	Quantitative Study (quasi experimental study). Sample: fathers with pregnant wife, intervention (390), control (412). Intervention: fathers received breastfeeding education and counseling services at health facilities and home visits during antenatal, delivery, and post-delivery. Peer education and social exchange about breastfeeding in "fathers' club". Structured interviews and questionnaires. Multivariate logistic model, Cox regression.	Early breastfeeding initiation within 1 hour postpartum and the percentage of EBF were higher in the intervention group. Interventions targeting fathers in the antenatal and postnatal periods positively affected mothers' breastfeeding practices.
6.	Nabulsi et al., 2019 Beirut, Lebanon (28)	A multi-component intervention to support breastfeeding in Lebanon	Quantitative Study (randomized clinical trial) Sample: single pregnancy, experimental (174), control (188) Intervention: ANBE with peer and professional support in hospital and home (postpartum) settings. Infant Feeding Attitude Scale Questionnaire (IIFAS-A), Infant Feeding Intention Scale (IFI-A), Infant Breastfeeding Knowledge Questionnaire (BFK-A), Breastfeeding Behavior Questionnaire (BBQ-A). Post-hoc, multivariable, stepwise logistic regression test.	BE with peer and professional support increased the exclusivity (twice as likely) and knowledge of breastfeeding for six months. Participants who adhered to all three components were six times more likely to practice EBF for six months than those with standard care.
7.	Hanafi et al., 2014 Arab Saudi (29)	Impact of health education on knowledge of, attitude to and practice of breastfeeding among women attending primary health care centres in Almadinah Almunawwarah	Quantitative Studies (Cohort studies) Sample: 360 pregnant women, intervention and control groups. Interventions: Three sessions of health education (group and individual sessions), lecture method, posters, brochures, pamphlets, videos, demonstrations and role play. Questionnaire. Chi square, McNmar, logistic regression analysis.	There were significant differences between the two groups after health education, in aspects of knowledge, attitudes, and breastfeeding practices which perceived in early initiation of breastfeeding, hospitalization, giving colostrum, lunch and dinner, eating on demand and intention to continue breastfeeding.
8.	Chapman et al., 2013 New Haven, Connecticut (30)	Breastfeeding Education and Support Trial for Overweight and Obese Women	Quantitative Study (randomized trial) Samples: 206 pregnant women. Study group: Specialized Breastfeeding Peer Counseling (SBFPC) included 3 prenatal visits, daily in hospital support, 11 postnatal home visits. Interviews, review of medical records and monthly phone calls (6 months postpartum). Bivariate analysis and logistic regression.	The intervention group had a 3.76 greater chance of continuing breastfeeding and at least 50% of them breastfed and their babies' lower chance of hospitalization during the first 6 months after birth compared to the control. BSE was higher in the intervention group.
9.	Efrat et al., 2015 Los Angeles County (USA) (31)	The effect of lactation educators implementing a telephonebased intervention among low-income Hispanics	Quantitative Study (randomised trial) Samples: 298 Pregnant women. The intervention group received all the services of the control group plus a telephone-based breastfeeding intervention. Phone questionnaire. Fisher exact test a, Pearson, logistic regression. T-test, Wilcoxon/Mann-Whitney U test (not normally distributed).	There was a significant difference in the duration of BSE during the first week of the infant's life. The average duration of BSE was longer; it also provided a higher amount of breast milk in the intervention group.

and in healthcare facilities (hospitals, clinics, and health centers), fathers can also participate in social events that support breastfeeding and father groups that encourage continued involvement (27).

Gharaei et al (23) who involved grandmothers in BE sessions argued that one of the most supporting factors of BSE and EBF was support from the family especially fathers (spouse). In fact, some spouses had difficulty in taking time away from work and rarely attended antenatal education sessions. Therefore, maternal grandmothers (who were closely related) could be involved in BE activities. It was proven that BE with grandmothers' presence was efficient to increase BSE for primiparous women.

Breastfeeding Education Materials

Seven of the nine articles have reported on the material or information presented in Breastfeeding Education. The most information conveyed in BE was about the benefits and importance of breastfeeding, the position and the attachment of the baby (23,26,27,29,32), incorrect beliefs related to breastfeeding (23,27,29,31), the use of formula milk (23,27,29,30), exclusive breastfeeding (23,30,32), breastfeeding barriers, breast problems and management (23,26,31), how to express and store breast milk (30,32), breastfeeding initiation (31), how to increase the amount of breast milk and the use of breastfeeding drugs (23), and other information such as the effect of breastfeeding on contraception, signs of adequacy of breast milk, and signs of dehydration in babies (30).

The information provided can affect mothers' perception of BE. Almost all primiparous and multiparous women perceived that the information received in the ANBE was useful for 3 main reasons: the benefits of breastfeeding, the position of the baby, and how to recognize proper attachment while breastfeeding. Some mothers perceived that ANBE was useless because of some reasons such as outdated information, short duration, ineffective materials, and delivered in a language they did not fully understand. Some others stated that there were some topics that they wanted to share in the ANBE. The most frequently asked questions were about techniques for expressing and storing breast milk and dealing with low milk supply (32).

Breastfeeding Education Methods

Five of the nine articles that inform various BE methods including lectures/presentations (23), guidance/counseling (27,30), group discussions (26), and a combination of lectures, demonstrations, and roleplay (29). Individual ANBE with the counseling method and followed by routine postpartum lactation support effectively increased EBF rates from delivery to four months postpartum and changed breastfeeding behavior (26).

Chapman et al (30) also used guidance and counseling

for individual BE targets. The difference was that the counseling intervention was provided by SBFPC. As a result, SBFPC had no impact on EBF practice in overweight/ obese women but SBFPC increased breastfeeding intensity during 2 weeks postpartum and lower infant hospitalization rates in the first 6 months.

Research by Gharaei et al (23) mentioned that the target of BE was a small group and applied a group discussion method. Education was given twice: once during prenatal and once during the puerperium, before hospital discharge. The results were effective in increasing BSE. In Bich et al., research (27) the targets were small groups consisting of pregnant women and fathers (spouses) and used guidance/ counseling methods and group discussions. The intervention was performed repeatedly during the antenatal and postnatal period. During the intervention, fathers received counseling and information about breastfeeding at medical facilities as well as home visits held during the prenatal, delivery, and postpartum periods. At the "fathers' club," where it was able to hold group talks, peer education and social exchanges about breastfeeding were developed. The results indicated positive effect on early breastfeeding initiation and EBF levels.

Research by Hanafi et al (29) using individual and group targets chose lectures, demonstrations, and role play methods. The intervention was given in 3 sessions: at the beginning of the study, 2 weeks after the first session, and 4 weeks after the first session. Each session lasted for 30 minutes. The session included providing general knowledge about breastfeeding, its guidelines, and some efforts to change mothers' attitudes about breastfeeding. At the end of each session, the participants learned about proper positioning through demonstration and role modeling. Furthermore, they were also provided with information about false myths and practices which existed in the society. Costless discussions were held to answer questions and to correct misunderstandings. The results found significant differences in knowledge, attitudes, and practices of breastfeeding before and after health education.

Breastfeeding Education Media

There are six articles that discuss BE media. BE could employ a variety of media including print/ visual media such as pamphlets, booklets, and brochures (23); electronic media such as audio/ telephone; audio-visual/ video, presentation software; and internet/ websites (23,25,30,31). The media could also be combined such as between visual and audio-visual media (29) or between visual, audio, and audio visual media (26).

Intervention in the form of telephone-based breastfeeding education and support in the prenatal and postnatal period by lactation educators was considered cost-effective and quite effective strategy for low-income Hispanic women because it reduced barriers,

transportation costs, and child care costs (31).

According to Chapman et al (30), routine cares provided by hospital prenatal clinics, postpartum nurses, and lactation consultants, followed by individual and scheduled visits and telephone calls had no impact on EBF practice. However, it was associated with the increase in breastfeeding intensity and breastfeeding at 2 weeks postpartum and reduced infant hospitalization rates in the first 6 months. Web-based breastfeeding education through discussion forums was considered as the most effective way to boost breastfeeding outcomes and long-term exclusivity rates.

In contrast, Gharaei et al (23) used colorful pamphlets which were distributed to participants at the end of each session. At the postnatal session, the researchers reviewed prenatal education programs and presented healthy baby software created by the Ministry of Health and Medical Education. The researchers also emphasized practical education and assisted mothers to breastfeed their babies. Hanafi et al (29), used visual media (posters, brochures, pamphlets) and audio-visual media (videos) in group and individual sessions. Meanwhile, Huang et al (26) deployed visual, audio, and audio-visual media.

Health education media including audio-visual that had a significant effect on lactation management (33). Counseling using two-sided flipcharts was effective in increasing knowledge, behavior, and exclusive breastfeeding practices (34). Breastfeeding packages with booklet media had a significant effect on the success of early breastfeeding (35). The most effective way in increasing knowledge of breastfeeding mothers was using electronic leaflet media (36).

Breastfeeding Education Officers and Places

Of the nine articles reviewed, eight of them inform about the officers and places of breastfeeding education. Those who delivered BE were breastfeeding counselors or those who had training certificates (25,26,28,31), health workers such as midwives, doctors, nurses (25,27,29), and peers (23,25,30). BE could be implemented in the health facilities such as clinics, community health centers, hospitals (23,32,37), outdoors (25,28,31), and at home (26–28,30).

Adding more healthcare professionals and paraprofessionals with a basic understanding of breastfeeding was one way to enhance the EBF rate. A licensed or clinical health care professional (CLHCP) who were trained breastfeeding basic knowledge could train and support breastfeeding mothers. However, the using CLHCP might not be cost-effective (26).

Bich et al (27) made their choice of counselors from among district hospital midwives and communal health workers who offered both individual and group counseling. The chosen midwives received training on

the advantages of breastfeeding and EBF. They were also taught how to improve their abilities in both individual and large group counseling. Zielińska et al (25) explained that information related to breastfeeding were obtained from midwives and doctors, parent-press, lactation consultants, and self-study, but most of them obtained the information from specialized internet websites and internet unspecialized websites (29).

At two weeks postpartum, increased nursing intensity was linked to a special breastfeeding peer counseling intervention (SBFPC) that supported exclusive breastfeeding (EBF) among overweight/obese low-income women (30). Lactation educators or specialists could be trained to offer fundamental information and encourage nursing mothers, similar to breastfeeding counselors. Neither mothers nor CLHCP were prerequisites for lactation educators. Efrat et al (31) used research assistants who had earned an international certification for competent lactation consultants or undergraduate students who had finished one semester of lactation education courses and ten hours of post-course training (26). Health education could also be carried out at community health centers. ANBE, peer support, and professional lactation support were provided in health facilities, client's home, and outdoors (28).

Breastfeeding Education Time

There are seven studies described time of breastfeeding education, and all of which are carried out continuously from the antenatal period to the postnatal period (23,26–31). The Canadian Task Force for Preventive Health Care (CTFPHC) and the United States Preventive Services Task Force (USPSTF) recommended a combination of prenatal and postpartum lactation support to increase the initiation and duration of breastfeeding.

Information and support are essential for successful breastfeeding. Support may be provided by a trained health care professional, peer counselors or lay counselors from delivery to the puerperium or longer. ANBE, peer support, and professional lactation support in hospital delivery and home visit arrangements for six months was effective in improving knowledge, attitudes, and behaviors of breastfeeding mothers at six months (28). After discharge, contact can be in the form of face-to-face meeting, via telephone, or using teleconferences, since many mothers are turning to online sources for obtaining information and support. Every month they asked for details of the breastfeeding situation and provided follow-up telephone guidance after hospital discharge (26).

The presence of grandmothers in prenatal and postnatal education is also important. They may help their daughters after giving birth at the hospital. After discharge or 10 days after delivery, the researchers called the mothers to determine whether the grandmothers continued the treatment (23).

Bich et al (27) offered continuous interventions in the form of group health education and counseling, individual counseling, and public social activities during the prenatal and postnatal period. Monthly 30- to 45-minute group education and counseling sessions were given. Individual counseling was carried out at the time of delivery at the commune hospital or community health center and during four home visits (last trimester, first week, 6th week, 3.5 months postpartum).

Breastfeeding Education Effects

All reviewed articles reported the effect of BE on EBF, the majority of the articles reported the effect on early breastfeeding initiation and duration of breastfeeding while some others reported the effect on mother's knowledge and attitudes, breastfeeding problems, and other influences such as baby's length of hospitalization.

BE was proven to have a significant effect on EBF (24,26) even after adjusting for confounders. BE involving fathers in the antenatal and postnatal periods (27), BE with peer support and professional breastfeeding (28) positively affected EBF practice at six months after birth. BE over the phone is a practical way for low-income Hispanic women to increase the amount and quality of their breastfeeding (31). Gharaei et al (23) also reported that BE with the presence of maternal grandmother increased the percentage of infant feeding patterns or EBF at the time of hospital discharge until 8 weeks after delivery although this difference was not significant.

However, Chapman et al (30) reported that BE with the SBFPC counseling intervention promoting EBF among overweight low-income women had no impact on EBF or continuation of breastfeeding at six months postpartum. The intervention group had a 3.76 larger likelihood of continuing nursing only at 2 weeks postpartum, and at least 50% of them nursed their infants. In addition, BE has been proven to have an effect on early breastfeeding initiation. Bich et al (27) reported a higher proportion of mothers starting breastfeeding within one hour postnatally in the group who received BE with the involvement of fathers in the antenatal and postnatal periods. There was a significant difference (29). In contrast, Efrat et al (31) mentioned that there was no difference between the intervention and the control group in breastfeeding initiation rates among low-income Hispanic women.

BE also affects BSE rates. Gharaei et al (23) proved that BE with the presence of maternal grandmothers significantly increased BSE in primiparas. BE with SBFPC that promotes EBF in overweight/ obese low-income pregnant women had an effect on BSE (30). BE has also been shown to affect breastfeeding knowledge, attitudes, and behavior. Breastfeeding knowledge in the experimental group that was given BE with peer support and breastfeeding professionals increased significantly

at six months. However, no changes were observed in breastfeeding attitudes or behavior (28). Hanafi et al (29) reported different things. They reported that there were significant differences for knowledge, attitudes, and practices in the intervention group before and after health education and between the two groups after health education.

Mothers' better knowledge about breastfeeding significantly increased the likelihood of EBF (25). The study of Huang et al (26) found the opposite result. They claimed that there was no difference between the two groups' increasing understanding of breastfeeding (ANBE and postnatal lactation support compared to individual interventions with routine care). Other effects of BE are maternal satisfaction with breastfeeding, reduced breastfeeding problems such as cracked nipples (26) and a much lower chance of hospitalization during the first 6 months after birth (30).

DISCUSSION

Targets, materials, methods, officers and places, and time of implementation affect the effectiveness of breastfeeding education. This provides positive effect on knowledge, attitude, and behavior of breastfeeding including early initiation of breastfeeding and exclusive breastfeeding.

BE targets are pregnant women, fathers, and grandmothers. Pregnant women are the main targets of BE because they will breastfeed their babies. They need full support from their spouses (fathers) or other family members such as grandmothers so that they can perform exclusive breastfeeding and continue to breastfeed. Therefore, BE needs fathers and grandmothers' participation so that they could provide a great support. Education and/or breastfeeding support improved EBF rates and reduced non-breastfeeding rates (37) and thus BE required the involvement of family members. Mahesh et al (38) mentioned that fathers' role in breastfeeding promotion had yielded favorable results, such as the father's support and positive attitude increased the duration of breastfeeding (39). However, many husbands were considered unimportant in postnatal support and were excluded from ANBE (40). Grandmothers had the capacity to affect EBF (41). The support of biological mothers, mothers-in-law, and husbands also affected the practice of EBF (17).

Complete breastfeeding education materials or information, various methods, and the use of appropriate media also greatly determine the effectiveness of breastfeeding education and its impact on breastfeeding practices. This is in accordance with the results of previous studies that comprehensive information about breastfeeding was needed (8) to equip mothers to face the breastfeeding process, prevent possible problems, and overcome future problems. If BE was not given

thoroughly, mothers might fall for fake information from other people (24).

The success of education and health promotion is highly affected by the method. The effectiveness of a method depends on the size of the target. Some appropriate individual approach methods are guidance, counseling, and interview. Large groups use lectures and seminars while small groups apply group discussion, role play, brainstorming, snowballing, buzz groups, or game simulation. If the target is public, the methods used are public speaking, speeches in the media, and billboards (14).

Methods of breastfeeding education that influence breastfeeding practices include mentoring/counseling, mentoring/counseling and group discussion, and a combination of lectures, demonstrations, role-plays followed by group discussion. The group discussion method alone did not make a big difference. This is consistent with findings from other studies that counseling methods can improve knowledge, behavior, and exclusive breastfeeding practices (34), however, a combination of individual and group counseling appears to be superior to group counselling only (37).

Media make BE be more attractive and understandable so that the targets can adopt the positive behavior. The diversity of breastfeeding education media including print/visual media, electronic, internet/ websites, or the use of a combination of media, i.e., visual and audiovisual or a combination of visual, audio, and audiovisual influence the effectiveness of breastfeeding education. This is supported by the results of other studies that health education media including audio-visual had a significant effect on knowledge, and attitudes towards exclusive breastfeeding (42), as well as lactation management (33). Counseling using two-sided flipcharts was effective in increasing knowledge, behavior, and exclusive breastfeeding practices (34). Breastfeeding packages with booklet media had a significant effect on the success of early breastfeeding (35). The most effective way in increasing knowledge of breastfeeding mothers was using electronic leaflet media (36). Antenatal breastfeeding education with booklets, videos, and lactation consultation have better significance toward three months exclusive breastfeeding (19).

The impact of breastfeeding education on the initiation and duration of breastfeeding depends on the professional who providing BE and conducive birth environment to breastfeeding (28). Based on the review results, BE was delivered by certified lactation consultants or other medical professionals such as doctors, midwives, and nurses who have participated in the training. However, breastfeeding advice from trained peers is also a promising approach to promote exclusive breastfeeding. The results showed that women exposed to peer counselors were more likely to be satisfied

with breastfeeding practice at the time of delivery and more likely to breastfeed (43). It also increased the Breastfeeding initiation (18), duration and exclusivity of breastfeeding (44).

The review's findings also demonstrate that breastfeeding education can be provided in hospitals, outside of the patient's room, and at their residence. Implementing breastfeeding education in health institutions and continuing it at home or elsewhere, from the pregnancy through the postnatal period is more beneficial. In line with the research of Sinha et al (45), interventions provided in a combination setting involving the health system, home, family and the community environment could simultaneously increase breastfeeding outcomes. According to Meedyia et al (13), BE and support for moms were more successful if they were started during pregnancy and sustained throughout labor and breastfeeding.

BE had a significant impact on early breastfeeding initiation and duration of breastfeeding, but few reported effects on maternal knowledge or attitudes or other effects. This is consistent with the results of a review by Lumbiganon et al (18) which stated that breastfeeding education using multiple methods or a single method could increase breastfeeding initiation and exclusive breastfeeding. The average knowledge and attitude scores increased immediately after and three months after being given a BE session (46).

The results of this review will have implications for both the regulation and implementation of breastfeeding programs. Take a holistic view of the need for breastfeeding education, as this rule is particularly relevant to officers provided by certified lactation consultants, health care practitioners, or trained peer counselors while the implications include preparing appropriate goals, materials, methods, media, locations and timings. The targets of BE are not only pregnant or lactating women, but also family members such as fathers and grandmothers. All breastfeeding materials are provided using appropriate methods and media. BE can be administered during pregnancy and until postpartum in an appropriate place.

CONCLUSION

The implementation of comprehensive and sustainable BE starting from the antenatal to postnatal period accompanied by peer or professional support has been proven to have a maximum effect or influence especially on exclusive breastfeeding. Secondary effects are early initiation of breastfeeding, breastfeeding self-efficacy, duration of breastfeeding, mother's knowledge and attitudes, breastfeeding problems, and other influences such as the length of hospitalization of the babies. An effective BE must pay attention to the target, important information that must be conveyed, the methods and

media used, who provides education and the place education.

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