

# Breastfeeding education training program for healthcare professionals: A narrative review

Hanifatur Rosyidah<sup>a,1,\*</sup>, Sunah<sup>a,2</sup>, Sabita Khadka<sup>b,3</sup>

<sup>a</sup> Universitas Islam Sultan Agung, Semarang, Jl. Kaligawe Raya Km 4, Semarang, 50112, Indonesia

<sup>b</sup> Karnali Academy of Health Sciences, Military Sadak, Chandannath 21200, Nepal

<sup>1</sup>hanifa.r@unisula.ac.id\*; <sup>2</sup>ssunah838@gmail.com; <sup>3</sup>sabitakhadka541@gmail.com

\* Corresponding author



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## ABSTRAK

**Abstract:** Lack of knowledge and skills regarding breastfeeding education leads mothers to prefer formula milk over exclusive breastfeeding. Breastfeeding education provided by health professional is needed to support mothers to breastfeed their baby exclusively. **Methodology:** The methodology employed in this study was a narrative review where the researcher critically examines the ideas presented in several studies regarding breastfeeding education training program for health workers. Articles were selected using inclusion criteria: original research, published in English and Indonesian languages, within the last 5 years (2018-2023). A total of 50 articles were found. Ten articles meeting the inclusion criteria were included in the author's review. **Conclusion:** Breastfeeding education training programs have an impact on the success of breastfeeding mothers. The more healthcare professionals, especially midwives, understand breastfeeding education, the more breastfeeding mothers will be aware of the importance of breastfeeding for their children.

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## 1. Introduction

The breastfeeding period is a crucial and precious time for both a mother and her baby. It is during this period that the emotional bond between mother and child is formed, with a sufficiently long duration (Mufdlilah, Johan and Fitriani, 2018). Breast milk for infants is the ideal nutrition for growth and development in the first years of life because it provides various bioactive components beneficial for the baby's health, such as protection against various infectious diseases and long-term benefits (Mastorakou *et al.*, 2019).

The success of exclusive breastfeeding is not always guaranteed, as there are several factors influencing the failure of exclusive breastfeeding, including knowledge, employment status, education, psychological factors, economic factors, family support, self-confidence, infant's condition, mother's condition, delayed initiation of breastfeeding, parity, age, and socio-cultural factors (Kajdy *et al.*, 2020). Furthermore, healthcare professionals can provide education to breastfeeding mothers to encourage them to implement exclusive breastfeeding for their infants (Gresh *et al.*, 2019).

According to Abdulahi et al (Abdulahi M, Fretheim A, Argaw A, 2021) breastfeeding education has an impact on mothers who are newly delivered and have never had children before, where this education aims to make breastfeeding mothers aware of the importance of exclusive breastfeeding for their infants. Meanwhile, based on Giana's research (Janmohamed *et al.*, 2020) health education on

breastfeeding should also be supported by healthcare professionals as it greatly influences breastfeeding practices in infants. Therefore, the role of healthcare professionals is crucial in providing appropriate information, education, and counseling to breastfeeding mothers so that they can understand and implement the importance of breastfeeding for their infants and provide exclusive breastfeeding.

Supporting the achievement of exclusive breastfeeding must be done through education provided by healthcare professionals. Therefore, healthcare providers, especially midwives need to have an adequate knowledge and skills (Wang, Shang and Chow, 2023). There is a need to understand on how to increase the competency of midwives on this regard. This study reviewed several research on breastfeeding education training for health workers to identify their interventions and outcomes.

## 2. Methods

This research is narrative review method by using research questions based on the research objectives to be carried out. The research question was "What are the breastfeeding education training programs that lead to better breastfeeding outcomes?"

Meanwhile, for the search design and strategy to obtain a comprehensive narrative review, it is important to use all terms relevant to the research objectives included in the search. In addition, the authors included relevant synonyms and relevant terms for education training program, breastfeeding, and health professionals. The first category includes the following terms as synonyms for breastfeeding: "infant feeding, lactation, baby feeding, exclusive breastfeeding". The second category focuses on training program and includes the terms: "education and course." The third category is related to health professional, includes "health workers, nurse, midwife, medical doctor" Keywords and synonyms are connected to logical OR and AND connectors. Author used the PubMed database, while for collecting and managing article search results using Mendeley.

Article selection is done by reading the title, abstract, and full text of the article. The inclusion criteria for the selected articles were: 1) The research subjects were health professionals; 2) research using Randomized Control Trial (RCT) design; 3) Publications for the period 2018-2024 and presented in English; 4) The article is original research.

We found 50 studies based on the keyword search. Subsequently, articles were selected based on the relevance of their titles and abstracts to the aim of the review, which focuses on breastfeeding education training programs for healthcare professionals. Finally, 10 articles meeting the inclusion criteria were obtained through analysis.

## 3. Findings

### 3.1 Characteristics of the study based on training methods and duration

From the 10 articles found, there were 5 programs used to assess the knowledge, training, and support of healthcare providers for breastfeeding education for mothers, namely: Breastfeeding education program with smartphones, Breastfeeding education program with counseling, Breastfeeding education program with E-Health application, Breastfeeding education program with Smart BuSui application, and Breastfeeding education program with video.

#### a) *Breastfeeding Education Program with Smartphone*

The Breastfeeding Education Program using smartphones is a program that utilizes mobile phones by healthcare providers to deliver breastfeeding education that assesses knowledge, attitudes, and practices. Several training methods have been developed for breastfeeding education training for healthcare providers to promote healthy living, access to health information, especially regarding breastfeeding, and monitoring of chronic diseases (Jebraeily, Fazlollahi and Rahimi, 2017). This smartphone-based program is used by midwives developed for breastfeeding mothers in Iran and has yielded satisfactory results, wherein mothers have a better understanding of the education provided by healthcare providers and can apply it to their daily lives, benefiting breastfeeding mothers. It is a

unique program developed through education oriented towards topics that facilitate the discovery of problem-solving solutions in the breastfeeding process, thereby finding ways to improve breastfeeding coverage in Iran and potentially other countries, particularly Indonesia (Seyyedi *et al.*, 2021).

*b) Breastfeeding Education Program with Counseling*

The advancement of time is continuously increasing, providing various methods to enhance the coverage of breastfeeding mothers. One of the ways is through breastfeeding education programs conducted via counseling. In this article, there are 2 papers consisting of 1 international paper and 1 Indonesian paper aimed at enhancing the understanding of healthcare providers in delivering educational content through counseling methods. The first article is from Indonesia, discussing the importance of support from healthcare providers for breastfeeding education. One way to anticipate less conducive conditions in breastfeeding issues is through health promotion, providing materials, and training. Training can develop not only knowledge and understanding but also skills and motivation (Journal *et al.*, 2022). The second article is from Africa, where counseling provided training covering topics such as immediate breastfeeding initiation after delivery, breastfeeding positioning and latch, exclusive breastfeeding, breastfeeding frequency and duration, breast milk expression, storage age, handling and provision of expressed breast milk, and lactation management. The counseling was provided to healthcare providers who visited breastfeeding mothers' homes to deliver this content and proved effective in enhancing breastfeeding practices (Kimani-Murage *et al.*, 2017).

*c) Breastfeeding Education Program with E-Health Application*

Breastfeeding education through this program was developed by several research articles, including 2 articles from abroad. The first article is from Canada, where smartphones are widely used by the population, especially in various activities. One of the developments in smartphones is applications that facilitate health, especially for breastfeeding mothers involving healthcare professionals. Afterwards, it was developed for women working in a team with parents to achieve breastfeeding goals, proving to improve breastfeeding outcomes. E-health resources have been found to be easily accessible and suitable for providing breastfeeding education, used in Canada and can be further developed to increase breastfeeding rates in a country (Abbass-dick *et al.*, 2020). Meanwhile, the second article also discusses E-Health applications but in a different country, India. This application was tested on healthcare professionals, especially midwives, in providing breastfeeding education and has been tested for 6 months, proving to increase mothers' desire to breastfeed. This application covers topics such as proper breastfeeding techniques, breast milk storage, and correct breastfeeding techniques, so breastfeeding mothers do not need to go to health facilities to learn about these topics; they can simply use their smartphones to address the issues they are experiencing (Suryavanshi *et al.*, 2020).

*d) Breastfeeding Education Program with Smart BuSui Application*

Several methods exist to enhance healthcare professionals' abilities in breastfeeding education, one of which is the Smart BuSui application. One article found in the systematic review search describes this application, which facilitates healthcare professionals in providing education. In this application, the content is somewhat similar to the E-Health application, but while E-Health is used internationally, Smart BuSui is only used in Indonesia. Moreover, what makes this application recommended for healthcare professionals, especially nurses, in education provision, is that the Smart BuSui app includes information and education about the importance of exclusive breastfeeding, breast milk composition, benefits of exclusive breastfeeding, differences between breast milk and formula, signs of sufficient breast milk in babies, impacts if babies do not receive exclusive breastfeeding, correct breastfeeding positions, and breastfeeding steps. Additionally, there are videos related to breastfeeding and nursing, such as oxytocin massage videos that can be viewed, learned, and practiced by every member of the breastfeeding mother's family as a form of family support for mothers striving to provide exclusive breastfeeding to their babies. Furthermore, there are also 20 cooking menus as an effort to increase and facilitate breastfeeding. These are some advantages of the media used for breastfeeding education for healthcare professionals that can be implemented and beneficial for breastfeeding mothers (Hodnett *et al.*, 2013; Er *et al.*, 2016).

### e) Breastfeeding education program with video

The advancement of technology has led to various media supporting healthcare professionals in providing education, especially through video. Among the 10 articles, two discuss breastfeeding education using videos. The first article from the UK explains various methods and media used in education, such as leaflets, flipcharts, and posters, highlighting that only effective videos can be used by nurses in breastfeeding education and in educating practitioners in this skill. Videos are used to train knowledge and confidence in practice. To date, no research has used short videos to educate practitioners in this skill and test their knowledge of techniques to be observed as correct techniques by mothers before and after watching videos specifically designed to educate practitioners. However, in this article, researchers use short videos to ensure practitioners understand education delivery (Wallace *et al.*, 2018; Wang, Shang and Chow, 2023). Meanwhile, the second article conducted research for 6 months and applied it to healthcare professionals, especially midwives, developed for breastfeeding mothers who work. Many breastfeeding mothers cannot attend breastfeeding education seminars or counseling due to busy schedules and inability to spare time. However, with this educational program, breastfeeding mothers, especially new mothers, feel assisted and can learn the correct breastfeeding techniques, even while at work, as explained by midwives who have provided breastfeeding education through videos (Id *et al.*, 2021).

### 3.2 Characteristics of Studies by Country

Based on the articles, the findings come from various countries. 2 articles originate from Indonesia, 1 from India, 1 from Japan, 1 from China, 2 from Iran, 2 from Africa, and 1 from Canada

### 3.3 Characteristics Based on Research Design

Based on the characteristics of the research designs, it was found that 2 articles were qualitative research designs, while the other 8 articles were quantitative research designs.

### 3.4 Characteristics Based on Article Quality

Based on the critical appraisal conducted on the 10 articles, 7 articles received a quality rating of (A), while 3 articles received a quality rating of (B). The determination of Rating A and B is based on whether the article aligns with the research theme and sample expectations and whether the research method is well-explained. Articles with a Rating B lack clarity regarding exclusion criteria for the study sample, the researcher's role during data collection and its relationship with participants, and incomplete explanation of data collection methods.

### 3.5 Based on Article Theme

In this study, the mapping of article themes was conducted, while the analysis was performed after analyzing the data through data extraction and assessing the quality of research articles. The results of the research theme analysis are as follows:

**Table 1.** Analysis and Mapping of Article Themes

No	Theme	Subtheme	Article
1	Training for healthcare providers is crucial for breastfeeding mothers	Knowledge	A1, A2, A3, A5, A10
2	The benefits of breastfeeding education training for healthcare providers	Development	A3, A5, A6, A7, A8, A9
3	The important role of healthcare providers in breastfeeding education	Support	A3, A5, A6, A7

### 3.6 Based on the Methods Compared

This article compares the effectiveness of different training media used for breastfeeding education among healthcare providers. While one study focuses on the impact of breastfeeding education through video training, another study suggests that counseling-based training for healthcare providers can increase mothers' interest in breastfeeding (Shafaei, Mirghafourvand and Havizari, 2020).

### 3.7 Based on Measurement Method

The articles used as references for the systematic review on breastfeeding education training programs for healthcare providers were assessed using various methods, including SPSS versions 14, 16, 22, and 28, covariate tests, as well as the Shapiro-Wilk and Kolmogorov-Smirnov tests. These measurements aim to ensure the accuracy and accountability of the conducted research and to provide a foundation for future use.

## 4. Discussion

Based on the literature search results, three themes were identified, namely training for healthcare professionals is crucial for breastfeeding mothers, benefits of breastfeeding education training for health workers, the important role of health workers in breastfeeding education

Training for healthcare professionals regarding education for breastfeeding mothers is deemed essential. Many healthcare providers lack the knowledge of effectively delivering education that can be comprehended and applied in daily life, especially by breastfeeding mothers. Various methods have been employed for education delivery, such as leaflets, flyers, and flip charts; however, these methods may not sufficiently convey the importance of Exclusive Breastfeeding to mothers. One effective approach is education through applications designed for healthcare professionals, which proves beneficial for mothers (Gresh *et al.*, 2019; World Health Organization Regional Office for the Eastern Mediterranean, 2022).

Training in breastfeeding education using smartphones is an effective approach, and the implementation of the BuSui Cerdas application represents an innovative Android-based solution aimed at enhancing breastfeeding mothers' knowledge of exclusive breastfeeding. The BuSui Cerdas application includes information and education on the importance of exclusive breastfeeding, breast milk composition, benefits of exclusive breastfeeding, differences between breast milk and formula, signs of adequate breastfeeding, consequences of not receiving exclusive breastfeeding, correct breastfeeding positions, and steps for proper breastfeeding. Additionally, the application features videos related to breastfeeding and breast milk, such as oxytocin massage videos, which can be viewed, learned, and practiced by every member of the breastfeeding mother's family as a form of support for mothers striving to provide exclusive breastfeeding to their babies (Er *et al.*, 2016; Janmohamed *et al.*, 2020; Reverri *et al.*, 2022).

Healthcare professionals play a crucial role in the success of breastfeeding education, as relying solely on a mother's knowledge may not suffice to increase breastfeeding rates in a given country. The purpose of conducting training for healthcare professionals is to manage and evaluate the effectiveness of educational programs designed to enhance the self-efficacy of nurses and midwives in providing breastfeeding support and improve their social skills to maintain positive relationships with mothers. Several studies have shown that breastfeeding education training programs for healthcare workers are beneficial for both breastfeeding mothers and healthcare professionals, enabling them to better understand and support each other for the success of breastfeeding initiatives in a country (Tewabe *et al.*, 2016; Gresh *et al.*, 2019).

The limitations of this study is in terms of journal search and sample characteristics that are not yet fully aligned can still be considered for scoping review, which should be refined thoroughly for acceptance by readers.

## 5. Conclusion

The review of breastfeeding education training programs for healthcare providers yielded three themes: the importance of training for healthcare providers in breastfeeding for breastfeeding mothers, the benefits of breastfeeding education training for healthcare providers, and the crucial role of healthcare providers in breastfeeding education. The significance of breastfeeding knowledge for mothers is supported by training programs conducted by healthcare providers to further enhance breastfeeding coverage, proving beneficial for both mothers and infants in the future.

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