

## Conference Paper

# Impact of Baby-Friendly Hospital Initiative for Improving Exclusive Breastfeeding: A Systemic Review of Ten Steps to Successful Breastfeeding

Nuraini Fauziah and Pandu Riono

Faculty of Public Health, University of Indonesia, Depok, West Java, Indonesia

**ORCID:**Nuraini Fauziah: <https://orcid.org/0000-0002-6790-8895>**Abstract**

The Baby-Friendly Hospital Initiative (BFHI) launched by WHO / UNICEF has proven to be a powerful tool for raising breastfeeding rates. Breastfeeding is a protective factor for health, and breastfeeding promotion continues to be an important measure to improve child and maternal health in both developed and developing countries. A systematic review of the effect of BFHI worldwide found that the BFHI was the most effective intervention for improving breastfeeding rates at health system level and adherence to the Ten Steps positively affected short-, medium-, and long-term breastfeeding outcomes. This study therefore examines the impact of baby-friendly hospital initiatives for improving exclusive breastfeeding. This study used systematic review which performed according to Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guidelines. The published literature was identified using relevant keywords. The initial screening was conducted by year of publication (8 years) and free full text, then reading the titles and abstracts. Nine articles were included in this review. The studies showed there were positive impacts in enhancement of exclusive breastfeeding after applied baby-friendly hospital initiative program. Rates of exclusive breastfeeding were demonstrably improved by applying BFHI with Ten Steps to Successful Breastfeeding at health care facilities to all mothers from pregnancy until postpartum.

**Keywords:** Baby-Friendly Hospital Initiative, breastfeeding, exclusive breastfeeding, Ten Steps, Ten Steps to Successful Breastfeeding

Corresponding Author:

Nuraini Fauziah

nur.ainifauziah02@gmail.com

Published: 15 March 2021

Publishing services provided by  
Knowledge E

© Nuraini Fauziah and Pandu

Riono. This article is distributed

under the terms of the [Creative](#)[Commons Attribution License](#),

which permits unrestricted use

and redistribution provided that

the original author and source

are credited.

Selection and Peer-review under

the responsibility of the IVCN

Conference Committee.

## 1. Introduction

Each mothers produces breast milk as a natural food which is can be consumed by the baby. Exclusive breastfeeding are a good and correct suggestion was promoted to build a qualified human resources. Breast milk is the only one food which has the perfect nutrient contents to ensure the growth of infants in 0-6 months after birth.

**OPEN ACCESS**

In addition, breastfeeding process was done correctly, then the baby will get a good physical, emotional, and spiritual development during their life [1].

Exclusive breastfeeding for infants aged 0-6 months globally was reported that the percentage is under 40%. From BFHI practice at health care facilities, in industrialized countries, there was 9% of facilities have been designated as a “Baby–Friendly Hospital” (BFH) at least once. In a global context, this rate is low, but there are large variations in the proportion of BFHs across industrialized countries [2]. For example, in Sweden and The Netherlands, most hospitals have been designated as a BFH (97% and 83%, respectively), and in the United States and Canada, BFH designation rates are much lower (4% and 12%, respectively) [2]. In Switzerland, the BFHI has been rather successful, with 55% of hospitals having ever been designated a BFH in 2005 [2].

Before the year 2001, WHO advised to provide exclusive breastfeeding for 4-6 months. However, in 2001, WHO revised its exclusive breastfeeding recommendation to 6 months after the review of the article, systematic research and consultation with experts. The results showed that infants who get exclusively breastfeeding for 6 months were less likely to have gastrointestinal disorders, and fewer problems with their growth [3].

Since 1991, the Baby-Friendly Hospital Initiative (BFHI) has been a key component of the WHO/UNICEF strategy to support optimal infant feeding. This global effort has had 156 participating countries, with an estimated 21,328 hospitals or birth centers ever receiving the “Baby-Friendly Hospital Initiative” designation as of 2010. BFHI has fostered the development of several tools and materials to support implementation of “Ten Steps to Successful Breastfeeding,”

According to recent meta-analyses, the BFHI was the most effective intervention for improving breastfeeding rates at health system level [4] and adherence to the BFHI Ten Steps to support successful breastfeeding had a positive impact on breastfeeding outcomes [5]. A systematic review of the effect of BFHI worldwide found that adherence to the Ten Steps positively affected short-, medium-, and long-term breastfeeding outcomes, with the likelihood of improved outcomes, including initiation, exclusivity, and duration, increasing with the number of steps implemented.

Step 1 is for facilities to have a written breastfeeding policy and to inform all healthcare staff about it. It will show that hospital interventions can benefit breastfeeding, particularly among first-time mothers. Step 2 is train all healthcare staff in skills necessary to implement this policy, that is referring to the written breastfeeding policy of the facility providing maternity services and infant care, as noted in Step 1. Step 3 is giving explanation of benefits and management of breastfeeding in pregnant women. Step 4

is interpreted as placing baby's skin-to-skin with mother immediately after birth and for at least 1 hour. It concluded that skin-to-skin contact immediately after birth improved breastfeeding outcomes along with other infant outcomes and had no negative effects. Step 5 is giving instruction to patients how to do correct breastfeeding and keep breastfeeding continuously. Step 6 is not giving newborns any food or fluids other than breast milk, unless medically indicated. Step 7 states that mothers and infants should "room in," that is, remain together for 24 hours a day. It will show that there was little evidence to support rooming-in over mother-infant separation in terms of effects on breastfeeding duration. Step 8 is supporting the mother to give breast milk according to baby's needed (on-demand). Step 9 states that no artificial teats or pacifiers should be given to breastfeeding infants. It show controlled trials involving pacifier use and breastfeeding outcomes concluded that pacifier use afterbirth or after lactation was established among healthy, term breastfeeding infants did not affect exclusive and partial breastfeeding up to 4 months. Step 10 is supporting a breastfeeding support group and encouraging mothers to keep in touch with the groups and coordinating parents and their infants have timely access to ongoing support and care. All the recent reviews concluded that further studies were needed [5-7].

This study is an updated systematic review and synthesis of findings to inform the evidence base for Ten Steps to Successful Breastfeeding of BFHI practice. The purpose of this study is to examine the impact of baby-friendly hospital initiative to increase the success of exclusive breastfeeding.

TABLE 1: WHO/UNICEF Ten Steps to Successful Breastfeeding (revised 2018). Baby-Friendly Hospital Initiative systematic review

*Critical management procedures*

1. a. Comply fully with the International Code of Marketing of Breast-milk Substitutes and relevant World Health Assembly resolutions.
- b. Have a written infant feeding policy that is routinely communicated to staff and parents.
- c. Establish ongoing monitoring and data-management systems.
2. Ensure that staff have sufficient knowledge, competence and skills to support breastfeeding.

*Key clinical practices*

3. Discuss the importance and management of breastfeeding with pregnant women and their families.
4. Facilitate immediate and uninterrupted skin-to-skin contact and support mothers to initiate breastfeeding as soon as possible after birth.
5. Support mothers to initiate and maintain breastfeeding and manage common difficulties.
6. Do not provide breastfed newborns any food or fluids other than breast milk, unless medically indicated.
7. Enable mothers and their infants to remain together and to practice rooming-in 24 hours a day.
8. Support mothers to recognize and respond to their infants' cues for feeding.
9. Counsel mothers on the use and risks of feeding bottles, teats and pacifiers.
10. Coordinate discharge so that parents and their infants have timely access to ongoing support and care.

WHO/UNICEF, 2018

## 2. Methods

### 2.1. Information sources

PUBMED, EBSCO (included MEDLINE and CINAHL), PROQUEST, WILEY, and SCOPUS were searched from their dates of inception to January 2011. Hand searches were conducted of the bibliographies of each of the manuscripts considered eligible for the study as well as of relevant background articles.

### 2.2. Search Strategy

Several search strategies were used to identify potentially relevant studies. We searched the data and information used electronic, the site as a source of data. The article search results are used PRISMA for instruments (Preferred Reporting Items for Systematic Reviews & Meta-Analyses) and used flowchart based on checklist PRISMA 2009, eliminate the articles which not relevant with the identification criteria, screening, eligibility, and the end download the articles which are relevant. The first step is open the data base PubMed in <https://www.ncbi.nlm.nih.gov/pubmed/> use the advanced searching.

### 2.3. Document Selection

We searched for primary literature in five major databases and selected them by using search engine with English language studies (PubMed, PROQUEST, Wiley, EBSCO, and Scopus) using keywords “Baby-Friendly Hospital Initiative” OR “Ten Steps to Successful Breastfeeding” AND “Exclusive breastfeeding” AND “Health Care Facilities” and with source type scholarly journals with free full text published from January, 2010 through March, 2018.

We also reviewed the reference lists of all included articles, relevant review articles and related systematic reviews to identify additional articles. Results were limited to English articles. Abstracts were included in search results. We got results of 12,363 documents. Screened based on publication 2011-2018 (8 years), human population, and document type (journal, theses, and dissertations) (n=4,990). Then records screened based on publisher and subject in nurses, medical, health care, and public health (n=793). Screened based on English language (n=723), free and full text articles (n = 144). Selecting journals based on relevance by title and abstract, then assessed for eligibility, we choose as many as 9 documents.

## 2.4. Inclusion Criteria

Inclusion criteria of documents that we consider appropriate (eligibility) to do systematic review were as follows: a journal from research, thesis, and dissertation; an original study and systematic review; reported in English; reported “baby-friendly hospital initiative” or “ten steps to successful breastfeeding”; published from eight years (from January 1<sup>st</sup>, 2011 to March 31<sup>st</sup> 2018).

Inclusion criteria for the respondents are health care professional, patient as mothers who deliver at health care facilities, both of them or one of them, and/or hospital managements. Patients as mothers also give exclusive breastfeeding (EBF) or any breastfeeding (ABF) for their baby.

## 2.5. PICOS

The population (P) we are focused in this review were health care professional, patient as mothers who deliver at health care facilities, both of them or one of them, mothers have baby with age 0-24 month during the research, and/or hospital managements. The intervention (I) in this review got implementation of BFHI or not. The comparator (C) of this review was the success of exclusive breastfeeding or not. Outcome (O) of this review was increasing of exclusive breastfeeding rates in health care facilities for direct-impact and also occurred increasing of EBF in countries as indirect-impact. The study designs which selected by author were randomized controlled trials (RCTs), quasi-experimental studies, cohort, case-control, cross-sectional, and systematic review.

The study was conducted in three phases: (1) searching and collecting the literatures and data by search strategy and select studies in online journal database, (2) analyzing and evaluating the literature and data found by assessed quality of study using critical appraisal which corresponding to articles’ design, and (3) categorizing and summarizing the literatures and data.

## 2.6. Exclusion Criteria

Exclusion criteria were as follows: used language except English, not open access, abstract only, the articles published less than 2011, study design with qualitative method. There was no implementation of BFHI/ Ten Steps to Successful Breastfeeding, age of infants more than 2 years when the research was on going, and the research or articles talked just about breastfeeding (BF) theme without exclusive breastfeeding

(EBF) variable. The study selection process is shown in Figure 1 as a PRISMA flow diagram.

Extraction and analysis the data from each articles done by the author. The results are analyzed and the data are prepared in accordance with the theme analysis and arranged in the form of a narrative paper. (The selection process by means of a flow chart was presented in Figure 1.)

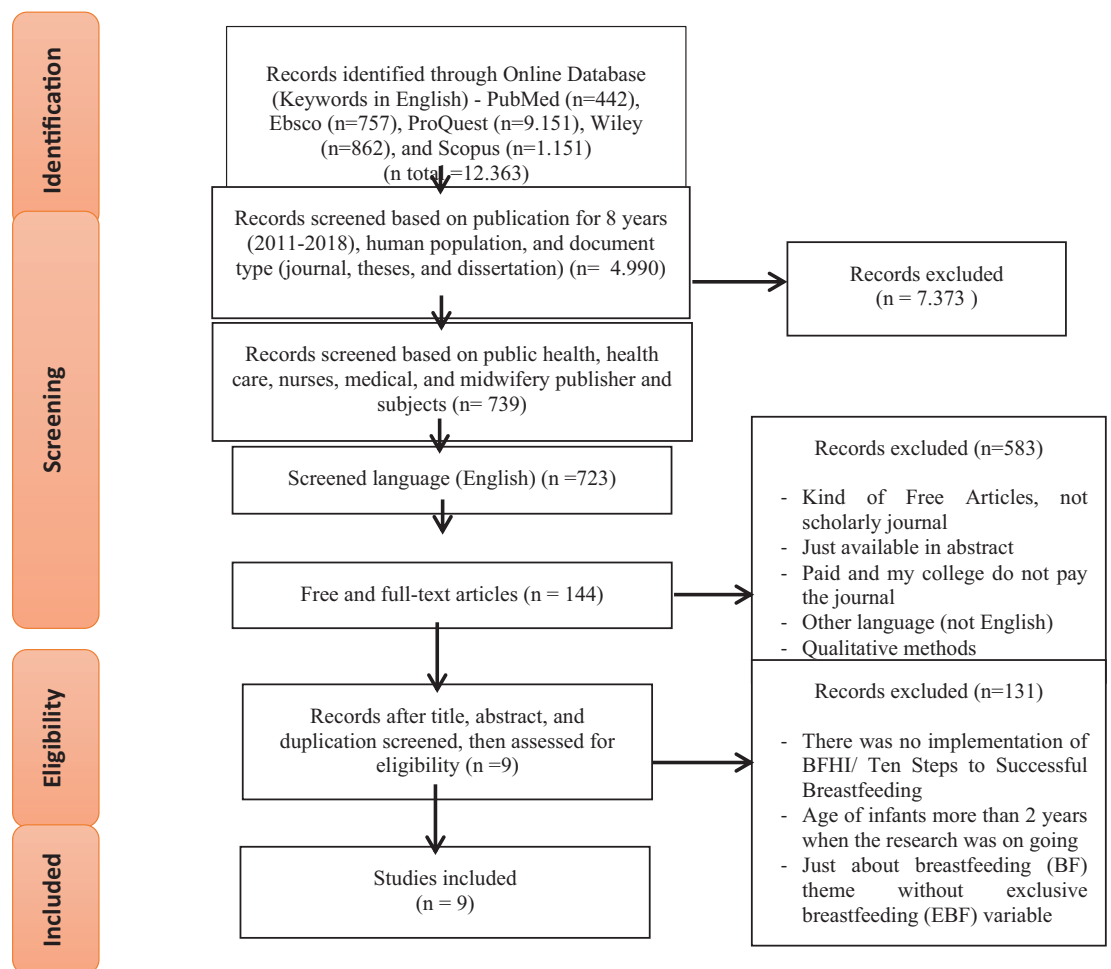


Figure 1: Preferred Reporting Items for Systematic Review and Meta-Analysis

### 3. Results and Discussion

Our search identified 9 papers. These studies came from some countries. The research was held in 9 countries, there were North Carolina, Indonesia, Sindh, [Alaska, Maine, Nebraska, Ohio, Washington], USA (2 articles), [South America, North America, Western Europe, Eastern Europe, South Asia, Eurasia, and Sub-Saharan Africa], Norwegian, Swiss, and Brazil. Research designs were 3 types, used Cross Sectional, RCT/ Quasi-

experimental, and Systematic Review. The studies showed there were positive impacts of BFHI to improve exclusive breastfeeding rates by applying ten steps to successful breastfeeding in health care facilities. Results are presented below by study design. From the 12,363 records originally identified, 9 articles were included in the final review (Figure 1).

### 3.1. Quasi-experimental

#### 3.1.1. Study quality

Four of the 9 articles identified were derived from a quasi-experimental approach conducted in Indonesia; North Carolina, USA; Sindh, Pakistan; and Norwegian. The implementation of BFHI was rated as high quality for EBF outcomes (showed in Table 2.) [8-11].

#### 3.1.2. Studies' description and findings

In Norway, data from the post-intervention survey, 18 of the 27 intervention municipalities were designated as Baby-friendly (BF) community health centers, nine municipalities have applied BF community, four municipalities were still in the process of becoming designated, and five municipalities had dropped out of the program. The result, women in the intervention group were more likely to breastfeed exclusively than those in the comparison group who received routine care; 17.9% vs. 14.1% until 6 months [cluster adjusted odds ratio (OR)=1.33; 95% confidence interval (CI): 1.02, 1.72; P=0.03,11].

In Sindh, Pakistan of the 236 women in the study, 196 (83.05%) respondents were from BFH and 40 (17%) from non-BFH (NBFH). BFH group showed that there was an increase in the breastfeeding practice up to 194 (98.97 %) in BFH compared to 12 (30 %) in NBFH [8].

In Indonesia showed that the high prevalence of exclusive breastfeeding (EBF) at 24 weeks existed among mothers who had a knowledge score 80 (50 %), who had a father with a knowledge score 80 (43 %), and who had support from grandmothers for EBF (37 %) [10].

Other research in North Carolina (USA) showed the initial breastfeeding rates and the scores on the different steps provided a descriptive indication of which steps appear to best mirror progress in breastfeeding. The illustration wished to know the baseline breastfeeding initiation and exclusive breastfeeding rates and the associated rank order

for each hospital. The scores for each of the Ten Steps were also included as rank ordered from the highest (1) to the lowest (6). In considering which step's rankings best reflected the top 2 and bottom 2 hospitals in terms of breastfeeding rates and rank, we found that steps 1 (policy), 2 (training), 6 (no supplements), and 9 (no artificial nipples) best reflected the rankings for breastfeeding rates and also EBF rates, followed by steps 3 (prenatal), 4 (skin-to-skin), and 7 (rooming-in). Especially, the steps that best reflected exclusive breastfeeding rate ranking were steps 1, 2, 4, and 9, followed by 3, 6, and 7. Steps 8 (cues) and 10 (community support) did not appear to be related to the rank levels both of breastfeeding and exclusive breastfeeding.

## 3.2. Cross-Sectional

### 3.2.1. Study quality

Three cross-sectional studies of 9 articles were identified. They were conducted in Swiss, USA, and Brazil. A study was classified as being of high quality because BFHI practice was defined as step by step which included ten steps in health care facilities with BFHI concept [12]. Other studies were classified as a moderate quality of research in BFHI practice. Both of them determined steps of BFHI Ten Steps, however each articles gave another sampling method and result. [13, 14].

### 3.2.2. Studies' description and findings

In Brazil, the sample design was selected in three stages: hospitals were stratified according to the five Brazilian Regions (North, Northeast, Southeast, Midwest, and South), location (state capital and other cities), and type of hospital funding (public, mixed, or private), with total of 266 hospitals. In total, interviews were conducted with 23,940 women, among 266 hospitals distributed in 191 municipalities, covering all the 27 Brazilian states [13].

This study found that among children born in hospitals with more than 500 deliveries/year in Brazil, 56 % were breastfed in the first hour after birth, when considering only mothers who were able to breastfeed and newborns with suckling conditions. In the bivariate analysis, they found an association ( $p < 0.20$ ) between timely initiation of breastfeeding and the following distal variables: maternal age, skin color/ race, maternal years of schooling, maternal work, marital status at delivery, parity, and Brazilian region of residence. Considering the intermediate variables, also found an association



TABLE 2: Summary of study quality by outcome and study design. Baby-Friendly Hospital Initiative systematic review

Outcome	Study Design	Quality	Author(s)	Location
BFHI / Ten Steps to Successful Breastfeeding practices in health care facilities	Quasi-experimental without parallel comparison group	Low	Susiloretni et al. (2014)	Indonesia
		Moderate	Khan and Akram (2013)	Sindh, Pakistan
	Quasi-experimental with parallel comparison group	Moderate	Taylor et al. (2012)	North Carolina, USA
		Moderate	Baerug et al. (2016)	Norwegian
	Cross-sectional	High	Spaeth et al. (2017)	Swiss
		Moderate	Calvalho et al. (2016)	Brazil
		Moderate	Hawkins et al. (2013)	USA
	Systematic Review	High	Perez-Escamilla et al. (2016)	USA
Exclusive Breastfeeding (0-6 month)	Quasi-experimental without parallel comparison group	Moderate	Susiloretni et al. (2014)	Indonesia
		Moderate	Khan and Akram (2013)	Sindh, Pakistan
	Quasi-experimental with parallel comparison group	High	Baerug et al. (2016)	Norwegian
	Cross-sectional	Low	Spaeth et al. (2017)	Swiss
		Low	Calvalho et al. (2016)	Brazil
		Moderate	Hawkins et al. (2013)	USA
		Systematic Review	High	Perez-Escamilla et all (2016)
Continued Breastfeeding (>6 month – 2 years)	Quasi-experimental without parallel comparison group	Moderate	Susiloretni et al. (2014)	Indonesia
	Cross-sectional	Moderate	Spaeth et al. (2017)	Swiss
		Low	Calvalho et al. (2016)	Brazil
		Low	Hawkins et al. (2013)	USA
		Systematic Review	High	Perez-Escamilla et all (2016)

with prenatal care funding and information about breastfeeding at prenatal care. The

proximal variables associated with the outcome were hospital funding, Baby-Friendly Hospital, type of delivery, gestational age and birth weight. The mothers that gave birth at a Baby-Friendly Hospital and with vaginal delivery also had a higher odds to timely initiation of breastfeeding. Low birth weight and premature babies had lower odds of being breastfed in the first hour after birth [13].

Another research in Swiss with cross-sectional study was did by [14] has showed result in different view. The Swiss Infant Feeding Study (SWIFS) is a nationwide cross-sectional study on infant feeding practices and selected mother and child health outcomes during pregnancy and in the first year after birth [15]. A sample of mother-baby dyads was randomly selected (N=4147) by Swiss Parent. A total of 1,650 mothers responded by questionnaire, yielding a response rate of 40%. To be accredited as a BFHI, hospitals have to implement the Ten Steps to Successful Breastfeeding and adhere to the Code of Marketing of Breast-milk Substitutes [16]. Once accredited, BFH are assessed every 3 to 5 years with an audit and with continuous monitoring of four of the Ten Steps (Steps 4, 6, 7, and 9) [17].

To assess the association of BFH designation on exclusive breastfeeding and continued breastfeeding, they ran multivariable Cox-regression models. In this study, 508 children (38%) were born in 34 current, 425 (32%) in 28 former, and 393 (30%) in 34 never BFHI. In this study population, 70% of the children were older than 6 months and the mean age of the children was 7.5 months. When the study population was compared across BFHI designations, characteristics were not significantly different [14]. Kaplan-Meier curves for exclusive breastfeeding showed the most prominent differences according to BFH designation up to week 17, when most of the babies (98%) had not yet been introduced to complementary food. The median duration of exclusive breastfeeding was 13.1 weeks in current BFH (95% confidence interval [12.0, 17.4]), 8.7 weeks in former BFH (95% confidence interval [8.0, 13.1]), and 13.1 weeks in NBFH (95% confidence interval [8.7, 15.2]) [14].

The results of this study showed that BFHI designation was associated with continued breastfeeding but not with exclusive breastfeeding duration. However, exclusive breastfeeding duration was associated with mothers reported compliance to six of the Ten Steps in any hospital and with high compliance to monitored Baby-Friendly (BF) practices in current BFHI. Another result showed the number of BF practices experienced and reported by the mother was positively associated with exclusive breastfeeding. Previous studies have shown that the number of Baby-Friendly practices experienced has a positive effect on short-term breastfeeding, irrespective of BFHI designation [18-22]. Therefore, it was rather surprising that exclusive breastfeeding rates and duration did

not differ significantly according to BFHI designation. It seems that compliance and practicing the steps are more important than designation to enable women to breastfeed exclusively. As BF practices were reported by the mother as experienced or not, it may reflect their breastfeeding self-efficacy. Breast feeding self-efficacy is an important independent predictor for breastfeeding duration [23, 24].

Another research in U.S. showed breastfeeding initiation increased from 1999 through 2009 in Baby-Friendly Hospital Initiative. However this research did not show correlation of BFHI and exclusive breastfeeding directly. On average Baby-Friendly hospitals had higher breastfeeding initiation rates than non-BFHI-accredited facilities. On average, in 2009, any breastfeeding for 24 weeks was higher among BFHI hospitals than non-BFHI facilities (76% v. 73%) as was exclusive breastfeeding (50% v. 42%) [25].

### 3.3. Systematic Review

#### 3.3.1. Study quality

Two of the 9 articles have identified as systematic review represented in USA and global. Both of articles agreed that BFHI has a positive impact on short-term, medium-term, and longer-term breastfeeding outcome across geographies [5]. Information sources for this review used MEDLINE, EMBASE, Global Health, CINAHL, PUBMED and Web of Science were searched from their dates of inception to December 2012 [5, 26].

#### 3.3.2. Studies' description and findings

For the purposes of this review, "Baby-Friendly Hospital Initiative (BFHI) Practices are defined as breastfeeding promotion interventions in a birthing facility or hospital that align with the Ten Steps to Successful Breastfeeding". An operational definition of Baby-Friendly practices can be obtained by examining the guidelines and evaluation criteria outlined by Baby-Friendly USA, collecting data to determine a facility's adherence to the criteria, and collecting data on maternal/infant health and breastfeeding outcomes [27].

Of 58 studies that met the systematic criteria, 55 support this relationship, and none suggest a negative impact of BFHI on breastfeeding outcome [5]. Baby-Friendly results by Social Ecological Model (SEM) level table represents data extracted from 18 total sources and provides information on breastfeeding outcomes, early infants health

outcomes, experiences and perceptions related to the BFHI, and the impact of hospital policy and environment on outcomes [26].

Both of systematic review articles conducted in United States. Baby-Friendly USA (BFUSA) is responsible for the initiative's implementation in the United States [27]. The 4D pathway to Baby-Friendly designation requires facilities to commit time, staff training expenses, and designation fee expenses [27, 28]. This pathway is a four-phase designation process involving changes in institution "policies, curriculum, action plans, quality improvement projects, staff training, and competency verification"[27, 29] as well as a site visit to determine whether the facility has implemented all standards necessary to be awarded Baby-Friendly status. Moreover, successfully following the 4D pathway requires nurses to commit to the Baby-Friendly philosophy, as operationalized through the Ten Steps to Successful Breastfeeding [27, 30].

Evidence is well documented from U.S. studies that have evaluated and supported the effectiveness of the BFHI for increasing rates of breastfeeding initiation and exclusivity (0-6 month) [25,31-35].

## 4. Conclusion

Data for this review provide valuable insights to inform systematic of BFHI practices. Results from the review support the BFHI's success in facilitating successful breastfeeding initiation and exclusivity. Breastfeeding duration appears to increase when mothers have increased exposure to Baby-Friendly practices.

The global evidence consistently supports the conclusion that adherence to the BFHI Ten Steps has a positive impact on short-term, medium-term and longer-term breastfeeding outcomes across geographies.

Findings from studies measuring degree of exposure to the Ten Steps are encouraging but need to be interpreted with caution because of possible maternal recall (e.g. successful BF women may be more likely to recall having received in-hospital BF support) or indication (women receiving help on BF may have been those experiencing BF difficulties) biases.

Breastfeeding is a behavior that is influenced by a multitude of internal and external motivational factors. It is recommended that future research takes into account psychosocial constructs that can help to explain these motivational influences and simultaneously fill the knowledge void between intentions and behaviors in healthy lifestyles research [5, 36, 37].

Prospective studies are needed that include breastfeeding promotion initiatives, explore maternal experiences and perceptions with Baby-Friendly practices, and track maternal breastfeeding decisions. Results from future qualitative and quantitative explorations could further clarify how the delivery of Baby-Friendly practices leads to successful breastfeeding and improved exclusive breastfeeding outcomes. A limitation of our review is that we were unable to compare the impact of partial vs. full implementation of the Ten Steps.

## Funding

All Author declare no funding for this study.

## Acknowledgement

The authors would like to thank their colleague for their contribution and support to the research. They are also thankful to all the reviewers who gave their valuable inputs to the manuscript and helped in completing the paper.

## Conflict of Interest

The authors have no conflict of interest to declare.

## References

- [1] Saleha, S. (2009). *Asuhan Kebidanan Pada Masa Nifas*. Jakarta: Salemba Medika.
- [2] Labbok, M. H. (2012). Global Baby-Friendly Hosital Initiative Monitoring Data: Update and Discussion. *Breastfeeding Medicine*, vol. 7, issue 4, pp. 210-22.
- [3] Fikawati, S. and Syafiq, A. (2012). Status Gizi Ibu dan Persepsi Ketidakcukupan Air Susu Ibu (Maternal Nutritional Status and Breast Milk Insufficiency Perception). *Journal Kesmas*, issue 450, pp. 249-254.
- [4] Sinha, B., et al. (2015). Interventions to Improve Breastfeeding Outcomes: A Systematic Review and Meta-Analysis. *Acta Paediatrica*, issue 104, pp. 114-134.
- [5] Perez-Escamilla, R., Martinez, J. L. and Segura-Perez, S. (2016). Impact of the Baby-Friendly Hospital Initiative on Breastfeeding and Child Health Outcomes: A Systematic Review. *Maternal and Child Nutrition*, issue 12, pp. 402-417.

- [6] World Health Organization. (2018). *Ten Steps to Successful Breastfeeding*. Retrieved from [www.tensteps.org](http://www.tensteps.org).
- [7] BFUSA. (2012). *The Ten Steps to Successful Breastfeeding*. Retrieved from [www.babyfriendlyusa.org/about-us/baby-friendly-hospital-initiative/the-ten-steps](http://www.babyfriendlyusa.org/about-us/baby-friendly-hospital-initiative/the-ten-steps).
- [8] Khan, M. and Akram, D. S. (2013). Effects of Baby-Friendly Hospital Initiative on Breastfeeding Practices in Sindh. *Journal Of Pakistan Medical Association.*, vol. 63, pp. 756-759.
- [9] Taylor, E. C., et al. (2012). Implementing the Ten Steps for Successful Breastfeeding in Hospitals Serving Low-Wealth Patients. *American Journal of Public Health*, vol. 102, pp. 2262-2268.
- [10] Susiloretni, K. A., et al. (2015). What Works to Improve Duration of Exclusive Breastfeeding: Lessons from the Exclusive Breastfeeding Promotion Program in Rural Indonesia. *Maternal Child Health Journals*, issue 19, pp. 1515-1525.
- [11] Baerug, A., et al. (2016). Effectiveness of Baby-Friendly Community Health Services on Exclusive Breastfeeding and Maternal Satisfaction: A Pragmatic Trial. *Maternal and Child Nutrition*, vol. 12, pp. 428-439, <https://doi.org/10.1111/mcn.12273>.
- [12] Hawkins, S. S., et al. (2014). Evaluating the Impact of the Baby-Friendly Hospital Initiative on Breastfeeding Rates: A Multi-State Analysis. *Public Health Nutrition*, issue 18, pp. 189–197, <https://doi.org/10.1017/s1368980014000238>.
- [13] Carvalho, M. L., et al. (2016). The Baby-Friendly Hospital Initiative and Breastfeeding at Birth in Brazil: A Cross Sectional Study. *Reproductive Health*, vol. 13, issue 3, pp. 207-215, <https://doi.org/10.1186/s12978-016-0234-9>.
- [14] Spaeth, A. (2017). Baby-Friendly Hospital Designation Has a Sustained Impact on Continued Breastfeeding. *Maternal and Child Nutrition*, issue 14, p. 12497.
- [15] Dratva, J., et al. (2014). *SWIFS–Swiss Infant Feeding Study. A National Study on Infant Feeding and Health in the Child's First Year Executive Summary*. Retrieved from <https://www.swisstph.ch/swifswebsite>.
- [16] Baby-Friendly USA. (2010). *Implementing the UNICEF-WHO Baby Friendly Hospital Initiative (BFHI) in the United States*. Retrieved from <http://www.babyfriendlyusa.org/eng/10steps.html>.
- [17] Forrester-Knauss, C., et al. (2013). The Baby-Friendly Hospital Initiative in Switzerland: Trends Over A 9-Year Period. *Journal of Human Lactation*, vol. 29, issue 4, pp. 510-516.
- [18] Brodribb, W., Kruske, S. and Miller, Y. D. (2013). Baby-Friendly Hospital Accreditation, in Hospital Care Practices, and Breastfeeding. *Pediatrics*, vol. 131, issue 4, pp. 685–692, <https://doi.org/10.1542/peds.2012-2556>.

- [19] Callendret, M., *et al.* (2015). Hospital Practices and Breastfeeding Cessation Risk Within 6 Months of Delivery. *Archives de Pédiatrie*, vol. 22, issue 9, pp. 924–931.
- [20] Chien, L. Y., *et al.* (2007). The Number of Baby Friendly Hospital Practices Experienced by Mothers is Positively Associated with Breastfeeding: A Questionnaire Survey. *International Journal of Nursing Studies*, vol. 44, issue 7, pp. 1138–1146, <https://doi.org/10.1016/j.ijnurstu.2006.05.015>.
- [21] Dulon, M., Kersting, M. and Bender, R. (2003). Breastfeeding Promotion in Non-UNICEF-Certified Hospitals and Long-Term Breastfeeding Success in Germany. *Acta Paediatrica*, vol. 92, issue 6, pp. 653–658.
- [22] Murray, E. K., Ricketts, S. and Dellaport, J. (2007). Hospital Practices that Increase Breastfeeding Duration: Results from a Population-Based Study. *Birth*, vol. 34, issue 3, pp. 202–211, <https://doi.org/10.1111/j.1523-536X.2007.00172.x>.
- [23] Baghurst, P., *et al.* (2007). Breastfeeding Self-Efficacy and other Determinants of the Duration of Breast Feeding in A Cohort of First-Time Mothers in Adelaide, Australia. *Midwifery*, vol. 23, issue 4, pp. 382–391, <https://doi.org/10.1016/j.midw.2006.05.004>.
- [24] Scott, J. A., Shaker, I. and Reid, M. (2004). Parental Attitudes toward Breastfeeding: their Association with Feeding Outcome at Hospital. <https://doi.org/10.1111/j.0730-7659.2004.00290.x>
- [25] Hawkins, S. S., *et al.* (2014). Compliance with the Baby-Friendly Hospital Initiative and Impact on Breastfeeding Rates. *Archives of Disease in Childhood Fetal and Neonatal Edition*, issue 99, pp. 138-143.
- [26] Munn, A. C., *et al.* (2016). The Impact in the United States of the Baby-Friendly Hospital Initiative on Early Infant Health and Breastfeeding Outcomes. *Breastfeeding Medicine*, vol. 11, issue 5, <https://doi.org/10.1089/bfm.2015.0135>.
- [27] BFUSA. (2012). *Get Started*. Retrieved from [www.babyfriendlyusa.org](http://www.babyfriendlyusa.org).
- [28] Nyqvist, K. H., *et al.* (2013). Expansion of the Baby-Friendly Hospital Initiative Ten Steps to Successful Breastfeeding into Neonatal Intensive Care: Expert Group Recommendations. *Journal of Human Lactation*, vol. 29, pp. 300–309.
- [29] American Public Health Association (APHA). *A Call to Action on Breastfeeding: A Fundamental Public Health Issue*. Retrieved from [www.apha.org](http://www.apha.org).
- [30] World Health Organization [WHO]. (1998). *Evidence for the Ten Steps to Successful Breastfeeding*. Geneva: World Health Organization.
- [31] Merewood, A., *et al.* (2005). Breastfeeding Rates in US Baby-Friendly Hospitals: Results of a National Survey. *Pediatrics*, issue 116, pp. 628–634.
- [32] Vasquez, M. J. and Berg, O. R. (2012). The Baby-Friendly Journey in a US Public Hospital. *The Journal of Perinatal Neonatal Nursing*, vol. 26, pp. 37–46.

- [33] Philipp, B. L., *et al.* (2001). Baby-Friendly Hospital Initiative Improves Breastfeeding Initiation Rates in a US Hospital Setting. *Pediatrics*, issue 108, pp. 677–681.
- [34] Parker, M., *et al.* (2013). 10 Years After Baby Friendly Designation: Breastfeeding Rates Continue to Increase in a US Neonatal Intensive Care Unit. *Journal of Human Lactation*, issue 29, pp. 354–358.
- [35] Perrine, C. G., *et al.* (2012). Baby-Friendly Hospital Practices and Meeting Exclusive Breastfeeding Intention. *Pediatrics*, vol. 130, issue 1, pp. 54–60, <https://doi.org/10.1542/peds.2011-3633>.
- [36] Schwarzer, R. (2008). Modeling Health Behavior Change: How to Predict and Modified Option and Maintenance of Health Behaviors. *Applied Psychology: An International Review*, vol. 57, issue 1, pp. 1–29.
- [37] Venancio, S. I., *et al.* (2012). The Baby-Friendly Hospital Initiative Shows Positive Effects on Breastfeeding Indicators in Brazil. *Journal of Epidemiology & Community Health*, vol. 66, issue 10, pp. 914–8.