STUDY PROTOCOL

Improving breastfeeding support through the implementation of the baby friendly hospital and community initiatives: a scoping review protocol [version 1; peer review: 1 approved, 1 approved with reservations]

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Abstract

Background: Improved breastfeeding practices have the potential to save the lives of over 823,000 children under 5 years old globally every year. Exclusively breastfeeding infants for the first six months would lead to the largest infant mortality reduction. The Baby-Friendly Hospital Initiative (BFHI) is a global campaign by the World Health Organization and the United Nations Children’s Fund (UNICEF), which promotes best practice to support breastfeeding in maternity services. The Baby-Friendly Community Initiative (BFCI) is an extension of the BHFI's 10th step of the Ten Steps to Successful Breastfeeding and of the BFHI overall. Its focus is on community-based breastfeeding supports for women.

There have been no known attempts to synthesise the overall body of evidence on the BFHI in recent years, and no synthesis of empirical research on the BFCI. This scoping review asks the question: what is known about the implementation of the BFHI and the BFCI globally?

Methods and analysis: This scoping review will be conducted according to the Joanna Briggs Institute methodology for scoping reviews. Inclusion criteria will follow the Population, Concepts, Contexts approach. A data charting form will be developed and applied to all the included studies. Qualitative and quantitative descriptive analysis will be undertaken. In order to address equity of access to the BFHI/BFCI, the Levesque et al. (2013) access to health care framework will be used as a lens to analyse the charted data in relation to this aspect of the review. An already established group of stakeholders with experience of infant feeding policy and implementation in Malawi will be consulted, to obtain expert views on...
the findings of the scoping review.

**Conclusion:** This review will establish gaps in current evidence which will inform areas for future research in relation to this global initiative.

**Keywords**

This article is included in the Maternal and Child Health collection.
Introduction

Globally, improved breastfeeding practices have the potential to save the lives of over 823,000 children under 5 years old every year, and save $300US billion. Exclusively breastfeeding infants for the first six months of their life is known to be the best start for a baby and a more widespread adoption of exclusive breastfeeding would lead to the largest infant mortality reduction. It can contribute towards meeting Sustainable Development Goals (SDG) 2 and 3 - targets on nutrition and health - as well as being linked to many other SDGs. Since 1990, the World Health Organization (WHO) recommends that all newborn babies are exclusively breastfed for the first six months of their lives, and continue to be breastfed for up to two years. Currently, just 42.2% of infants under 6 months are being exclusively breastfed and just 33 countries are on target for exclusive breastfeeding. Breastfeeding rates are both supported and hindered by the social determinants of health and multi-level support is needed, including policy, health systems and services, communities and families.

The Baby-Friendly Hospital Initiative (BFHI), launched by WHO and United Nations Children’s Fund (UNICEF) in 1991, has been implemented globally in over 150 countries and is a pillar of the WHO/UNICEF Global Strategy for Infant and Young Child Feeding. One of the nine operational targets of the Global Strategy for Infant and Young Child Feeding is to ensure that every maternity facility practices the Ten Steps to Successful Breastfeeding. Hospitals or maternity facilities that comply with the Ten Steps to Successful Breastfeeding and with the International Code of Marketing of Breastmilk Substitutes and subsequent relevant World Health Assembly resolutions (the Code) are designated as “Baby-friendly”. Table 1 details the Ten Steps, which were updated and revised in 2018. Although the BFHI has been widely implemented, coverage at a global level remains low. In 2017, just 10% of infants in the world were born in a facility currently designated as “Baby-friendly”. In 2018, the BFHI was revised, which led to greater emphasis on scaling up to universal coverage, ensuring sustainability, and integrating the programme more fully with health-care systems.

The Baby-Friendly Community Initiative (BFCI) is an extension of the BFHI’s 10th step of the Ten Steps to Successful Breastfeeding and of the BFHI overall. Its focus is on community-based breastfeeding supports for women. Given the usual short post-partum stay in facilities, this 10th step and associated separate initiatives are often critical to support breastfeeding mothers beyond the initial days of giving birth. The 10th BFHI step changed from “foster the establishment of support groups and refer mothers to them on discharge from hospital” in the 1989 version to “coordinate discharge so that parents and their infants have timely access to ongoing support and care” in the revised version in 2018. It has been suggested that this change in step 10 signals a shift in increased responsibility of facilities in planning and facilitating community supports for mothers. While the BFHI was adopted in 152 countries, it appears that the BFCI has been adopted in a smaller number of countries, namely low- and middle-income countries (LMICs), including Kenya, Cambodia, Gambia and High Income Countries (HICs) such as Italy and the UK.

Between 2012 and 2017, almost 80% of live births occurred with the assistance of skilled health personnel globally. However, the estimated coverage of births attended by skilled

Table 1. Ten Steps to Successful Breastfeeding.

<table>
<thead>
<tr>
<th>Critical management procedures:</th>
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<tbody>
<tr>
<td>1a Comply fully with the International Code of Marketing of Breast-milk Substitutes and relevant World Health Assembly resolutions</td>
</tr>
<tr>
<td>1b Have a written infant feeding policy that is routinely communicated to staff and parents</td>
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<tr>
<td>1c Establish ongoing monitoring and data-management systems</td>
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<tr>
<td>2 Ensure that staff have sufficient knowledge, competence and skills to support breastfeeding</td>
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<table>
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<tr>
<th>Key clinical practices</th>
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<tr>
<td>3 Discuss the importance and management of breastfeeding with pregnant women and their families</td>
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<tr>
<td>4 Facilitate immediate and uninterrupted skin-to-skin contact and support mothers to initiate breastfeeding as soon as possible after birth</td>
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<tr>
<td>5 Support mothers to initiate and maintain breastfeeding and manage common difficulties.</td>
</tr>
<tr>
<td>6 Do not provide breastfed newborns any food or fluids other than breast milk, unless medically indicated</td>
</tr>
<tr>
<td>7 Enable mothers and their infants to remain together and to practice rooming-in 24 hours a day</td>
</tr>
<tr>
<td>8 Support mothers to recognise and respond to their infants’ cues for feeding</td>
</tr>
<tr>
<td>9 Counsel mothers on the use and risks of feeding bottles, teats and pacifiers</td>
</tr>
<tr>
<td>10 Coordinate discharge so that parents and their infants have timely access to ongoing support and care</td>
</tr>
</tbody>
</table>

The Baby-Friendly Community Initiative (BFCI) is an extension of the BFHI’s 10th step of the Ten Steps to Successful Breastfeeding and of the BFHI overall. Its focus is on community-based breastfeeding supports for women. Given the usual short post-partum stay in facilities, this 10th step and associated separate initiatives are often critical to support breastfeeding mothers beyond the initial days of giving birth. The 10th BFHI step changed from “foster the establishment of support groups and refer mothers to them on discharge from hospital” in the 1989 version to “coordinate discharge so that parents and their infants have timely access to ongoing support and care” in the revised version in 2018. It has been suggested that this change in step 10 signals a shift in increased responsibility of facilities in planning and facilitating community supports for mothers. While the BFHI was adopted in 152 countries, it appears that the BFCI has been adopted in a smaller number of countries, namely low- and middle-income countries (LMICs), including Kenya, Cambodia, Gambia and High Income Countries (HICs) such as Italy and the UK.

Between 2012 and 2017, almost 80% of live births occurred with the assistance of skilled health personnel globally. However, the estimated coverage of births attended by skilled
health personnel during this period shows significant inequality between WHO regions. Just 59% of the births in the sub-Saharan Africa Region (during the period 2012–2017) were attended by skilled health personnel, where maternal mortality is highest\(^1\). In other WHO regions, between 68% to 99% of all births were attended by skilled health personnel\(^1\). This underlines the importance of supports at the community level for breastfeeding, and it points towards the need for international interventions that promote breastfeeding to be mindful of the need to improve equity of access to breastfeeding supports.

Study rationale, aims and objectives

A broad scoping exercise was undertaken by our research team in 2019 to examine empirical studies that have focused on the implementation of the BFHI in Africa\(^1\). During the literature search the following topics were examined: healthcare professionals’ knowledge and attitudes towards the BFHI\(^12\)-14, compliance with the BFHI code\(^1\) and the implementation of the BFCT\(^7\)-16,17. At this time, we have decided to focus on conducting a more systematic scoping review that incorporates both LMICs and HICs and also has a focus on equity of access to breastfeeding support in order to provide up to date evidence and to identify knowledge gaps.

To our knowledge there have been two attempts to systematically synthesise the evidence on BFHI. Semenic and colleagues\(^18\) undertook an integrative review synthesising barriers and facilitators to implementing the BFHI. A systematic review\(^19\) focused on the impact of the BFHI on child health outcomes up to 2012. This review concluded that adherence to the 10 Steps impacts early initiation of breastfeeding, exclusive breastfeeding and total duration of breastfeeding. UNICEF has documented case studies of the experiences of 13 countries in implementing the BFHI, across high, middle and low/incomes countries\(^20\),\(^21\).

Scoping reviews are useful when a body of literature has not yet been comprehensively reviewed, or ‘exhibits a large, complex or heterogeneous nature, not amenable to a more precise systematic review’\(^22\). Scoping reviews map the range of evidence, and also identify gaps in the knowledge base, clarify concepts, and document research that inform and address practice\(^23\). A pilot search as part of the initial stage of this review (see Extended data) found that the majority of studies in this area have been published since 2012. There have been no known attempts to synthesise the overall body of evidence on the BFHI in recent years, and no synthesis of empirical research on the BFCI.

Methods and analysis

This scoping review will be conducted according to the Joanna Briggs Institute (JBI) methodology for scoping reviews\(^24\). We will use the framework for scoping reviews developed by Arksey & O’Malley\(^25\) as the foundation, updated and advanced by Levac et al.\(^26\) and progressed further by new guidance from the JBI\(^21\),\(^23\),\(^28\).

According to this framework, there are six different stages, including: 1) identifying the research question; 2) identifying relevant studies; 3) study selection; 4) charting the data; 5) collating, summarising and reporting results; and 6) consulting with stakeholders. The scoping review will also adhere to the Preferred Reporting Items for Systematic Reviews and Meta-Analyses Extension for Scoping Reviews (PRISMA-ScR) to ensure rigour in reporting. The review is registered with the Open Science Framework, DOI: https://doi.org/10.17605/OSF.IO/27R3M.

Stage 1: identifying the research question

The research aims and objectives for this scoping review were developed iteratively through discussions between the research team and were informed by the pilot search of the literature. The proposed review is situated within a wider research project, which is evaluating the implementation of evidence-based policy on infant feeding in Malawi\(^7\), focused on exclusive breastfeeding for the first six months. In Malawi, the BFHI has been a well-known vehicle for the improvement of exclusive breastfeeding promotion in hospitals and health facilities since 1993, and as recent as 2018, several externally funded initiatives have been implemented to revive the BFHI, provide training for healthcare staff and accreditation for baby-friendly hospitals\(^8\).

However, while Malawi has achieved almost universal coverage of facility delivery (90%)\(^8\), staff shortages in many health facilities are acute\(^9\), which means that the provision of breastfeeding support within one hour of delivery and, more importantly, in the hours and days beyond that, cannot be guaranteed. Besides, women who have delivered a healthy baby tend to be discharged within 24 hours after delivery, which leaves little time to provide sufficient breastfeeding support\(^10\). A second point of concern is the lack of support or encouragement for women to continue to breastfeed exclusively for six months. A recent study\(^11\) showed that while 78% of the study cohort babies in Malawi were breastfed within the first hour of birth and 89% were exclusively breastfed to 6 months. To achieve optimal health benefits, especially in countries such as Malawi, where rates of stunting and wasting among children under five are high, greater access to breastfeeding support is needed. The implementation of the full 10 steps of the BFHI and, ideally, BFCI, appear to be most crucial, if the objective to promote greater equity in access to breastfeeding support is to be achieved.

This scoping review asks the question: what is known about the implementation of the Baby-Friendly Hospital Initiative and the Baby-Friendly Community Initiative globally? The aim is to map and examine the evidence relating to the implementation of Baby-Friendly Hospital and Community Initiatives globally. Review objectives include:

1. To provide an overview of interventions and/or approaches to implement the BFHI/BFCI
2. To identify barriers and enablers to implementation of the BFHI/BFCI
3. To identify the extent to which the BFHI/BFCI facilitates equity of access to breastfeeding support
4. To identify knowledge gaps in relation to research on the BFHI/BFCI

Stage 2: identifying relevant studies

**Search strategy.** A three step search strategy, as documented in the JBI manual\(^6\) will be followed. Step one is a limited search for peer-reviewed, published papers on the PubMed and CINAHL databases (see *Extended data*\(^{23}\), which has already been performed. An academic research librarian was consulted and an analysis of the words contained in the titles, abstracts and index terms generated the list of keywords detailed in *Extended data*. Search terms will be piloted to assess the appropriateness of databases and keywords. The second step will be conducted with the librarian which may involve refining the search terms. The third step will be examining the references of key articles that have been identified for full text review that meet the inclusion criteria. The following databases have been selected in consultation with an academic librarian: Pubmed, Embase, Web of Science, Global Health and CINAHL. Key words and index terms from the title and abstract of key articles were noted and used to inform the search strategy. The timeframe for the search will be from when the first article was published in a given database to October 2020.

**Inclusion and exclusion criteria.** Inclusion criteria will be guided by the Population, Concepts, Contexts approach\(^9\).

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<thead>
<tr>
<th>Criteria</th>
<th>Determinants</th>
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<tr>
<td>Population</td>
<td>Women are pregnant, postnatal period and up to 2 years post-partum</td>
</tr>
<tr>
<td>Concepts</td>
<td>Baby-Friendly Hospital Initiative and the Baby-Friendly Community Initiative</td>
</tr>
<tr>
<td>Context</td>
<td>Hospital or community. No country or geographic location will be excluded.</td>
</tr>
</tbody>
</table>

All research designs will be included: qualitative, quantitative and mixed method studies. Quantitative studies will include both experimental (e.g., randomised trials, non-randomised trials) and observational (e.g., cohort, cross-sectional) study designs. Qualitative studies will include designs such as grounded theory, ethnography, phenomenology, action research and qualitative descriptive design. In addition, all types of reviews will be included. Grey literature will not be considered for inclusion in the review.

Draft inclusion and exclusion criteria will be tested on a sample of 15 studies to check the criteria’s suitability and will be amended as necessary.

**Inclusion criteria**

Studies that:

i) describe the implementation of the BFHI and/or BFCI

ii) evaluate the BFHI (any of the 10 steps) and/or the BFCI

iii) focus on experiences of accessing/delivering supports and services through the BFHI and/or BFCI

iv) focus on breastfeeding outcomes as a result of the BFHI and/or BFCI

v) focus on any country or group of countries

vi) are in the peer reviewed literature only

vii) empirical studies

**Exclusion criteria**

Studies that:

i) focus on other breastfeeding initiatives, supports/interventions in the hospital and/or community other than the BFHI/BFCI

ii) are published in a language other than English

iii) commentaries, opinion pieces, editorials, evaluations, theses and book chapters

Stage 3: study selection

The screening process will consist of two phases: i) a title and abstract screening; ii) full-text screening. In stage i) all titles and abstracts will be screened by two reviewers, one reviewer will review 100% of articles, and two other reviewers will review 50% each. Screening will be undertaken through Covidence and duplicates will be removed. Where there is disagreement between reviewers as to whether an article should be included or excluded, a third reviewer will arbitrate. At full text screening stage, one reviewer will undertake a full text screening for eligibility and 30% of articles will be cross-checked by another reviewer.

Stage 4: charting the data

Data will be extracted according to the JBI framework\(^23\). A data charting form will be developed and applied to all the included studies. Examples of information to be included in the data charting form is included in *Extended data*\(^{23}\). Two reviewers will independently pilot the form on a random sample of approximately five included articles. Data will be coded and entered in Microsoft Excel. In keeping with scoping review methodology, an assessment of the quality of individual studies will not be undertaken.

Stage 5: collating, summarising and reporting results

A ‘descriptive-analytical’ method will be used. As this is a scoping review, it is not anticipated that aggregation and synthesis of individual research results will be undertaken. In order to address research objective number 3, the Levesque *et al.* access to health care framework\(^29\) will be used as a lens to analyse the charted data. The framework is described as:

“a conceptualisation of access to health care describing broad dimensions and determinants that integrate demand and supply-side-factors and enabling the operationalisation of access to health care all along the process of obtaining care and benefiting from the services”.
Levesque’s revised framework was chosen because it incorporates the ‘dynamic access to care’ concept and identifies determinants that can have an impact on access to healthcare from a multilevel perspective such as health systems, institutions/organisations, individual, household, community, and population levels. It was developed by synthesising literature on existing access frameworks.

Stage 6: consulting with stakeholders
This scoping study forms part of a larger research project, which focuses on the implementation of evidence-based policy on infant feeding in Malawi. The research further includes a realist review and realist evaluation of the Care Group approach to deliver community-based infant feeding support. Realist research is a theory-based method of social enquiry and realist researchers often work in collaboration with a group of stakeholders who have lived experience or are subject experts. For this scoping review, we aim to consult the already established group of stakeholders with experience of infant feeding policy and implementation in Malawi, in order to obtain expert views on the findings of our scoping review and to verify our application of the accessibility framework with those who have first-hand experience in improving equity of access to breastfeeding support.

Research checklist
This scoping review protocol was drafted using the PRISMA-SCR extension checklist.

Study status
This study has completed the scoping stage, including piloting and refining search terms. Full database searches are ready to run and de-duplication and screening will begin in December 2020.

Conclusion
The aim of this scoping review is to map and examine the evidence relating to the implementation of Baby-Friendly Hospital and Community Initiatives globally. Results will be published in a peer-reviewed journal and disseminated through conferences and/or seminars. This review will establish gaps in current evidence which will inform areas for future research in relation to this global initiative.

Data availability
Underlying data
No data is associated with this article.

Extended data
Open Science Framework: Improving breastfeeding support through the implementation of the Baby Friendly Hospital Initiative and the Baby Friendly Community Initiative. https://doi.org/10.17605/OSF.IO/27R3M; registered at https://osf.io/g8zbq.

This project contains the following extended data:
- Search strategy pilot.
- Draft data charting form (Peters et al., 2020).
- PRISMA-SCR extension checklist.

Data are available under the terms of the Creative Commons Zero “No rights reserved” data waiver (CC0 1.0 Public domain dedication).

Acknowledgements
The authors acknowledge the support from Andrew Simpson, RCSI Associate Librarian, for supporting the development of search terms with the reviewers.

References
11. ZM, et al.: Evidence about the implementation and effectiveness of


Linda Alinane Nyondo-Mipando
School of Public Health and Family Medicine, Department of Health Systems and Policy, College of Medicine, University of Malawi, Blantyre, Malawi

The proposal is relevant and well outlined. The authors should specify how the disagreements will be settled during the time of the review. This needs to be specified ahead of time.

There seems to be a leaning towards Malawi as such the authors have to be specific if this review is Malawi specific or will include other countries as well. Either way, the direction as far as the setting is concerned and boundaries for the papers that will be included should be explicit. If it covers research beyond Malawi, then other works from other countries should be cited as well and Malawi should not stand out.

Is the rationale for, and objectives of, the study clearly described?
Yes

Is the study design appropriate for the research question?
Yes

Are sufficient details of the methods provided to allow replication by others?
Yes

Are the datasets clearly presented in a useable and accessible format?
Partly

Competing Interests: No competing interests were disclosed.

Reviewer Expertise: Health Systems and Policy, Maternal Newborn and Adolescent Health and HIV and AIDS researcher

I confirm that I have read this submission and believe that I have an appropriate level of
expertise to confirm that it is of an acceptable scientific standard, however I have significant reservations, as outlined above.

Reviewer Report 19 February 2021

https://doi.org/10.21956/hrbopenres.14308.r28641

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**Professor Patricia Leahy-Warren**

1 School of Nursing and Midwifery, University College Cork, Cork, Ireland  
2 National University of Ireland, Cork, Ireland

**Dr. Helen Mulcahy**

School of Nursing and Midwifery, National University of Ireland, Cork, Ireland

Thank you for the opportunity to review this scoping review protocol, which seems particularly timely as the authors have clearly identified the dearth of synthesised evidence relating to the BFHI and particularly the BFCI. This scoping review using the framework by Arskey and O’Malley (2005) is clearly described and the rationale for choice of review is defended. The Scoping Review protocol as presented is clearly articulated outlining each step of the systematic review process. As reviewers we have the following suggestions which we propose would enhance the review protocol:

1. The inclusion of the reference to Malawi in the abstract is a distraction and recommend its removal.

2. The conclusion to the scoping review needs to be mirrored in the abstract as there seems to be a disconnect between the global perspective and the research plans articulated for Malawi.

3. The last statement of the Study rationale section refers to empirical research, yet the inclusion criteria includes reviews. This needs to be revised.

4. There is no need to use the abbreviations in the ‘Identifying the research question’ section as this had already been previously addressed.

5. The iterative process for this scoping review is to be commended. However, as per point 2 above, the global perspective needs to be better reflected in stage 1.

6. In Stage 2, it is to be commended that a librarian would be engaged in the search strategy as this will ensure that all relevant databases and appropriate search terms will be utilised.

7. The authors refer to the inclusion of ‘all types of review’, however, we believe that inclusion of reviews should be confined to systematic reviews, metasynthesis or any that have been underpinned by a defined framework such as PRISMA.
8. In relation to point iii) of the inclusion criteria, could greater clarity be provided by referring to the support from the 10 steps to interrogate the evidence as support in general is such a broad concept.

9. In relation to point vii) empirical studies, it would be best to revise if the authors are including reviews.

10. In terms of Exclusion criteria no iii), we suggest that conference proceeding also be included here.

11. In Stage 3, we suggest us of the term papers be employed rather than studies to reflect that more than one paper may be published from a particularly study.

12. In Stage 4, it is important to note that identifying gaps in the literature through a scoping study will not necessarily identify research gaps where the research itself is of poor quality since quality assessment does not form part of the scoping study remit. Therefore we suggest this limitation is acknowledged.

13. On the data extraction plan, the final point (no 11) states ‘key findings’ which seems non specific. The inclusion of sub divisions would aid clarity.

14. In Stage 5, use of the Levsque framework is not clearly articulated, for example, is it the intention to extract data according to the framework?

15. In Stage 6, following on from the above point, reference to the ‘…application of the accessibility framework…’ is not clear.

16. In Stage 6, there is reference to realist research which is not sufficiently contextualised or integrated with the scoping review protocol and maybe consider removing.

Thanking you and wishing you every success with this work
Patricia and Helen

Is the rationale for, and objectives of, the study clearly described?
Yes

Is the study design appropriate for the research question?
Yes

Are sufficient details of the methods provided to allow replication by others?
Partly

Are the datasets clearly presented in a useable and accessible format?
Not applicable

Competing Interests: No competing interests were disclosed.
**Reviewer Expertise:** Patricia Leahy-Warren areas of research expertise include but not limited to: breastfeeding; perinatal mental health; transition to parenthood and social support. Helen Mulcahy areas of research include but not limited to: breastfeeding support; child health; and parental concern.

We confirm that we have read this submission and believe that we have an appropriate level of expertise to confirm that it is of an acceptable scientific standard.