



A study to Assess the Knowledge and Practice of Staff Nurses and Postnatal Mothers on Implementation of Baby Friendly Hospital Initiative in a Tertiary Care Hospital in Chennai

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Authors' contributions

This work was carried out in collaboration among all authors. Authors RM and SK designed the study, performed the statistical analysis, wrote the protocol and wrote the first draft of the manuscript. Author SK managed the analyses of the study. Author RS managed the literature searches. All authors read and approved the final manuscript.

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ABSTRACT

Aims: Breastfeeding is considered the ideal nutrition for neonates. It not only provides the essential micronutrients and macronutrients but also helps in building a bond between the baby and the mother apart from its long term effects. For the promotion of breastfeeding several steps have been initiated by the UNICEF and WHO of which BFHI is the most important initiative. This study is to assess Knowledge and Practice regarding breastfeeding of BFHI among Nurses and postnatal mothers.

Study Design: A non experimental descriptive study.

Place and Duration of Study: Department of Neonatology and Department of obstetrics, Saveetha Medical College and Hospital, Saveetha University, Chennai, India. Between September 2020 and December 2020.

Methodology: A hospital based survey was done among 40 staff nurses and 40 postnatal mothers regarding their knowledge about BFHI and breastfeeding, demonstration of practice of breastfeeding and principles of BFHI and their perceptions on factors that hinder the implementation of BFHI. Data on knowledge of baby-friendly hospital initiative and breastfeeding was collected by using a self-administered structured questionnaire and practice of breastfeeding by observation checklist. Descriptive (frequency, percentage, mean, standard deviation) and inferential (Chi-square, normality test, and Spearman's rank correlation) statistics were used for data analysis with SPSS version 20.

Results: Both the staff nurses and mothers were assessed for knowledge using 7 questions compared to the postnatal mothers the knowledge about BFHI and Breastfeeding was higher among the staff nurses. Successful practice of breastfeeding and principles of BFHI was studied using demonstration of proper positioning, attachment, expression of breast milk and skin to skin contact which again was higher among the staff nurses compared to the mothers. The findings show that out of 40 nurses surveyed, more than (77.1%) of the respondents had a good level of knowledge and more than three-fourth had a good level of practice of breastfeeding. Among the mothers there was significantly lesser knowledge with less than half (45%) had knowledge about BFHI. Regarding the practice of breastfeeding and BFHI (89%) of the staff nurses demonstrated successful breastfeeding and principles of BFHI in comparison (75.5%) of the mothers showed successful breastfeeding. Regarding the hindrances to breastfeeding both the mothers and staff nurses had similar views.

Conclusion: There is still lack of complete awareness of some major recommended practices in the hospitals that will promote and sustain breastfeeding. The staff nurses and postnatal mothers need to be educated further on the importance of breastfeeding and principles of BFHI. This can be achieved by promoting antenatal and lactation counseling of the mothers and training of the staff nurses on the principles of BFHI. Policy changes in educating mothers and staff nurses on promoting breastfeeding should be implemented.

Keywords: Breastfeeding; baby friendly hospital; WHO; neonatal mortality.

1. INTRODUCTION

Breastfeeding is considered as the most preferred method of baby feeding to fulfill babies' nutritional needs. Worldwide around 40% of children below six months are breastfed exclusively [1]. In India around 64.9% [2] are exclusively breastfed. The Target of 2025 is to increase exclusive breastfeeding rates by 50% globally and 69% in India [3].

Baby Friendly Hospital Initiative was launched in the year 1991, by UNICEF and World Health Organization to support and promote breast feeding [4]. A facility can be considered as baby friendly when it does not accept breast milk substitutes, feeding bottles, and has implemented ten steps to support breastfeeding. It has laid down Ten Steps of Successful Breastfeeding which are accepted as the minimum global criteria for attaining the status of a Baby-friendly Hospital.

In spite of increase in the institutional deliveries (82.86%) less than half of the neonates are initiated on breastfeeding with one hour of being born [5].

With the Governments new strategies to promote breastfeeding including the new programs like MAA, the importance of breastfeeding initiation and exclusive breastfeeding for six months is stressed upon. The knowledge among health care personnel and among the mothers regarding breastfeeding and BFHI needs to be addressed as the priority criteria for evaluating the success of implementation of this BFHI initiative. There are limited studies evaluating practice of nurses and mothers with regard to BFHI. Hence this study was undertaken to assess the knowledge practice of principles of Baby Friendly Hospital Initiative among staff nurses working in obstetric and neonatal care and mothers in the postnatal ward which in future would enable the administrators to plan strategies to implement BFHI more effectively.

2. MATERIALS AND METHODS

A non experimental descriptive study was done among forty staff nurses working in obstetric and neonatal care units and forty mothers admitted for safe confinement at Saveetha medical college and hospital between September 2020 and December 2020.

Convenience sampling technique was used to select the subjects. Staff nurses who are working in obstetric or neonatal care units for the past 3 months and forty mothers were included in the study. Data on socio personal and professional characteristics including age, sex, religion, number of children, personal experience in breast feeding professional education, years of experience in obstetrics or neonatal wards, type of employment, official category/position, attendance to CME on BFHI or breast feeding were obtained using self- report technique and practice adherence on BFHI using participant observation technique. A structured observation checklist was used to assess the practice of subjects with regard to selected components of BFHI guidelines.

The components studied included knowledge about breastfeeding and BFHI, Practice of principles of BFHI and finally the possible hindrances to the implementation of BFHI were also studied.

To test the knowledge seven questions related to definition of BFHI, components of a BFHI, benefits of breastfeeding, definition of rooming in, demand feeding and knowledge about other artificial feeding options were asked and recorded in a structured questionnaire. Structured Observation Checklist was used to collect data regarding practice adherence of staff nurses and mothers on BFHI guidelines.

Knowledge about possible hindrances to implementation of BFHI were also recorded in the specified format.

Institutional ethical clearance was obtained. Subjects were given opportunity to read the Participant Information Sheet and made provisions to clarify their doubts. Informed consent was obtained from the subjects who showed willingness to participate in the study.

2.1 Statistical Analysis

Data were analyzed using Microsoft Excel and R software. Median, range and inter quartile range were used to assess practice adherence score on BFHI. To evaluate the association of practice adherence scores with selected socio personal and professional variables Chi-square test / Fisher's Exact were used.

3. RESULTS

A total of 80 participants were included in the study. Forty staff nurses and forty mothers. The socio demographic details were collected. Majority of them were in the age group between 20 to 30 years. Majority of them were neither having children nor had one child. Previous breastfeeding experience was absent among most of the staff nurses while most of the mothers interviewed had previous breastfeeding experience.

Table 1. Demographic characteristics of study participant

Sociodemographic characteristics	Staffnurses N (%)	Postnatal Mothers N (%)
Age		
<20 years	3 (7.5%)	3 (7.5%)
20 to 30 years	31 (77.5%)	34 (85%)
>30 years	6 (15%)	3 (7.5%)
Religion		
Hindu	15 (37.5%)	32 (80%)
Christian	25 (62.5%)	4 (10%)
Muslim	1 (2.5%)	2 (5%)
Previous children		
Nil	37 (92.5%)	22 (55%)
One	3 (7.5%)	16 (40%)
Two	0	2 (5%)
Previous breastfeeding experience		
No	37 (92.5%)	22 (55%)
Yes	3 (7.5%)	18 (45%)
Education		
School	0	25 (62.5%)
Graduate	39 (97.5%)	12 (30%)
Postgraduate	1 (2.5%)	3 (7.5%)

Table 2. Source of information about breast feeding and BFHI

Variable studied	Staff nurse N(%)	Postnatal mothers N(%)
Breastfeeding and BFHI Awareness		
Yes	40 (100%)	18 (45%)
No	0	22 (55%)
Source of information		
CNE	18 (45%)	0
Part of curriculum	22 (55%)	0
Lactation classes	0	11 (27.5%)
Peers	0	22 (55%)
Antenatal counseling	0	7 (17.5%)

Data regarding the exposure to benefits of breastfeeding or BFHI was also collected and source of information was also recorded. Among the staff nurses all the nurses had undergone some class or nursing education or training with respect to breastfeeding and principles of breast feeding and BFHI. While among the mothers significant number of them was not advised about breastfeeding during their pregnancy but was given counseling after delivery.

3.1 Knowledge of Breastfeeding and BFHI

Knowledge of BFHI and breastfeeding was studied by 7 questions related to breastfeeding, demand feeding, BFHI, Artificial feeds. 28 staff nurses knew about BFHI compared to 11 mothers. 23 staff nurses knew about the components of BFHI compared to 6 mothers. With regards to BFHI principles 32 nurses compared to 19 mothers knew the principles. Majority of the staff nurses knew about exclusive breastfeeding, demand feeding and rooming in compared to the mothers. Other options for feeding like artificial feeds were known by both the mothers and staff nurses.

From the statistical analysis it was found that the knowledge about breastfeeding among the staff nurses and postnatal mothers varied significantly. The variations were evident in the knowledge about BFHI, components of BFHI, definition of exclusive breastfeeding and baby friendly practices.

3.2 Practice of Breastfeeding and BFHI Principles

34 and 36 staff nurses demonstrated correct positioning and attachment for breastfeeding compared to 29 and 31 mothers. Early skin to skin contact and correct hand expression was

demonstrated by 38 and 32 nurses compared to 11 and 26 mothers

3.3 Hindrances to Breastfeeding and Attitude towards BFHI Implementation

The major hindrance to implementation of breastfeeding and BFHI principles among the participants both the staff and mother showed that being a working woman, family pressure, inadequate weight gain, thought of inadequate milk supply, breast infection, inconvenience of giving breastfeeding, alternative feeds are available were some of the reasons which hinder breastfeeding and BFHI implementation.

4. DISCUSSION

4.1 Knowledge among Staff Nurses and Mothers

There have been previous studies which have looked at knowledge and practice of breastfeeding and BFHI among the staff nurses and mothers. A previous study done in India. [6] showed very poor knowledge among staff nurses where less than 50 percent of the respondents had knowledge about BFHI and breastfeeding which is dissimilar to our finding. This is possible due to the higher number of nurses attending CNE and training programs in our hospital. Also since the centre has a comprehensive lactation management centre, the staff nurses are trained as a part of their induction training also. Other studies in Turkey [7] and India [8] have shown moderate knowledge which is again slightly dissimilar to our finding. These findings again are possibly due to the previously explained reasons. The diversity of hospitals and differences in practices may have resulted in such a difference in the level of knowledge of breastfeeding. Similarly knowledge among mothers in our study is also similar to the reports from other studies

Table 3. Knowledge of breastfeeding and BFHI among nursing staff and postnatal mothers

Knowledge	SN (n=40) n(%)	PNWM (n=40) n(%)	P value*
Heard of the BFHI	28 70%	11 27.5%	0.0003*
What are the components of the BFHI	23 57.5%	6 15%	0.0001*
Name three baby-friendly care practices and routines	32 80%	19 47.5%	0.004*
Define exclusive breastfeeding	36 90%	24 60%	0.003*
Define rooming-in	38 98%	28 70%	0.006*
Define demand feeding	33 82.5%	26 65%	0.12
Define infant feeding options for an diseased/covid mother	26 65%	14 35%	0.013*

Table 4. Practice of BFHI principles by nursing staff and postnatal mothers

Practice	SN (n=40) n (%)	PNWM (n=40) n (%)	P value*
Show correct positioning of baby	34 85%	29 72.5%	0.27
Show correct attachment to the breast	36 90%	31 77.5%	0.22
Show correct hand expressing technique	32 80%	26 65%	0.21
Should initiation of breastfeeding & skin to skin contact practised within one hour after birth	38 95%	33 82.5%	0.15
Should babies need to suck on a dummy/pacifier	38 95%	32 80%	0.08

Table 5. Attitude towards BFHI principles of nursing staff and postnatal mothers

BFHI principle	SN (n=40)		PNWM (n=40)		P value
	n (%)	n (%)	n (%)	n(%)	
	Agree	Disagree	Agree	Disagree	
The benefits of breastfeeding outweigh any difficulties/ inconvenience mothers may encounter	40 100%	0	39 97.5%	1 2.5%	1.0
Mother should stop breastfeeding if she develops a breast infection (mastitis)	6 15%	34 85%	16 40%	24 60%	0.023*
Exclusive breastfeeding for six months is the optimal feeding for healthy babies	39 97.5%	1 2.5%	35 87.5%	5 12.5%	0.20
Working mothers can breastfeed exclusively	37 92.5%	3 7.5%	32 80%	8 20%	0.19
It is very difficult to breastfeed exclusively up to six months of age	0	40 100%	4 10%	36 90%	0.11
Babies younger than six months should not be given water	38 95%	2 5%	35 87.5%	5 12.5%	0.43
Healthy full-term babies need additional fluids, other than breast milk	39 97.5%	1 2.5%	35 87.5%	5 12.5%	0.20
Early supplements can result in insufficient breast milk supply	38 95%	2 5%	36 90%	4 10%	0.67
Implementation of the BFHI results in effective breastfeeding	40 100%	0	38 95%	2 5%	0.49
Implementation of the BFHI is a burden to nursing staff	0	40 100%	0	40 100%	1.0
Complementary feeding should start at six months	38 95%	2 5%	35 87.5%	5 12.5%	0.43

In the present study, nearly three fourth of the respondents knew of the existence of breastfeeding policy, and out of them nearly three fourth gave correct answers regarding ten steps of breastfeeding policy. Similarly most of the staff nurses and mothers were aware of the terminology demand feeding, exclusive breastfeeding.

The dissemination of information among staff nurses through CNE and mothers through lactation counseling and antenatal counseling and during postnatal visits resulted in a better knowledge in our study compared to previous studies [6-9].

4.2 Practice of Principles of BFHI and Breastfeeding

In our study, most of the staff nurses showed good practice of breastfeeding in relation to initiation of breastfeeding, good positioning, and good attachment with around 89% of the staffs showing good practice scores. Even among the mothers the practice scores were 77.5% this finding is similar to previous study from India where the majority showed good practice [6].

However these findings are dissimilar to studies from Pakistan [9] and also other studies from India where level of practice was found to be between 38.1% to 51% [11].

In our study all the mothers were supported for breastfeeding initiation, which is similar to the study by Indira Timalina et al. [10]. Previous studies have consistently shown that supporting breastfeeding is a key concept in continuation of breastfeeding and almost all postpartum mothers requires motivation and continuous support from a health professional and family members for successful breastfeeding [11].

4.3 Hindrances to Implementation of Breastfeeding and BFHI

Majority of the respondents were aware of the hindrances to implementation of breastfeeding and BFHI and many respondents also feel that adequate steps are not provided to overcome them in all the situations. These were similar to study by Daniels et al. [12].

5. CONCLUSION

Our study has demonstrated that there is moderately good knowledge and practice among

the staff nurses and postnatal mothers about breastfeeding and BFHI however there is lack of complete and clear knowledge which needs to be strengthened further with the help of lactation counseling during antenatal visits. Practice of breastfeeding and BFHI was good among the participants in the study; however continued efforts need to be taken in this aspect also.

CONSENT AND ETHICAL APPROVAL

As per university standard guideline participant consent and ethical approval has been collected.

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COMPETING INTERESTS

Authors have declared that no competing interests exist.

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