

ASSESSMENT OF COMPLIANCE OF BABY FRIENDLY HOSPITAL INITIATIVE IN TERTIARY CARE HOSPITAL, SOUTH INDIA

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Abstract

Background: The effect of interventions by the Government on breastfeeding practices especially in a tertiary care hospital setting is poorly studied. The objective is to assess the compliance of a tertiary care hospital, in South India with the ten steps of the Baby Friendly Hospital Initiative following the UNICEF/WHO global criteria. **Materials and Methods:** This Cross-sectional study was conducted in Government run Tertiary care hospital, in South India from October 2022 to November 2022. Staff nurses who were posted in the obstetrics and gynaecology department and the mothers admitted to antenatal, postnatal, and labour wards were the participants and a total of 180 participants were included. **Result:** Only 35% of the staff nurses interviewed received formal training in breastfeeding techniques. Written information about breastfeeding was given to all prenatal mothers (100%) yet, only 75% knew the importance of breastfeeding soon after delivery. Only 62.5% of babies were exclusively breastfed and 51.3% of the babies were breastfed within one hour of birth. Compliance with the Ten Steps of the baby-friendly initiative was 66.63%, signifying moderate compliance overall. **Conclusion:** Compliance with the Ten Steps of Baby-friendly Hospital initiative was moderate. More focused approaches are needed to improve breastfeeding practices in healthcare institutions.

INTRODUCTION

Breastfeeding has been recognized as an essential component of a child's nutrition because of its dramatic effects on morbidity and mortality, especially in infants under one year of age. According to estimates, achieving universal breastfeeding rates might stop 823,000 children from dying each year.^[1] Worldwide, more than two-thirds of the deaths of children under five years are caused by Malnutrition. More than two-thirds of infant deaths under the age of five occur in the first year of life, and inappropriate feeding practices are important contributors. World Health Organization (WHO) and the United Nations International Children's Emergency Fund (UNICEF) recommends that breastfeeding should be initiated within the first hour of delivery; it should be continued exclusively for the first six months and can be continued until two more years with complementary feeding. Globally, only 40% of infants under the age of six months are exclusively breastfed, and only 44% of infants are started breastfeeding within the first hour of life.^[2] According to the national family health survey 5

(NFHS-5), in India, only 42% of the babies are breastfed within the first hour of life and 63.7% of the babies are exclusively breastfed for at least 6 months. In Tamil Nadu, 60% of the babies are breastfed within the first hour of life and 55% of the babies are exclusively breastfed for at least 6 months.^[3] The risk of death in neonatal period is 33% higher for infants who begin breastfeeding after the first hour compared to newborns who were breastfed within the first hour after birth.^[4]

The WHO and UNICEF's collaborative program, the Baby Friendly Hospital Initiative (BFHI), has identified the steps to support and promote breastfeeding in hospitals around the world.^[5] According to the Baby Friendly Hospital Initiative, the "Ten Steps to Successful Breastfeeding" should be the standard of care for all maternity care facilities to promote breastfeeding.^[6] Being baby-friendly is a gradual process rather than something that happens all at once.^[7] Mother's absolute affection Program(MAA) is a program launched by the Government of India (GOI) in 2016 to promote breastfeeding through health systems.^[8] According to the World Breastfeeding Trends Initiative (WBT)-

India study from 2018, which highlighted that there has been not much development since 2005 and that India's implementation of the BFHI initiative is not performing well, there are significant deficiencies in both policy and programs.^[9,10]

In this setting, it becomes essential to assess the compliance of tertiary care hospitals in the government sector with baby-friendly hospital initiatives.

Objectives

To assess the compliance of a tertiary care hospital, in South India with the ten steps of the Baby Friendly Hospital Initiative following the UNICEF/WHO global criteria.

MATERIALS AND METHODS

Study Setting: Tertiary care hospital, Tamil Nadu, South India

Study Design: Cross-sectional study

Study Duration: October 2022 to November 2022 (2 months)

Sample Size: Sample size was calculated using the following formula: $4pq/d^2$.

A prevalence of 86 % (BFHI compliance) (11) and absolute precision of 5% were considered. The expected sample size was obtained to be 180, divided between Antenatal mothers (n=80), Postnatal mothers (n=80) and staff nurses (n=20)

Sampling Method: Simple random sampling; Computer generated random numbers were used.

Study Population: Staff nurses who are posted in the antenatal, postnatal wards and the mothers admitted to antenatal, postnatal, and labour wards.

Eligibility Criteria

- Pregnant women in third trimester with at least two ANC visits
- Those Postpartum mothers with antenatal care in the study facility, with at least three ANC visits during the pregnancy, and delivered after 32 gestational weeks were included. Also, they should have been booked for discharge and received discharge counselling.
- Staff nurses posted in the antenatal, postnatal wards for at least 6 months were included.

Exclusion Criteria

Postpartum mothers whose babies were unhealthy or preterm were excluded.

Data Collection: The Baby-friendly hospital initiative monitoring and Reassessment: tools to sustain progress, World health organization, Geneva data collection instrument was used. ^[12,13] The participants were instructed to go through the questionnaires and get their doubts clarified before answering. For those unable to read, the information was disclosed in the presence of a witness and data was collected.

Qualitative Data Collection: The first phase involved assessing the maternal/newborn profile of the hospital, reviewing documents, and observing procedures in key areas. They were scored based on

adequacy, accuracy, and completeness. Possible scores ranged from zero to 100%.

Quantitative Data Collection: The second phase involved face-to-face interviews to assess (a) knowledge (b) skills (c) practices and (d) support systems

“Yes” responses were equivalent to 100 points; “No” and “Don't know” to 0 points. Unanswered statements were given 0 points as the practice was considered compliant only if the respondent was aware of it.

Statistical Methods: Data entry was done in Microsoft Excel as per the standard BFHI monitoring and reassessment tool. Results were entered into the WHO/UNICEF BFHI computer tool (WHO & UNICEF, 2009), summarized, and scored. All data were analyzed quantitatively and presented as descriptive statistics. Percentage scores for each criterion were added, and the average was taken to derive the total compliance. The global standards require a minimum of 80% compliance for almost all indicators. To determine the extent of the BFHI implementation, compliance was classified as low (< 50%), moderate (50–80%), and high (> 80%).

RESULTS

This cross-sectional study was carried out in a tertiary care hospital with a sample size of 180. This included 80 antenatal mothers, 80 postnatal mothers and 20 staff nurses.

Step 1 is about having a breastfeeding policy. Written breastfeeding policy (step 1) showed full compliance as IEC banners and posters were displayed inwards and in consultation rooms. All the antenatal, postnatal and labour wards displayed written breastfeeding policy (100%) and there are no posters or materials promoting breast milk substitutes (100%). Step 2 is about training the healthcare workers about the breastfeeding policy.

Out of the 20 staff in the study, 4 staff received 18 hours of training according to records and 4 staff received 18 hours of training as reported by them, yet all the 20 have the correct breastfeeding management knowledge. No staff was given refresher training. [Table 1]

Step 3 is about educating pregnant women about the benefits and management of breastfeeding. Maternal and child protection (MCP) card was available to all the antenatal mothers, which contained information regarding breastfeeding practices. Also, all discharge summaries of antenatal mothers admitted during their pregnancy had details of breastfeeding.

Written information about breastfeeding was given to all prenatal mothers (100%) yet, only 75% knew the importance of breastfeeding soon after delivery and 72.2% knew the importance of giving only breast milk for up to 6 months. 68.75% of mothers knew the benefits of breastfeeding, 62.5% knew the importance of feeding on demand and 52.5% knew how to ensure enough production of breast milk.

Only 47.5% of prenatal mothers knew about correct positioning and attachment of the baby and 36.25% knew about rooming in. 51.3% of the babies were breastfed within one hour of birth (Step 4) and the proportion was even lower (43%) for infants delivered via the caesarean section. [Table 1] 50% of the mothers were offered help with breastfeeding (Step 5).63% of the mothers were offered help with correct positioning or attachment.63% of the mothers demonstrated correct positioning/attachment and 61% of the mothers were taught how to express milk. Only 20% of the staff had demonstrated correct positioning/attachment though the majority of them said that they knew the correct technique. Step 6 is regarding exclusive breastfeeding and 62.5% of babies were exclusively breastfed. [Table 2]. Step 7 is about rooming in and 46.25% of postnatal mothers practiced rooming within one hour of birth.53.75% of mothers were not separated from their babies for more than one hour. The mean score of step 7 was 50% [Table 2]. Step 8 is about encouraging breastfeeding on demand.88.75% of postnatal mothers were advised to

breastfeed on demand and no limitations were put on mothers in their breastfeeding in 58.75%. The mean score of step 8 was 73.75% [Table 2]. Step 9 is about not giving any artificial teats or pacifiers to breastfeeding infants.90% were not given pacifiers and 87.5% were not fed with a bottle. The mean score of step 9 was 88.75% [Table 2]. Step 10 is about breastfeeding support groups. 100% of mothers were given written information on where to get help with breastfeeding after discharge, while only 28.5% of mothers were advised the same. Out of the 23 mothers who were advised on where to get help with breastfeeding, 78.26% of them could list at least one appropriate way they were advised to get help. The mean score of step 10 was 88.75% [Table 2]. Step 1 (written breastfeeding policy) was fully met, hence has good compliance. Step 2 (staff training) was least met, thus resulting in poor compliance. The rest of the steps were moderately met. Compliance with the Ten Steps of the baby-friendly initiative was 66.63%, signifying moderate compliance overall.

Table 1: Compliance with baby-friendly hospital initiative (Steps 1-5)

Step 1– have a breastfeeding policy that is routinely communicated to all healthcare staff					
Step1	Criteria			Percentage	
1(A)	Policy displayed			100%	
1(B)	No posters or materials promoting breast milk substitutes			100%	
Cumulative mean % for step 1 [(1a + 1b)/2] = 100%					
Step 2– Train all healthcare staff in the skills necessary to implement this policy					
Step2	Criteria			N=20	Percentage
2(A)	Staff receiving 18 hours of training (In records)			4	20
2(B)	Staff receiving 18 hours of training (reported by staff)			4	20
2(C)	Staff with correct breastfeeding management knowledge			20	100
2(D)	Trained staff scheduled for refresher training			0	0
Cumulative mean % for step 2 [(2a + 2b + 2c + 2d)/4] = 35%					
Step 3–inform all pregnant women about the benefits and management of breastfeeding					
3(A)	1	A written description of prenatal education		100%	
3(b)	Topic	Knowledge of mothers on:	N = 80	Percentage	
	1	Benefits of breastfeeding	55	68.75	
	2	Importance of breastfeeding soon after delivery	60	75	
	3	Importance of rooming-in	29	36.25	
	4	Correct positioning and attachment	38	47.5	
	5	Importance of feeding on demand	50	62.5	
	6	What can be done to ensure the production of enough breastmilk	42	52.5	
	7	Importance of giving only breastmilk for up to 6 months	58	72.5	
		Mean		59.29%	
Cumulative mean % for step 3 [(3a + 3b)/2] = 79.64%					
Step 4: Help mothers initiate breastfeeding within a half-hour of birth					
4(a)	Babies breastfed within one hour of birth (vaginal delivery)			25 (Out of 43)	58.13%
4(b)	Babies breastfed within one hour of mothers being able to respond (caesarean)			16 (Out of 37)	43.24%
4(c)	Babies breastfed within one hour (vaginal and caesarean)			41 (Out of 80)	51.25%
Cumulative mean % for step 4 [(4a + 4b)/2] = 51.25%					

Table 2: Compliance with baby-friendly hospital initiative (Steps 6-10)

Step 5: Show mothers how to maintain lactation, even if they should be separated from their infants				
Step	Criteria		N=80	Percentage
5(a)	Mothers offered help with breastfeeding		40(n=80)	50
5(b)	Mothers offered help with positioning or attachment		51(n=80)	63.75
5(c)	Mothers demonstrating correct positioning/attachment		51(n=80)	63.75
5(d)	Staff demonstrating correct positioning/attachment		14(n=20)	20
5(e)	Mothers taught how to express milk		49(n=80)	61.25
5(f)	Staff describing an acceptable technique for milk expression		16(n=20)	80
Cumulative mean % for step 5 [(5a + 5b ++ 5f)/6] = 56.45%				
Step 6: Give newborn infants no food or drink other than breastmilk, unless medically indicated				
6(a)	Babies breastfeeding exclusively		50	62.50%

Step 7: Practice rooming-in (allow mothers and infants to remain together)			
7(a)	Babies rooming in within one hour of birth	37	46.25
7(b)	Mothers and babies not separated for more than one hour	43	53.75
Cumulative mean % for step 7 $[(7a + 7b)/2] = 50\%$			
Step 8: Encourage breastfeeding on demand			
8(a)	No limitations put on mother's breastfeeding	47	58.75
8(b)	Mothers advised breastfeeding on demand	71	88.75
Cumulative mean % for step 8 $[(8a + 8b)/2] = 73.75\%$			
Step 9: Give no artificial teats or pacifiers to breastfeeding infants			
9(a)	Babies not given pacifiers	72	90%
9(b)	Babies not fed with bottles	70	87.50%
Cumulative mean % for step 9 $[(9a + 9b)/2] = 88.75\%$			
Step 10: Foster the establishment of breastfeeding support groups and refer mothers to them on discharge from the hospital or clinic			
10(a)	Mothers advised on where to get help with breastfeeding	23	28.75%
10(b)	Mothers who could list at least one appropriate way they were advised to get help	18 (Out of 23)	78.26%
10(c)	Mothers receiving written information on where to get help	80	100%
Cumulative mean % for step 10 $[(10a + 10b + 10c)/3] = 69\%$			

DISCUSSION

This cross-sectional study was carried out in a tertiary care hospital with a sample size of 180. This included 80 antenatal mothers, 80 postnatal mothers and 20 staff nurses.

Written breastfeeding policy (step 1) showed full compliance. Only 35% of the staff nurses interviewed received formal training in breastfeeding techniques which is comparable to national trends.^[14] Of all steps, step 2 (train all healthcare staff) has the least compliance due to there being a yearly rotation of staff in various departments, high staff turnover and funding constraints. The 2018 revision of the BFHI criteria focuses on practical competencies (WHO & UNICEF, 2018) necessitating flexible and less time-consuming training.⁽⁶⁾ Available pieces of evidence suggest that implementation of a minimum of 18 hours of training for health care providers has been shown to positively impact breastfeeding practices significantly.^[14] Though concrete efforts are taken by the government to promote breastfeeding, the proportion of trained staff nurses available at labour wards is still low.⁽⁸⁾ TS Raghu Raman et al has demonstrated that proper health care providers' education and training can lead to the modification of practices from being "inappropriately baby friendly" to being "appropriately baby and mother friendly."^[15] Only 51% of the babies were breastfed within one hour and it is lower than the national average of 55%,^[16] which is a worrying trend. The practice of breastfeeding within one hour reported by us is low as compared to other studies as well. Sridevi et al had reported that 59% of mothers initiated breastfeeding within 1 h of childbirth.^[17] Shalini S et al. have reported that 56% of mothers initiated breastfeeding within 1 h of childbirth.^[18] The national family health survey 5 reports that 60% of mothers had initiated breastfeeding within one hour in Tamil Nadu.^[3] Training components and monitoring mechanisms need to be strengthened more to sustain good breastfeeding practices.^[16]

75% of the post-natal mothers knew the importance of breastfeeding soon after delivery and 72.2% knew the importance of giving only breast milk up to 6 months. Only 47.5% of prenatal mothers knew about

correct positioning and attachment of the baby and 36.25% knew about rooming in. Jelly et al had reported better results than our study (81%).^[19]

Step 5 (how mothers breastfeed/ maintain lactation) was moderately followed (56.45%) [Table 2]. Only 50 % of them were offered help with breastfeeding, 63.75% of them were offered help with positioning and attachment of the baby and hence the same 63.75% of them were able to demonstrate the correct method of positioning and attachment. Sultania et al had reported good compliance with breastfeeding techniques whereas some studies had reported low compliance with good breastfeeding techniques.^[20,21] Only 62.5% of the babies were exclusively breastfed in our studies which is above the national family health survey-5 finding of 55%.^[3] However, few studies had reported a higher percentage.^[18] This area didn't show much progress over the years though there is strong evidence that exclusive breastfeeding is essential up to 6 months of age of the infant. Breastfeeding is a complex behaviour and mere knowledge is not enough to sustain the practice. A lot of factors influence the compliance of breastfeeding like cultural beliefs, strong influence from the commercial sector, lack of support and misinformation etc.^[10]

Despite there being a written breastfeeding policy on the maternal child health card (MCH), there is moderate compliance with Step 3 (inform all pregnant women about breastfeeding) and Step 8 (encourage breastfeeding on demand) because mothers often tend to skip reading that section of the card. Other reasons for poor adherence to step 8 were sore nipples, unsupportive households, working mothers and so on.

According to Gupta et al., Steps 3, 5, and 10 call for expertise and depending on the education and availability of healthcare professionals appear to be more challenging to implement.^[14] The overall compliance of the institution under study, with the BFHI standards was found to be moderate viz, 66.63%. In a study done in Ganna, compliance was 86%.^[11] According to the Cochrane review on baby-friendly hospital initiatives, the average global BFHI compliance score is 77 which is higher than our study compliance score.^[22] According to a World Bank

report, though the hospital staff was required to promote early breastfeeding and encourage mothers who wanted to breastfeed exclusively, these measures were not supported by any policy, monitoring system, or specialised training. Particularly during caesarean section deliveries, newborns were separated from their mothers. Mothers with breastfeeding problems lacked any sort of follow-up support from the healthcare system.^[23]

CONCLUSION

Compliance with the Ten Steps of the baby-friendly initiative was low even in a tertiary care setup in south India. Good breastfeeding practices should be promoted in all health facilities. To attain the intended results, evaluation tool development for assessing breastfeeding habits and rewarding healthcare organizations should be promoted. The practice of exclusive breastfeeding is low. More focused approaches are needed to improve breastfeeding practices even in tertiary care settings in India.

Limitations

The study was conducted in a tertiary hospital in the government sector. Therefore, its findings and conclusions do not apply to the primary and secondary health facilities in the government sector or to private hospitals. Staff could have altered their behaviours and given responses that might not necessarily reflect their routine practices. The study was conducted at a single centre and therefore its results cannot be accurately generalized on a large scale

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