

Evaluating the impact of baby-friendly Hospitals on mother's knowledge and practices regarding breastfeeding in Karachi, Pakistan

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Abstract

Introduction: Breastfeeding is a natural way of feeding to a new born baby. World Health Organization launched a Baby Friendly Hospital initiative in 1992, to strengthen maternity practices to support breast-feedings. Currently, about 19250 hospitals world wide have achieved Baby Friendly Status. To evaluate the role of Baby Friendly Hospital Initiative on feeding and weaning practices of mothers in improving health status of children under five years of age

Methodology: Cross sectional comparative study was done at baby friendly hospital (BFHI) and non-baby friendly hospital (Non BFHI) Karachi. A total of 784 mothers were selected through convenient sampling and grouped according to place of birth.

Results: Feeding practices in BFHI group was better in some respects. Among them 81% mothers did not give any pre-lactal feeds, 79% mothers reported that their babies were exclusively breast fed up to four months of age and 31% reported that they initiated breast feeding within one hour after the delivery.

Conclusions: Baby Friendly Hospital initiative has a beneficial effect on feeding practices of mothers and duration of exclusive breastfeeding. But some areas of optimal breastfeeding practices are not taken care well. Initiation of breastfeeding within ½ to 1 hour needs attention.

Key words: Breast feeding, Baby Friendly Hospital Initiative, weaning, exclusive breast feeding

Introduction:

Breastfeeding is a natural way of feeding to a newborn baby. Breast milk contains all nutrients that a baby needs for the first few months of life and it is quickly and easily digested. A number of studies have amply demonstrated the important role that breastfeeding plays in child survival¹. The risk of death due to diarrhea in non- breastfed compared to breast fed infants is 25 times more in children under two years of age. The relative risk of death due to lower respiratory tract infections is 3 times more in children under two months old and two times more in those between 3 – 11 months. Similarly, the relative risk of morbidity is 6.9 times more for diarrhea, 5 – 6 times more for acute lower respiratory tract infections and three times more for hospitalization in the first year of life^{2,3&4}.

WHO and UNICEF launched the Baby Friendly Hospital Initiative to strengthen maternity practices to support breastfeeding in 1992. The foundation for the BFHI are the Ten Steps to Successful Breastfeeding described protecting, promoting and supporting breastfeeding, a joint WHO / UNICEF statement⁵.

The Baby Friendly Hospital Initiative (BFHI) is considered as one of the most successful international effort ever performed to protect, promote and support breastfeeding⁶. Currently 20,000 maternity facilities in 150 countries around the world have earned the Baby-Friendly designation⁷.

In 1991 Pakistan became signatory of BFHI and in 1992 practical work was started. However, infant mortality rate is still high in Pakistan. In a country where exclusive breastfeeding prevalence is only 16 percent at 4 months of age, this much effort is not acceptable. Since 1992, BFHI was implemented through assessments of hospitals by WHO/UNICEF questionnaire on "Ten Steps to

Successful Breastfeeding⁸. So far limited data is available regarding impact of Baby Friendly Hospital initiative on knowledge, attitudes and practices of mothers for breastfeeding and weaning.

Primary objective of this study was evaluating the impacts of baby-friendly hospitals on mother's knowledge and practices regarding breastfeeding in Karachi, Pakistan. The secondary objective of study was to compare the knowledge. (Regarding feeding and weaning of babies) of mother who delivered babies in Baby friendly Hospitals and with those of babies born in non-baby friendly hospitals.

Methodology:

This was a comparative cross-sectional study which was conducted at Pediatric outpatient clinics of Lady Dufferin Hospital and Sind Government Hospital Karachi for the duration of six months from March 2015 to August 2015 after taking the Ethical committee approval from Lady Dufferin Hospital. Lady Dufferin was the Baby friendly Hospital and Sind Government was non baby friendly hospital. The sample size of 392 was calculated through WHO calculator by using the proportion of 48%⁸ with 95% C.I and 5% margin of error and it was doubled as study was conducted at two different centers so overall 784 mothers who came to pediatric clinics with children under 2 years of age were included in the study through convenience sampling technique after taking written consent. Those mothers whose children were seriously ill or with chronic illness were excluded from the study. Mothers were interviewed through semi-structured and pre-tested questionnaire regarding their socio-demographic, obstetric history of accompanied child and their knowledge, attitude and practices by the principal investigator himself. Data was entered and analyzed by SPSS version 20. Mean and standard deviation was calculated for continuous data. Frequencies and percentages were calculated for categorical data. To

establish association between variables of interest Chi square test was applied accordingly. During inferential analysis we compared the responses given by mothers in BFH and Non BFH hospitals. Chi square test was applied and P-value less than 0.05 were considered significant.

Results:

A total of 784 mothers were interviewed in our study. Out of this total 442 mothers (56.4%) were delivered in Baby Friendly Hospital (BFH) while 342 (43.6%) delivered babies in hospitals listed as non-Baby Friendly Hospital (Non BFH).

At BFHI setting majority of the mothers belonged to age group of 21 to 30 years (77.4% n=342), 15.4% (n=68) were above 31 years of age and 7.2% (n=32) were of 20 years or less. A very small proportion were of working mothers 3.6% (n=16) while rest of mothers 96.4% were housewives. About 43% (n=190) belonged to income group of above 5000 rupees per month. About 38.7% (n=171) mothers were having their first baby and 13.3% (n=59) mothers had five or more children. **In Non BFHI group** 71.9% (n=246) mothers belonged to age group between 21 years to 30 years of age, 1.2% (n=4) were working mothers while rest of mothers 8.8% (n=338) were housewives. About 59.9% (n=205) belonged to income group of below 3000 rupees per month, 23.1% (n=79) mothers were having their first baby

Feeding practices among mothers

Mothers from BFHI settings reported that 45% (n=199) were given breastfeed within one hour of birth. However mothers from Non- BFHI setting reported that more than half 65.5% (N=224) mothers started breastfeeding within one hour of birth.

Knowledge about feeding among mothers

In our sample mothers belonging to BFH setting 95% (n=420) of mother accepted that antenatal counseling about breastfeeding was done, 98.9% (n=437) mothers of this group believed that breastfeeding is beneficial, 41% mothers believed that breast feeding was cost effective. About 70.8% (n=313) knew that bottle-feeding is harmful, 40% mothers claimed that the self-study was the major source of information. In our non BFHI group no antenatal counseling regarding breastfeeding was done to 64% (n=218) mothers while 36% (n=124) were counseled about breast feeding. However, 95.6% (n=327) mothers believed that breastfeeding is beneficial. 44% believed that breast fed baby remains healthy with good growth. About 96.2% mothers (n=329) had knowledge about that bottle feeding is harmful and major source was health care providers.

Knowledge about weaning among mothers

Majority of mothers from BFH settings 56.8% (n=251) believed to start weaning at four months while from Non BFHI group only 69.3% (n=237) knew that weaning should start at the age of four months.

Table no 1. Comparison of optimal breastfeeding practices in babies delivered at BFHI and NON BFHI centers

Comparison of optimal breast-feeding practices in BFH and Non BFH babies					
Feeding practices		BFHI mothers n=442 (%)	Non BFHI mothers n=342 (%)	Chi square value	P value
Pre-lacteal Feeds	Not given	360 (81.4)	128 (37.4)	158.9	<0.01
	Given	82 (18.6)	214 (62.6)		
Start of breast feeding	Within 1 hour	201 (45.4)	224 (65.5)	31.14	<0.01
	After 1 hour	241 (54.6)	118 (34.5)		
Duration of exclusive breast feeding	Up to 4 months	349 (78.9)	93 (27.2)	210.1	<0.01
	< 4 months	93 (21.1)	249 (72.8)		
Duration of exclusive breast feeding	Up to 6 months	136 (30.7)	29 (8.5)	57.6	<0.01
	< 6 months	306 (69.3)	313 (91.5)		

Table no 2. Comparison of optimal breastfeeding practices in educated and non-educated mothers

Comparison of optimal breast-feeding practices in educated and not educated mothers					
Feeding practices		Educated mothers N=645 (%)	Non-Educated mothers N=139 (%)	Chi square value	P value
Pre-lacteal Feeds	Not given	408 (63.2)	80 (57.6)	1.6	0.123
	Given	237 (36.8)	59 (42.4)		
Start of breast feeding	Within 1 hour	331 (51.3)	94 (67.6)	12.2	<0.01
	After 1 hour	314 (48.7)	45 (32.4)		
Duration of exclusive breast feeding	Up to 4 months	381 (59)	61 (43.9)	10.7	<0.01
	< 4 months	264 (41)	78 (56.1)		
Duration of exclusive breast feeding	Up to 6 months	139 (21.6)	26 (18.7)	0.56	0.267
	< 6 months	506 (78.4)	113 (81.3)		

BFH: Baby friendly hospitals

Non BFH: Not designated baby friendly hospitals

Table no 3. Breastfeeding practices in educated and non-educated mothers

Comparison of mothers' knowledge about weaning in BFH and non-BFH centers					
Feeding practices		BFH mothers n=442 (%)	non BFH mothers n=342 (%)	Chi square value	P value
start of weaning	at 4 months	253 (57.2)	237 (69.3)	11.9	<0.01
	other than 4 months	189 (42.8)	105 (30.7)		
start of weaning	at 6 months	143 (32.3)	84 (24.6)	5.7	0.01
	other than 6 months	299 (67.7)	258 (75.4)		

Discussion:

The objective of present study was to find out the effect of Baby Friendly Hospital Initiative on feeding and weaning practices of mothers.

The first few days after delivery are very important. Mothers are more likely to succeed and continue breastfeeding if at this time proper guidance is provided. As soon as baby is delivered, let the mother hold him close and the mother should be encouraged to let the baby suckle⁹. The present study has shown that practices of prelacteal feeds are markedly reduced in BFHI setup. A very small number of babies were given prelacteal feeds in BFHI setup while in the Non BFHI setup more than half of the babies were given honey, ghutti, etc. as prelacteal feeds. Our results are almost similar to a study conducted at Lahore where 68% of the babies were given prelacteal feeds¹⁰. Giving prelacteal feeds is our cultural trend. A study conducted of Islamabad showed that giving prelacteal feeds was a deeply entrenched tradition. Women of all age group in the said study considered giving a lick of honey after birth to be religious injunction¹¹. So our results of Non BFH setting are in accordance to other Pakistan based studies^{12,13&14}.

Our results clearly show that BFHI is very successful in preventing prelacteal feeds, however in Non BFHI setup prelacteal feeds are still significantly practiced. One of the most important steps in successful breastfeeding is the initiation of breastfeeding within ½ to 1 hour. Our study has shown that in BFH setting only half of the babies were given breastfeed within one hour of birth. While in the Non BFH more than half babies were started breastfeeding within one hour. Our results are comparable to findings of Pakistan Demographic and Health Survey of 2006-07 where most of the babies were started breastfeeding after significant delay¹⁵.

The delay in the initiation of breastfeeding in Non BFH setup is explainable as it coincides with our general cultural setup. However, in BFHI setup, our results differ from recommended standards. There may be some explanation to this like at present BFHI setup are large hospitals where high risk deliveries are conducted and some of these babies are kept in neonatal units for observation and treatment. Therefore medical & surgical reasons may be a barrier to early start of breastfeeding.

Our study has shown that exclusive breastfeeding rates of four months were significantly high in BFH setting. These results are comparable with other studies conducted locally and internationally^{16&17}. Another cohort study showed that BFHI was probably the main factor for improvement of breastfeeding rates¹⁸. Promotion of Breastfeeding Intervention Trial (PROBIT) showed that experimental intervention has increased duration and degree (exclusivity) of breastfeeding¹⁹. Similarly, a Chinese study also showed that certified Baby Friendly Hospitals have high rates of breastfeeding²⁰. Similar results were reported from others studies^{21, 22&23}.

The present study reflects that still exclusive breastfeeding is practiced significantly till four months of age which is not in accordance to new recommendations that is of six months. Similar results have been reported from a study from Bangladesh which found highest rate of exclusive breast feeding in first month after the birth and successively decreased with increasing age²⁴. However, a study from Karachi reported that more than 77% of the children continue breast feeding up to 12-15 months of age but it is complementary breast feeding²⁵. In present study almost all the mothers were having some knowledge about the benefits of breastfeeding and disadvantages of bottle feeding. But their practices were different from their knowledge more markedly in Non BFH setup. These results are comparable with a study conducted at Karachi²⁶ and Egypt²⁷.

The study favors the positive role of BFHI but it was not a truly multicenter study. Most of the babies in BFHI were from one hospital.

Conclusions:

All the mothers whether delivered at BFHI settings or Non BFHI settings had adequate knowledge about feeding and weaning but their practices were different from their knowledge. Prevention of pre-lacteal feeds is significantly achieved but initiation of breastfeeding is not practiced adequately at BFHI setup.

Recommendations:

Baby Friendly Hospital Initiative should be expanded to all over the country. Every health facility with maternity services should be included in BFHI. BFHI should be a part of undergraduate and postgraduate, medical and nursing curriculum.

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