

Effect of educational intervention on breast feeding practices in tertiary care hospital, Gwalior Madhya Pradesh

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Abstract

Introduction: Evaluation of the effect of educational intervention on early initiation of breast feeding in full term normally delivered baby 1 & 6 months and factors affecting breast feeding. **Methods:** interventional study with subjects as mothers with vaginal delivered newborns excluding preterm, VLBW/ LBW /IUGR babies, newborn with medical or surgical problems and whose child didn't survive. Cases were pregnant women attending antenatal clinic of KRH (n=124) and controls were mothers delivered at government hospital except KRH. (n=120). Mothers counseled antenatally and helped for initiation of breast feeding immediately after birth and again counseled individually at discharge, on follow up at end of 1st and 6 months. In control group breast feeding practices were recorded at 1 and 6 months after birth without any counseling. **Results:** There were 76.8% (n=80) mothers who had early initiation of breast feeding in interventional group compared to 10.56% (n=12) in non-interventional group with odds ratio of 32.93 and 83% mothers in interventional group were practicing EBF (p = 0.01) against only 63%, and 49% mothers at 1 and 6 months respectively in non-interventional group. Effect of counseling in cases for EBF was more in primiparous (70.83% and 91.30%) than in multiparous (29.16% and 60.41%) at 1 and 6 months respectively (p = 0.01 and 0.04). **Conclusion:** counseling antenatally and at regular intervals significantly increase early initiation and sustained exclusive breast feeding. This influence primiparous mothers more.

Keywords: Breastfeeding, Counseling, Early Initiation

Introduction

Breastfeeding is the normal way of providing young infants with the nutrients they need for healthy growth and development. Virtually all mothers can breastfeed, provided they have accurate information and support of their family, the health care system and society at large. Exclusive breastfeeding is recommended up to 6 months of age. Breastfeeding is the ideal food for newborns and infants, providing them with all the nutrients they need for healthy development. If every child was breastfed within an hour of birth, given only breast milk for their first six months of life, and continued breastfeeding up to the age of two years, about 800 000 child lives would be saved every year [1].

Adequate breastfeeding counseling and support are essential for mothers and families to initiate and maintain optimal breastfeeding practices [2]. Early

breastfeeding within 1 hour and exclusive breastfeeding for the 6 months are the key interventions to achieve millennium development goal 1 (MDG) and MDG 4, which deal with reduction in child malnutrition and mortality. In India, effective implementations of these interventions are yet to be achieved. National Family Health Survey- 4 data show that the initiation of breast feeding within 1 hour is only 34.5% while the exclusive breast-feeding rates in children < 6 month is only 58.2% [3]. Counseling is very important in antenatal period for early initiation of breast feeding & sustained exclusive breast feeding.

Method

This study was a prospective non-randomized interventional study. Ethical approval was obtained from Ethical Committee, Gajra Raja Medical College, Gwalior. Informed and written consent of mothers was taken prior to enrollment in the study. Total 244 (calculated by $n = z^2 \cdot p(1-p) / d^2$) mothers were participant for study. One group (n=124) was given

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educational intervention for breast feeding benefits (as per the IYCF Guidelines) who attended Anti natal checkup and delivered in Kamla Raja Hospital and were called interventional group and other group (n=120) who were delivered in another hospital (after ethical clearance) were not given any intervention taken as non-interventional group. Educational intervention was in form of counseling about the benefits and importance of early initiation of breast feeding before delivery in the antenatal ward in third trimester then after delivery and 1 month and 6 months of age, assistance in starting breast feeding, motivation to continue exclusive breast feeding up to optimal period. This group was helped in starting breastfeeding within 1 h after delivery and during their stay at hospital and counseled at discharge. Counseling skills was adapted according to infant and young child feeding (IYCF) practice guidelines [4]. Early initiation of breastfeeding

is defined as breast feeding started within the first hour of life and Exclusive breastfeeding is defined as the infant exclusively receives breast milk and no any additional food or drink, not even water. Follow-up was carried out in newborn well baby clinic at the end of 1st and 6 months. Effect of counseling was also compared in primiparous and multiparous mothers enrolled in interventional group [Table 3]. Non-interventional group received all the information about breast feeding as per the standard protocol of the hospital and received no counseling by the investigator at any time during the study. Support for breastfeeding in the non-interventional group included the usual verbal encouragement provided by the maternity ward staff members, a general health assessment and an evaluation for evidence of successful breastfeeding behavior by the investigator. They were also followed at the end of 1st and 6th month and breast-feeding practices recorded.

Results

In interventional group out of 124 enrolled, 28 were excluded based on exclusion criteria and 96 mothers participated in study. Out of 96, 6 and 8 were lost to follow-up at 1 month and 6 months respectively so finally 82 mothers were taken for final analysis [Fig.1]. In non-interventional group, out of 120 enrolled mothers, 32 were excluded. 88 mothers were taken in study but 9 and 12 were lost to follow up at 1 and 6 months respectively so in group II finally 67 mothers were taken for final analysis [Fig.1].

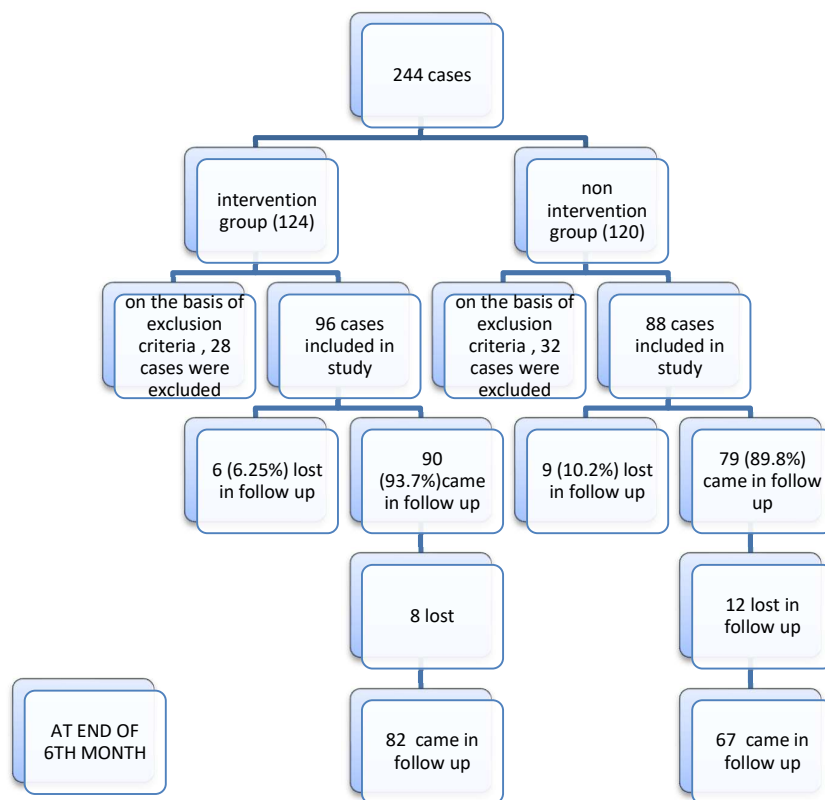


Figure-1: Study groups flow diagram, intervention group & non intervention group
 Participants flow diagram, 96 mothers were included in interventional group and 88 in non-interventional group

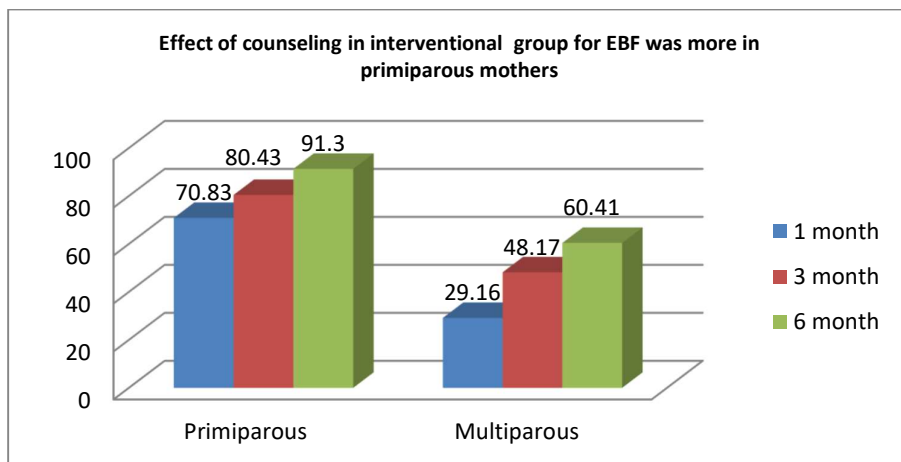


Figure-2: Effect of counseling in interventional group for EBF was more in primiparous mothers

In present study we observed that effect of counseling was more significant in primiparous mothers

Table-1: Base line demographic data of study groups showing educational status, parity and exclusive breastfeeding of mothers.

Base line demographic of study groups	Intervention group (n=96) (%)	Non intervention group (n=88) (%)	p value
Education of mothers			
Above high school	18 (18.75)	10 (11.36)	0.001
High school	26 (27.08)	16 (18.18)	0.002
Below high school	28 (29.1)	18 (20.45)	0.001
Total literate Mothers	72 (75)	44 (50)	
Illiterate	24 (25)	44 (50)	
Parity			
Primiparous	68(70.83)	42 (47.72)	
Multiparous	28 (29.16)	46 (52.27)	
EBF			
1 month	93 (96.8)	63 (71.6)	0.01
6 month	83 (86.4)	49 (55.6)	0.002

There were 76.8% (n=80) mothers who had early initiation of breast feeding in interventional group compared to 10.56% (n =12) in non-interventional group with odds ratio of 32. 93% and 83% mothers in interventional group were practicing EBF at 1 and 6 months respectively (p = 0.01) against only 63% and 49% mothers were practicing EBF at 1 and 6 months respectively in non-interventional group. Effect of counseling in interventional group for EBF was more in primiparous mothers (70.83% and 91.30% at 1 and 6 months, respectively) than in multiparous (29.16% and 60.41% at 1 and 6 months, respectively) (p = 0.01 and 0.04)[fig 2]. Analysis showed that literacy rate in mothers in interventional group was more (75%) compared to those in non-interventional group (50%). [Table-1].

Table-2: Distribution pattern of mean weight gain on follow up significant in interventional group

Weight (in kg)	Birth	1 month	6 month
Intervention group	2.66±0.39	3.61±0.48	5.79±0.52
Nonintervention group	2.49±0.36	3.07±0.41	4.86±0.78
Mean weight gain	0.27±0.03	0.54±0.07	0.93±0.26
p value	0.01	0.0006	0.00001
t value	2.78	4.93	5.45

In interventional group weight gain in new born at 1 month 3.61 ± 0.48 (in kg), was significantly higher as compared to weight gain in non-intervention group at 1 month (3.07 ± 0.41) with P value 0.0006, and at 6 months weight gain was higher in interventional group with p value 0.00001 [Table 2]

Discussion

The present study was undertaken to observe the morbidity pattern and breast-feeding practices in 244 newborns in Kamla Raja Hospital as well as other government maternity homes of Gwalior divided in to 2 groups intervention group and non-intervention group. The infants, so registered were periodically followed at 1 month and 6 months of age. At each follow up their feeding history was reviewed, nutritional status was assessed through anthropometry and clinical examination was done to discover any disease present and history regarding breast practices was recorded.

We observed in this study intervention group primiparous mothers were more effectively counseled for early initiation of breast feeding as compared to multiparous mothers. Dedicated lactation specialists may play a role in providing education and support to pregnant women and new mothers wishing to breastfeed to improve breastfeeding outcomes [5]. According to National Family Health Survey-3 data, about 20 million children are not able to receive exclusive breastfeeding (EBF) for the first six months, and about 13 million do not get good, timely and appropriate complementary feeding along with continued breastfeeding [3]. Over the past several years, India has failed to witness any remarkable progress in infant feeding practices, with only a small increment being recorded in EBF rates amongst infants 0-6 months of age – from 41.2% in 1998-99 (NFHS-2) to 46.3% in 2005–2006 (NFHS-3) to 58.2% in 2015-2016 (NFHS-4) [3].

In our study this 93% and 83% mothers in interventional group were practicing EBF at 1 and 6 months respectively ($p = 0.01$) against only 63% and 49% mothers were practicing EBF at 1 and 6 months respectively in non-interventional group. In other study the rate of early initiation of breastfeeding stands abysmally low at 24.5%, while the median duration of EBF among last-born children is as brief as two months. Further, the rate of EBF drops progressively from 51% at 2-3 months of age to 28% at 4-5 months of age [4]. In a recent Annual Health Survey conducted in India from 2010 to 2013 covering all the 284 districts (as per 2011 census) of 8 Empowered Action Group (EAG) States (Bihar, Uttar Pradesh, Uttarakhand, Jharkhand, Madhya Pradesh, Chhattisgarh, Odisha and Rajasthan and Assam) [6], the percentage of children breastfed within one hour of birth was observed to vary from 30% in

Bihar and Uttar Pradesh to around 70% in Assam and Odisha. Children exclusively breastfed for at least 6 months ranged from 17.7% in UP to 47.5% in Chhattisgarh [4]. In this study early initiation of breast feeding in interventional group was more (76.8%) compared to those in non-interventional group (10.56%). Early breastfeeding within 1 h and exclusive breastfeeding for the first 6 months are the key interventions to achieve millennium development goal 1 (MDG 1) and MDG 4, which deal with reduction in child malnutrition and mortality respectively [7].

In India, effective implementation of these interventions is yet to be achieved. National Family Health Survey-4 data show that the initiation of breastfeeding within 1 hour is only 41.6% while the exclusive breastfeeding rates in children <6 months is only 54.9% [3]. It has been estimated that initiation of breastfeeding within an hour of birth can save 1 million babies [8]. Promotion of early initiation of breastfeeding has potential to make a major contribution in achievement of healthy child survival MDG. About 16% of neonatal lives could be saved if all infants were breastfed from day 1 and 22% if breastfeeding started within the 1st hour [1].

This has particular relevance in our country, where neonatal and infant morbidity and mortality rates are high. Counseling has an inevitable role in successful and sustained exclusive breastfeeding along with early initiation of breastfeeding.

Therefore, this study was planned to assess the effect of counseling on breast feeding practices, especially early initiation and sustained exclusive breast feeding (EBF). Every mother, especially the primipara, should receive support from doctors, nursing staff or community health workers (in case of non-institutional birth) with regard to correct positioning, latching and treatment of problems, such as engorgement, nipple fissures and delayed 'coming-in' of milk. If available, dedicated skilled supports like Lactation Consultants/ Mother Support Counselors/ Peer Counselors should be facilitated to support the mother in the antenatal, immediate postnatal period, post discharge follow-ups and in neonatal care units.

Mothers need skilled help and confidence-building during all health contacts and at home through home

visits by trained community worker, especially after the baby is 3 to 4 months when a mother may begin to doubt her ability to fulfill the growing needs and demands of baby [4]. Early initiation and EBF was strikingly more in primiparous, which showed that these mothers could be easily motivated when approached during antenatal and immediate postnatal period to emphasize and teach them the importance of early initiation and sustained EBF along with technique of breast feeding.

Multiparous mothers, due to their previous experience in breast feeding, are difficult candidates for counseling for early initiation of breast feeding and also for sustained EBF in later life. A previous study also reported same results [9]. Similarly, a study of selected Mexican hospitals showed that counseling combined with babies staying with their mothers, significantly increased full breastfeeding among primiparous mothers [10]. Similar results were obtained in study done by Agre et al and Holmes et al. [11,12].

However, Ekström et al. concluded that parity had no significant influence [13]. common reasons for early breastfeeding discontinuation was early discharge from hospital. Which could be overcome if the woman was informed antenatally and on periodic basis about the benefits of breastfeeding and prepared mentally for exclusive breastfeeding.

This study revealed that antenatal breastfeeding education and postnatal lactation support, can significantly improve rate of early initiation of breast feeding and rates of exclusive breastfeeding for optimum period. Existing support for breastfeeding is inadequate in the population studied and needs to be strengthened.

Informing all pregnant women about the benefits and management of breastfeeding should be a priority during antenatal visits. Primipara mothers are most important target group for counseling because they are more adaptive. The group counseling was found more effective than individual mother counseling.

Conclusion

Early initiation of breast feeding after birth i.e. 1 hr prevents morbidities and promote healthy survival of infant & optimal weight gain in infants. Counseling in antenatal period is very effective in early initiation of breast feeding. Primiparous mother are more energetic as comparison to multiparous mother about breastfeeding.

What this study adds: Mothers/ caretakers/ attenders should be counselled in antenatal period to ensure hundred percent early initiation of breastfeeding.

Regular and periodic counselling for sustained breastfeeding upto six months of life and beyond that.

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Editorial

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