

## Original Research Article

# To assess the impact of various modes of postnatal breastfeeding education in promoting breastfeeding practices

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### ABSTRACT

**Background:** Breast milk is the best nutrient a mother can provide her baby. WHO recommends exclusively breastfeeding up to 6 months of life. The objective of the study was to study the impact of postnatal breastfeeding education in promoting breastfeeding practices and to identify the effective mode of education.

**Methods:** This is a RCT study conducted in Government RSRM lying-in hospital between Dec 2015 and May 2016. 300 women who delivered live, term, healthy, AGA babies were divided randomly into 3 study groups. Participants in group A were counselled about breastfeeding orally. Those in group B received written information and oral counselling. Group C members were shown an educational video apart from oral and written information. They were assessed on 15th day, 45th day, 3.5 months and 6 months using a simple questionnaire.

**Results:** Analysis showed that during the 1st visit, there was no statistical difference between groups. However, during the last visit there was significant statistical difference between groups with a p value of 0.004.

**Conclusions:** Audio-visual aid helps in better breastfeeding practices. Literacy status has no role in promoting breastfeeding practices.

**Keywords:** Breastfeeding, Education, Neonate, Postnatal counselling

### INTRODUCTION

Breast milk is the best nutrient a mother can provide her baby. Early administration of breast milk provides more health benefits to the mother as well as to the baby and it offers protection against infection.<sup>1</sup> As per WHO statistics, breast feeding lowers the risk of diarrhoeal diseases by 4 to 14-fold and the risk of respiratory illness by 5-fold. At present, globally only 38% of the infants are exclusively breastfed.<sup>2</sup> and alarmingly nearly 800,000 infant deaths occur due to sub optimal breast feeding. Babies who were fed nothing but breastmilk from birth till 6 months of life get the best start in life and are said to be exclusively breast fed. WHO recommends exclusively breastfeeding up to 6 months of life.

In India, most of the people are not aware of the health benefits of breast feeding. Breastfeeding targets both ends of the nutritional spectrum. It improves the nutritional status of the child, thereby reducing infant mortality rate, as malnutrition is a major contributor of IMR. Various studies states that breastfeeding also protects against obesity. Besides offering protection against asthma and diabetes mellitus it also favours neuronal development in the brain. There are various methods by which a post-natal mother can be counselled. Postnatal counselling for breast feeding was found to be marginally superior compared to antenatal counselling for breast feeding.<sup>3,4</sup> However, there are no much studies to assess the best mode of education. Henceforth our study was conducted

not only to create awareness to the postnatal mothers but also to identify the best method.

## METHODS

The objective of the study was to study the impact of postnatal breastfeeding education and its various outcomes. To identify the effective mode of education in promoting breastfeeding practices. This Randomised Control Trial was conducted between Dec 2015 and May 2016 in RSRM lying-in hospital, Stanley Medical College, Chennai. This study targeted women in the postnatal ward at the inpatient department.

### Inclusion criteria

Our study population included mothers who delivered a live, term (>37 weeks <42 weeks), healthy AGA (appropriate for gestational age) baby irrespective of the gravida status and the mode of delivery.

### Exclusion criteria

We excluded those mothers who had their babies admitted in NICU, LBW (<2.5kg), preterm delivery (<37 weeks) and babies born with any congenital anomaly.

We started this study after getting informed consent from the participants. During the study period, we divided the participants in to 3 groups namely Group A, Group B and Group C. Each group comprised of 100 participants.

Each of them had to fill a preformed questionnaire covering the literacy status, occupation, birth order and the sex of the baby born along with basic details like address and phone number. Participants in group A received oral counselling about the importance, advantages, management of common feeding problems, attachment and position, by a postgraduate/social worker trained in breastfeeding counselling.

This uniform counselling session took place in the postnatal wards for the sake of participant's convenience and each session lasted for 30-45 minutes. Members in group B were counselled about the same orally and they also received an information booklet containing details about the benefits of breastfeeding, pictures containing proper position and attachment in their vernacular language. Those mothers in group C were educated in the same way as group B and in addition these participants were shown an educational video which demonstrated the importance of breast feeding, attachment techniques and we also showed them the ill effects of bottle feeding, for example, videos of an infant with respiratory distress, acute diarrhoeal disease etc.

Oral session, booklet and videos were based on BPNI guidelines. After each counselling session, participants were given a chance to ask doubts and we clarified it for them. They were informed that exclusive breast feeding

meant only breastmilk and not formula feed or water. They were encouraged to exclusively breastfeed up to 6 months of age.

These participants were followed up at 15<sup>th</sup> day, 1.5 months, and 3.5 months and at 6 months. Participants were given a questionnaire to fill during each visit. Data were collected from those who did not turn up during any particular visit through telephone interviews.<sup>5</sup> The primary outcomes were rates of exclusive and predominant breastfeeding at each visit.

### Statistical analysis

Data analysis were done using SPSS software version 21. one way analysis of variance (ANOVA) test was used to analyse data collected from 3 groups at each visit. And to identify which group was more significant we used post hoc tests. p value <0.05 was considered significant.

## RESULTS

We totally recruited 300 participants for the ease of data collection. These 300 participants were randomly divided into 3 groups based on stratified randomisation technique.

We did not lose anybody to follow up because we were able to reach them through phone calls and our questionnaire was simple enough that it did not take much of their time too. Below flow chart depicts a simplified format of how we carried out our study

During the 1st visit, 80% women followed exclusive breastfeeding in group A, 86% in group B, and 88% in group C and there was no much statistical difference between groups.

We started noticing difference among them in the 3rd visit. However, during the last visit (4<sup>th</sup> visit) we found that there was significant statistical difference between groups with a p value of 0.004.

In order to find out which group was more significant we used post hoc test which stated that there was significant difference between group C and group B, and between group C and group A, as shown in Table 1 and Table 2.

**Table 1: Breastfeeding during 4<sup>th</sup> visit.**

	Sum of squares	Df	Mean square	F	Sig.
Between groups	1.407	2	0.703	5.464	0.004
Within groups	38.230	297	0.129		
<b>Total</b>	<b>39.637</b>	<b>299</b>			

Table 1 shows that there is significant difference between groups, thereby rejecting the null hypothesis.

We also compared the influence of occupation and literacy status on breastfeeding practices and we could

not establish a relationship between them as shown in Table 3 and Table 4 respectively.

**Table 2: Post-hoc tests multiple comparisons dependent variable 4<sup>th</sup> visit.**

(I) Groups	(J) Groups	Mean difference (I-J)	Std. error	Sig.	95% Confidence interval		
					Lower bound	Upper bound	
Games-howell	A	B	0.010	0.057	0.983	-0.13	0.15
		C	0.150*	0.047	0.005	0.04	0.26
	B	A	-0.010	0.057	0.983	-0.15	0.13
		C	0.140*	0.047	0.009	0.03	0.25
	C	A	-0.150*	0.047	0.005	-0.26	-0.04
		B	-0.140*	0.047	0.009	-0.25	-0.03

\*The mean difference is significant at the 0.05 level

**Table 3: Occupation Vs breast feeding practices.**

	Value	Df	Asymmetrical Sig
Pearson chi square	2.184	3	0.535

**Table 4: Literacy status and breast feeding.**

	Value	Df	Asymmetrical Sig
Pearson chi square	1.740	3	0.628

## DISCUSSION

This study demonstrated the importance of postnatal lactational counselling in breastfeeding practice. Prenatal counselling has been found to be of not much use as study done by Demirci et al similarly health literacy of the mother also had an effect on breast feeding practices.<sup>8,10</sup>

Our results showed that counselling the mothers at each visit was instrumental in getting better outcomes rather than one time counselling sessions. Noella Md Pereira et al study showed the importance of postnatal lactational counselling and neonatal weight gain pattern however it did not specify the effective mode of education.<sup>4</sup> In comparison our study besides stressing the importance of postnatal breastfeeding counselling also states that the outcome depends of the mode which we chose to educate the mothers. Providing printed information alone cannot motivate the mother to the extent of what a video does. Mattar CN et al also showed similar results concluding that printed materials regarding breast feeding alone is not sufficient.<sup>6</sup> Audio visual aid plays an important role in practising better breastfeeding practices. However, study done by Kellam et al showed that there was no improvement using audio-visual aid in hospital breast feeding in low income group.<sup>7</sup> Mothers who exclusively or predominantly breastfed were found to be happier than their counter parts. Women who did well in the beginning continued to do well in terms of feeding their baby and hence emotional and psychological part also to be considered in breastfeeding. Literacy status did not

contribute much to the outcome which concludes that proper counselling alone using combined techniques during the post-natal period made a vast change in the outcome even for those participants who were illiterate in contrast to the study done by Rahman et al.<sup>9</sup>

The following includes few limitations of our study. Our sample size was less and we could not follow up the participants for a longer period. We also did not include preterm and low birth weight babies which was yet another drawback.

What is already known: Breast feeding counselling has an important role in educating postnatal mothers.

What this study adds: Audio-visual mode of education is the best method to promote breastfeeding practices in mothers.

## CONCLUSION

Infants who are not breast feed are at the risk of infections like recurrent respiratory tract infection, acute diarrhoeal disease, malnutrition etc. which contributes to morbidity and mortality. Need of the hour is to create awareness among the mothers about all the ill effects of not breast feeding. All women must ideally receive this education during the antenatal period. However, in our setup all antenatal women do not receive routine lactational counselling. So now the burden lies in the hands of the paediatrician and it is the duty of the paediatrician to motivate the mother to breast feed their babies. In order to motivate them, post-natal lactational counselling can be looked upon as a better option. Our study concluded that those mothers who received postnatal counselling using combined oral method, written information as well audio visual aid had better breastfeeding practices.

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