



## Title of the Paper: Breast Feeding Practices Among Non Working Women in North Chennai, Tamil Nadu

### KEYWORDS

Prelacteal Feeding, Colostrum, Exclusive Breast Feeding, Bottle feeding

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**ABSTRACT** *This hospital based cross sectional survey was designed to determine the various breast feeding practices adopted by non working women in north Chennai, Tamil Nadu, India. A total of 200 mothers with infants aged 6 to 12 months were enrolled from three different private hospitals. An interview schedule was formulated by the researcher which was pretested and validated for reliability. Results concluded that 79.5 percent of the mothers were breastfeeding during the study period. Only 35 percent of mothers initiated breastfeeding within one hour after birth and practice of giving prelacteal feeds like honey, donkey milk and sugar water was observed among 41 percent of the total participant. Fortunately no mother practiced discarding of colostrum due to misconception. Nearly half of the mothers practiced exclusive breast feeding. Faulty practice like using feeding bottles was adopted by 49 percent mothers for supplementation of infant formula and cow's milk. Significant relationship at 1 percent level was observed between family income and weight of children.*

### INTRODUCTION

Breastfeeding is associated with significant maternal and infant health benefits and is promoted as the optimal form of infant feeding by the American Academy of Pediatrics (AAP) and the World Health Organization (WHO)[1]. Globally, malnutrition is a big challenge and is responsible for 50% of deaths of children aged less than five years (under-five children). Two-thirds of these deaths occur during the first year of life, which is often attributable to faulty feeding practices [2].

Adequate nutrition during infancy and childhood is essential for the development of children's full human potential. Inadequate infant feeding practices, coupled with high incidence of infectious diseases which demands an urgent need for comprehensive evidence based strategy to tackle the situation [3].

Evidence based interventions, which include initiation of breastfeeding within one hour of birth, exclusive breastfeeding for the first six months of life and introduction of appropriate and adequate complementary food at 6 month of age, and then continued breastfeeding with complementary feeding to two years of age and beyond [4]. Since breast feeding practices adopted by mothers directly influence the health of the children, there is a felt need to study the breast feeding practices prevalent in north Chennai where illiteracy and poverty are rampant problems. The objectives of this study are to provide descriptive analysis of the maternal socio-demographics and breastfeeding practices. Further the study also attempts to explore the impact of maternal education and economic status on birth weight of the infants.

### Aim of the study

- Obtain basic maternal demographic data including age, educational qualification, family income, type of family and weight of the infant.
- To assess the impact of maternal educational and economic status on birth weight of the infants.
- To explore various breast feeding practices like colostrum feeding, prelacteal feeding, breast feeding initiation and duration, type of breast feeding practices, bottle feeding and month of initiation of top feedings like cow's milk and infant milk substitute

### MATERIALS AND METHODS

#### Study design

Study design employed was descriptive cross sectional study.

#### Selection of area

The study was conducted in Washermenpet and Thiruvotriyur located in northern part of metro Politan city of Chennai, Tamil Nadu, India. The subjects were selected by means of purposive random sampling technique from three different private hospitals namely Nagamani hospital private limited, Sanjeevani nursing home and Kumaran hospital located in north Chennai after seeking prior permission from the concerned authorities.

#### Sample size and description of participantse

Two hundred mothers with children aged between 6 – 12 months were selected. Verbal consent was obtained from all respondents after explaining the details. Mothers who visited their pediatrician in outpatient department in all three private hospitals for routine checkup, minor illness and vaccination for their babies were interviewed over a period of 3 months. The birth weight of the infant was noted either from immunization chart or enquired from the mother.

#### Study instrument

An interview schedule was formulated by the researcher which includes maternal socio demographics, general information of the babies and breast feeding practices. Pilot study was conducted with 10 percent of total population to validate the questionnaire.

#### Data analyzes

The raw data obtained was analyzed using SPSS software. Both descriptive and inferential statistics were used and conclusion was drawn accordingly. Descriptive statistics such as frequency, percentage and standard deviation will be used for analyzing the demographic profile and various breast feeding practices. Inferential statistics like ANNOVA was used to determine the impact of maternal education and economic status on birth weight of the infants.

### RESULTS AND DISCUSSION:

**TABLE 1: Maternal socio demographic profile and general**

information of infants

	Variable	Classification	N(%)
Socio demographic profile of mother	Educational qualification	Primary	45(22.5)
		Secondary	77(38.5)
		Undergraduate	55(27.5)
		Postgraduate	23(11.5)
	Economic status	Low income	47(23.5)
		Lower middle	53(26.5)
		Upper middle	38(19.0)
High income		62(31)	
Age of mother	<25	117(58.5)	
	>25	83(41.4)	
Family set up	Nuclear	75(37.5)	
	Extended	46(23)	
	Joint	79(39.5)	
General information of infants	Mode of Delivery	Vaginal	103(51.5)
		Caesarean	48.5(97)
	Age of the children in months	6 – 8	86(43)
		8 – 10	47 (23.5)
10 – 12		67(33.5)	
Sex of the baby	Male	101(50.5)	
	Female	99(49.5)	

TABLE 1 illustrates socio demographic profile of the mothers and general information of infants. Data revealed that 45% and 77% of mothers had attained primary and secondary levels of education. Nearly 55% of mothers had professional under graduation degree and only 23% had completed their post graduation.

Kuppuswamy's socioeconomic status revised scale was used to classify economic status of the participants. The results revealed that almost 31% of the participating mothers belong to high income group and about 23.5% and 26.5% were from low income and lower middle income group respectively. Rest of them belonged to upper middle income group. The mean age of the participating mothers was 24.95±3.7 years. More than half of the mothers (58.5%) were in the age group < 25 years and rest of them were in the age group > 25 years of age.

Regarding general information of infants, about 51.5% of the babies were born by vaginal delivery and rest of the mothers had Caesarean section. The mean age of infants was 9.05±2.1 month. A majority 43% were aged between 6 – 8 month while 33.5% and 23.5% of the children belonged to 8 – 10 and 10 – 12 month of age respectively. The study had an even distribution of male and female infants which is about 50.5% and 49.5% of infants respectively.

TABLE 2: Comparison of mean birth weight of the children with maternal economic and educational status using ANOVA

Anthropometric measurement	Source of variation	Sum of Squares	Df	Mean Square	F	Sig.
Weight (Kg) and Economic status	Between Groups	1.814	3	0.605	4.439	S**
	Within Groups	26.698	197	0.136		
	Total	28.512	200			
Weight (Kg) and educational status	Between Groups	0.861	3	0.287	2.034	NS
	Within Groups	27.651	197	0.141		
	Total	28.512	200			

S\*\* - Significant at 1 percent level, NS – Not significant

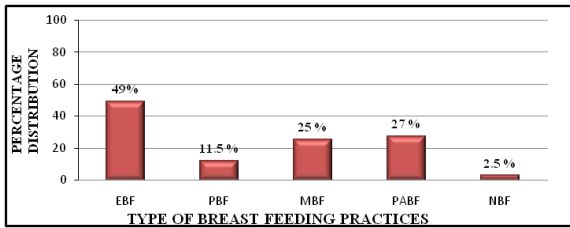
A difference in birth weight related to socio-economic status has been reported, but it was not known whether this is due to the maternal nutritional status or to non-nutritional differences in living conditions. So an attempt was made by the researcher to evaluate the relationship between socio demographic factors and birth weight of the infants using one way analysis of variance which was exhibited in the table 2. From the results it was observed that birth weight of the children was not influenced by educational qualification of the mothers. But results showed that F –ratio was found to be significant at 1 percent level indicating that birth weight of infants was influenced by the educational status of the mother. The weight of the infant born to mother from high income group was comparatively more than that of babies of mothers from other income groups.

TABLE 3: Breast feeding practices adopted by mothers

Breast feeding practices	N (%)
Breast feeding	79.5
Administration of prelacteal feeds	82(41)
Donkey milk	33(16.5)
Honey	18(9.0)
Sugar water	57(28.3)
Administration of colostrums	183(91.5)
Early initiation of breast feeding	
Within 1 hour	70(35.0)
1 – 6 hours	93(46.5)
6 – 12 hours	14(7.0)
After 12 hours	23(11.5)
Month of termination of breast feeding	
Below 10 days	5(2.5)
1- 3 months	8(4.0)
3 – 6 months	14(7.0)
6 – 9 months	11(5.5)
9 – 12 months	
Type of container	
Feeding bottle	82(41)
Paladai	36(18)
Straw tumbler	33(16.3)
Spoon	51(25.5)

TABLE 3 exhibits the various breast feeding practices adopted by mothers. Results revealed that around 41% of the mother gave prelacteal feeds which include donkey milk (16.5%), honey (18%) and sugar water (28.5%). The proportion of mothers who gave colostrum to the newborns was 91.7% and the reason cited for not feeding colostrum were inability of the infant to suck at the breast, premature baby, illness of the baby and mother and maternal exhaustion due to caesarean delivery. The proportion of mothers who initiated breastfeeding within one hour of birth was only 35%. About 46.5% of them initiated breast feeding between 1 – 6 hours. The major reason for decline in early initiation of breast milk was caesarean delivery, problems relating to nipple and insufficient milk production or lack of awareness of the rationale behind early initiation of breastfeeding. About 41% of the mother used feeding bottles. Bottle feeding is discouraged because improper sanitation and unhygienic method of formula preparation can introduce pathogens to the infant, putting the child at a greater risk of illness and malnutrition. Most mothers did not follow the recommended safe mode of giving fluids to the child such as paladai, spoon or tumbler. About 2% of the total mother discontinued breastfeeding even before one month of age.

FIGURE 1: Type of breast feeding practices



EBF – Exclusive breast feeding (when infant has received only breast milk from his or her mother along with syrups consisting of vitamins, minerals, supplements or medicines), PBF – Predominant breast feeding (when infant receives non – milk liquids like water, tea and gripe water besides human milk), MBF – Mixed breast feeding (when infant receives infant formula and cow’s milk besides human milk), PABF – Partial breast feeding (when breast milk is supplemented along with complementary foods), NBF – Not breast feeding.

FIGURE 1 elucidates different type of breast feeding practiced by respondents. It was noticed that only 49% of the mother practiced exclusive breast feeding. About 27% and 25% of the mother followed partial and mixed breastfeeding. The primary reason given by mothers was insufficient milk production and psychological feeling of mother that breast milk alone was no longer adequate after 3 month of age. Around 11% of the interviewed respondent stated that they followed predominant breast feeding.

FIGURE 2: Month of Initiation of supplementation of infant formula milk and cow’s milk

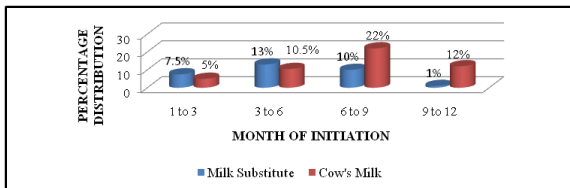


FIGURE 2 illustrates the month of initiation of supplementation to infants. Around 5 % of them introduced cow’s milk even before 3 month of age which is considered as too early. Around 10.5%, 22% and 12% of the mother introduced cow’s milk by 3 – 6 month, 6 – 9 month and 9 – 12 month respectively. The study also found that 4% of the mothers introduced milk substitute even before 3 month of age whereas 10.5% of the mother initiated by 3 – 6 month of age. The proportion of mothers who initiated milk substitute was predominantly high during 6 – 9 month of age.

**CONCLUSION:**

In conclusion, breast feeding practices adopted by non – working mothers in north Chennai are suboptimal and there is a huge gap still exists between ideal recommendation by world health organization and existing practices. Unsatisfactory and unexpected behavior regarding prelacteal feeding, delayed initiation of breast feeding, increased use of infant formula, diluted cow’s milk and bottle feeding was still widely prevalent and need to be addressed immediately. It is the sole responsibility of the hospitals to educate young mothers either during pre or post natal period through specific nutrition intervention programs about proper breast feeding practice to fight against malnutrition in India.

**REFERENCE**

1. Ip S, Chung M, Raman G, Chew P, Magula N, DeVine D, Trikalinos T, Lau J. (2007). Breastfeeding and maternal and infant health outcomes in developed countries. Rockville, MD: US Department of Health and Human Services. | 2. Black RE, Morris SS, Jennifer B. (2003). Where and why are 10 million children dying every year? Lancet. 361: 2226-2234. | 3. Bhandari N. (2004). An Educational Intervention to Promote Appropriate Complementary Feeding Practices and Physical Growth in Infants and Young Children in Rural Haryana in India. Journal of Nutrition. 134:9. | 4. '10 facts on breastfeeding', World Health Organisation, July 2012, <http://www.who.int>. Globally, less than 40% of infants under six months of age are exclusively breastfed, despite the documented benefits of breastfeeding. | 5. Kumar D, Goel NK, Mittal PC, and Misra P.(2006). Influence of infant-feeding practices on nutritional status of under-five children. Indian J. of Paediatrics. Vol.73 (5): 417-421. |