



Selected Breast Feeding Practices and its Association With Economic Status and Family Type of Mothers in North Chennai: a Descriptive Study

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ABSTRACT

The research presented in this manuscript constitutes an attempt to evaluate the association between socio economic status and family type of mothers on selected breast feeding practices like prelacteal feeding, time of initiation of breast feeding, exclusive breast feeding, month of initiation of top feeding and bottle feeding. A total of 200 non working mothers with children aged between 6 to 12 months were selected from three different private hospitals in Washermenpet and Thiruvotriyur located in northern part of metro Politan city of Chennai, Tamil Nadu. In this hospital based prevalence survey, self developed semi structured interview schedule was used to collect data. Interview schedule consisted of both open and closed ended questions which elicited information about mother's socio demographic profile and selected breast feeding practices. Pearson Chi-square test of comparison between groups was applied to evaluate the relationship between income level, family type of mother and breastfeeding practices. The results showed a statistically significant association between the demographic variables and selected breast feeding practices.

KEYWORDS : socio demographics, income level, type of family, association, bottle feeding

INTRODUCTION

Breastfeeding is an unequalled way of providing ideal food for the healthy growth and development of infants. Breast milk contains all the nutrients that a baby needs in the right quantity [1]. Poor infant and young child feeding behaviors are known to be one of the most important causes of child malnutrition, which in turn is a major cause of child mortality [2].

Many factors such as mother's socio economic status, type of family, education, working environment, hospital practices, and cultural differences influence the breast feeding practices and may be associated with the knowledge, attitudes, experiences and beliefs of the family members [3]. Acquiring information on factors influencing breast feeding practices may bridge the gap between the existing infant feeding practices and recommendations of WHO.

In particular, income is the major socioeconomic determinant of maternal and child health [4]. Wealth index of the family is strongly associated with the health of the baby, as mothers from a low socioeconomic status have limited resources, inadequate housing condition and less access to safe drinking water and hygienic food. Contrarily, mothers from high socioeconomic status are less vulnerable to health issues as they are able to make better decisions due to higher affordability [5].

The family is the basic and important unit of society because of the role in influencing individual behavior and practices [6]. Three types of family system (joint, extended, nuclear) exist predominantly in India. It is expected that mothers who belong to joint family system may follow appropriate breast feeding practices because of the strong influence of the family members. Study by Nithin Kumar in coastal south India also supports the fact that the mothers belonging to joint family, breast fed the child for more than a year compared to those belonging to nuclear families. Moreover, feeding related issues like maternal exhaustion, nipple problems, feeding premature baby, anxiety, depression and less secretion of milk can be tackled effectively by the encouragement, emotional and psychological support, guidance and advice provided by the family members especially the mother, mother in law and grandparents.

Hence the primary purpose of this research was to explore the association between the socio demographic factors like income level and family type of mothers and the selected breast feeding practices, both of which play a pivotal role in influencing the health of the children.

The aim of the research paper was

1. To provide descriptive analysis of socio demographic characteristics of the mothers like income level and type of family.
2. To identify the influence of income level and family type of mothers on selected breast feeding practices like pre lacteal feeding, breast feeding initiation, exclusive breast feeding practices, month of initiation of supplementation and bottle feeding.

MATERIALS AND METHODS

Study design: Hospital based descriptive study.

Selection of area: North Chennai in particular was selected because illiteracy and poverty are rampant problems which may influence the breast feeding practices. The study was conducted in three different private hospitals in Washermenpet and Thiruvotriyur located in north Chennai, after seeking prior permission from the concerned authorities in written form.

Sampling technique: The sampling technique employed in this observational study was purposive random sampling.

Sample size and description of participants: Two hundred mothers with children aged between 6 – 12 months who visited their pediatrician in outpatient department in all three private hospitals for routine checkup, minor illness and vaccination for their babies were selected randomly and interviewed over a period of 3 months by the researcher.

Study tool & Collection of data: Semi-structured interview schedule was formulated by the researcher to elicit information about mother's socio demographic profile and selected breast feeding practices. The variables used in socio demographic profile are family income per month in rupees and type of family like nuclear, joint and extended. Socio-economic status was assessed using Kuppuswamy's socio economic scale. Pilot study was conducted with 10 percent of study population initially to acquire pre-knowledge to validate the questionnaire and modifications were made accordingly.

Analysis of data: Completed surveys were entered into a computerized database using SPSS software. Descriptive statistics such as frequency, percentage and Inferential statistics like chi-square test was used in this study.

RESULTS AND DISCUSSION:

FIGURE 1:

Percentage distribution of income level of the mother's family

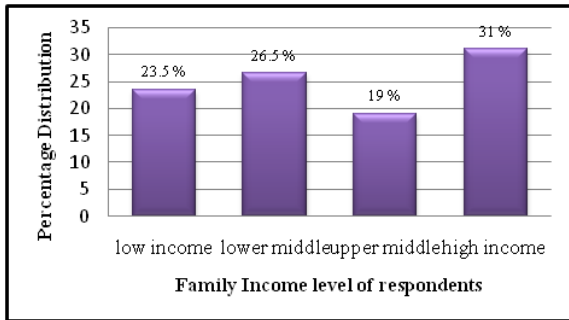


Figure 1 illustrates percentage distribution of family income of mothers. It was classified based on kuppusamy socio economic revised scale and accordingly the monthly income below 3000 (<3000) constituted low income group and 3000 -10000 constituted lower middle, 10000-25000 constituted upper middle and greater than 25000 (>25000) constituted high income group. Of the 200 mothers enrolled, 31% of the participating mothers belong to the high income while 23.5% and 26.5% were from low income and lower middle income respectively. Rest of the mothers belonged to the upper middle income status.

FIGURE 2:
Percentage Distribution of Family Type of mothers

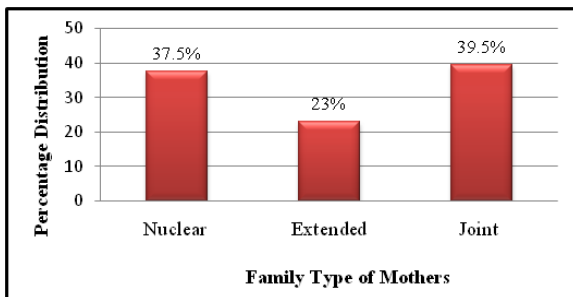


Figure 2 elucidates percentage distribution of maternal family type. It was observed that 37.5% of mothers lived in nuclear family background and nearly 39.5% and 23% of them stayed in joint and extended family set up. It can be witnessed from the survey that prevalence of joint family system was more in north Chennai.

TABLE 1:
Prevalence of selected breast feeding practices according to family income of mothers

Variables	Total sample N=200 N(%)	FAMILY INCOME OF MOTHERS				Chi Square value	p-value	Level of significance
		Low N(%)	Lower N(%)	Upper middle N(%)	High N(%)			
		47(23.5)	53(26.5)	38(19)	62(31)			
ADMINISTRATION OF PRE LACTEAL FEEDS								
	82(41)	31(66.0)	21(39.6)	13(34.2)	17(27.4)	17.595	0.001	S**
EARLY INITIATION OF BREAST FEEDING								
<1hr	70(35)	26(55.3)	24(45.3)	7(18.4)	8(25.8)	51.186	0.000	S**
1-3 hr	63(31.5)	7(14.9)	16(30.2)	17(44.7)	8(25.8)			
3-6 hr	30(15)	11(23.4)	3(5.7)	8(21.1)	4(12.9)			
6-9 hr	9(4.5)	0(0)	2(3.8)	2(5.3)	4(12.9)			
9-12 hr	5(2.5)	3(6.4)	1(1.9)	0(0)	0(0)			
	98(49.0)	32(38.3)	22(60.4)	25(57.9)	18(40.3)	7.955	0.035	S*
MONTH OF INITIATION OF INFANT MILK SUBSTITUTE								
1-3	15(7.5)	1(2.1)	1(1.9)	2(5.2)	11(17.7)	54.557	0.000	S**
3-6	26(13)	1(2.1)	7(13.2)	2(5.3)	16(48.4)			
6-9	22(11)	5(10.6)	6(11.4)	3(7.9)	8(25.8)			
MONTH OF INITIATION OF COW'S MILK								
1-3	10(5)	8(17.0)	2(3.8)	0(0)	0(0)	94.692	0.000	S**
3-6	23(10.5)	4(8.4)	4(7.6)	6(15.8)	9(14.5)			
6-9	58(34)	18(38.3)	19(32.1)	5(13.2)	16(25.8)			
	82(41.0)	20(42.6)	18(34.0)	15(39.5)	29(46.8)	2.023	0.623	NS
* - significant at 5% level, ** - significant at 1% level, NS - Not Significant								

Table 1 shows the association between income level of mothers family and selected breast feeding practices since women from higher income may be better able to afford feeding supplies like feeding bot-

les and formula feeds thus not following ideal feeding practices.

Regarding feeding of prelacteal feeds like honey, donkey milk and sugar water, income level was statistically associated with administration of prelacteal feeds at p < 1%. i.e administration of pre lacteal feeds are high among low income group i.e. 66%, whereas in high income group only 27.4% was observed.

The time of initiation of breast milk was found to be directly influenced by economic status of respondent family. A statistically significant association between time of initiation of breast feeding after childbirth and income level was observed at p < 1%. Early initiation of breast feeding was seen predominately high in low income (55.3%) and lower middle income (45.3%) in contrast to their counterparts from upper middle and high income groups. The infant should be put on breast, preferably within one hour of birth because of unique nutritional and antibody properties of colostrum.

The other interesting finding of this study was a statistically significant association was observed at p < 5% between exclusive breast feeding and family economic status. A higher family income level was found to be associated with lower rate of exclusive breast feeding in i.e around 61.7% of mothers from high income group had not practiced exclusive breast feeding, whereas only 39.6% of infant from low income group were not exclusively breastfed. The reason may be due to power of affordability, rise in living standard, wide availability of breast milk substitutes in market etc.

Wealth index of family had statistically significant association with the month of initiation of milk substitute at p < 1%. The data clearly reveals that mother from high income group are more likely to initiate milk substitute when compared to women from low, lower middle and upper middle income group. The discrepancy may be attributed to a difference in the knowledge level of the mother along with income level.

Month of initiation of cow's milk was also associated with income level of the mother at p < 1% level. As cow's milk is comparatively cheap and easily accessible it was not surprising to see mothers from low income level to start the same early i.e. is around 17%. Nearly 15.8% and 14.5% of mothers from upper middle and high income groups had started cow's milk during the period of exclusive breastfeeding. This unhealthy trend can be linked to lack of knowledge about hazards of diluted cow's milk.

The present study also attempts to assess the type of container used keeping in mind that feeding bottle is an important factor in the infamous malnutrition - infection. There was no significant association was found between use of feeding bottles and wealth index of the mother. So bottle feeding was practiced equally by mothers from all income groups.

TABLE 2:
Prevalence of selected breast feeding practices according to maternal family type

Variables	Total sample N=200 N(%)	MATERNAL FAMILY SET UP			Chi Square value	p-value	Level of significance
		NUCLEAR N(%)	EXTENDED N(%)	JOINT N(%)			
		75(37.5)	46(23.0)	79(39.5)			
ADMINISTRATION OF PRE LACTEAL FEEDS							
	82(41)	34(45.5)	20(43.5)	28(35.4)	1.707	0.426	NS
EARLY INITIATION OF BREAST FEEDING							
<1hr	70(35)	23(30.7)	14(30.4)	33(41.8)	21.901	0.016	S*
1-3 hr	63(31.5)	18(24.0)	24(52.2)	21(26.6)			
3-6 hr	30(15)	3(15)	17(22.7)	14(13.9)			
6-9 hr	9(4.5)	9(4.5)	0(0)	0(0)			
9-12 hr	5(2.5)	1(1.3)	1(2.2)	3(3.8)			
	98(49.0)	37(49.3)	26(36.5)	35(44.3)	1.742	0.412	NS
MONTH OF INITIATION OF INFANT MILK SUBSTITUTE							
1-3	15(7.5)	3(4.0)	4(8.7)	8(10.2)	28.715	0.052	NS
3-6	26(13)	7(9.3)	9(19.6)	10(12.7)			
6-9	22(11)	9(12)	8(17.4)	5(6.4)			
MONTH OF INITIATION OF COW'S MILK							
1-3 mo	10(5)	0(0)	1(2.2)	9(11.4)	46.293	0.001	S**
3-6 mo	23(10.5)	7(9.6)	4(8.7)	13(15.3)			
6-9 mo	58(34)	31(30.0)	18(38.6)	9(12.7)			
	82(41.0)	23(30.7)	23(30.0)	36(35.6)	2.023	0.063	NS

The above table exhibits the association between the selected breast feeding practices and type of family the mothers belong to. Mothers in joint and extended family set up are more likely to follow ideal

breast feeding practices because of the proper guidance by family members.

Type of family setup did not have significant influence on the practice of administration of prelacteal feeds. This was reflected in the fact that mothers belonging to all three type of family practiced administration of pre lacteal feeds. Pre-lacteal feeds interfere with mother's confidence, sucking stimulation of infants, and may introduce pathogens. Prelacteal feeds are usually administered due to strong social customs and cultural beliefs in India.

Regarding time of initiation of breast feeding, nearly 41.8 % of the mothers from joint family initiated breast milk within one hour after birth and 52.2 % of them from extended family started breast feeding within three hours after birth. It can be inferred from the data that mothers from nuclear family are less likely to initiate breast feeding, indicating the importance of the family members in the early initiation of breast feeding.

Contrary to our expectation, family type of mother had no significant association with exclusive breast feeding practices. So mothers from all three family types did not follow exclusive breast feeding.

As expected the urge for introduction of milk substitute even before six month of age was more prevalent among mothers from all three family back ground. Early introduction of cow's milk was predominantly high in joint family (11.4%) when compared to nuclear family in which the figures are negligible. Around 34.3% of mothers staying in extended family started feeding cow's milk only after 6 months. Use of feeding bottles did not show significant association with maternal family type. So it can be concluded that family type of mothers did not have any influence on bottle feeding practices.

CONCLUSION:

In summary, many socio economic factors like maternal age, education qualification, economic status, type of occupation, type of family, residential environment, life-style, religion, caste, culture, past experience and beliefs may influence breast feeding choices. In this survey a unique attempt was made to evaluate the influence of house hold income and family type of mothers on selected breast feeding practices like prelacteal feeding, time of initiation of breast feeding, exclusive breast feeding, month of initiation of top feeding and bottle feeding. The results showed that selected breast feeding practices were strongly associated with both the variables. The current findings emphasize on the need to understand the socio demographic factors to develop targeted educational interventions that would actively promote ideal breastfeeding practices among mothers.

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