



ORIGINAL RESEARCH PAPER

Medical Science

DEMOGRAPHIC FACTORS AND ANTE-NATAL COUNSELLING IMPACT ON BREAST FEEDING PRACTICES

KEY WORDS: Breastfeeding, socio-economic status, educational levels, ante-natal counselling, early initiation

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ABSTRACT

The object was a descriptive study to examine the impact of demographics like education and socio-economic status of mothers as well as ante-natal counselling on early initiation of breast feeding. Data was collected for the period August 2014 to August 2015 from 250 mother-infant dyads admitted in postnatal wards in the Niloufer Hospital for Women and Children, Hyderabad, affiliated to Osmania Medical College. A semi-structured questionnaire was used.

The total number of mother-infant dyads in the study was 250. 151 mothers out of 250 (60%) started breastfeeding their babies within one hour of delivery. Education levels and socio-economic status (Kuppuswamy class) appeared to have no relation to early initiation of breast-feeding. However, ante-natal counselling had a significant impact. Proper antenatal lactation counselling will motivate the mothers to initiate early breastfeeding.

INTRODUCTION

For the new born baby, breastfeeding has been recognized since time immemorial as the best natural, healthy and nutritious food for the baby. From a relationship perspective, breastfeeding bonds the mother and baby and provided an emotional comfort to the new-born (Sujatha et al, 2017)¹. Encouraging early initiation of breastfeeding has been a common goal for international, and national professional bodies. The American Academy of Pediatrics² (AAP) suggests exclusive breastfeeding for the first six months, a combination of breastfeeding and complementary foods from 6 to 12 months of age. The World Health Organization³ recommends that breastfeeding be initiated within 1 hour of birth. In India, the National Guidelines on Infant and Young Child Feeding⁴ (NGIYCF) also recommends to initiate breast feeding in first hour after birth and to continue exclusive feeding up to 6 months. At a 1990 meeting in Florence, Italy, the WHO and UNICEF announced the Innocenti Declaration⁵. The thrust of this document was the emphasis on a "social mobilization to reinforce a breastfeeding culture". Similarly, a UNICEF report of developing countries has suggested that exclusive breastfeeding of new-borns in the first six months can reduce the under-five mortality rates of infants below five years of age by 13%⁶.

However, the facts show something different. It is reported that only 39% of new-borns in the developing countries are breastfed within one hour of birth, and only 37% of infants under-six months of age are exclusively breastfed (Bhat et al 2012⁷). The WBTi 2012.⁸ India report of 2012 has reported that the rate of early initiation of breastfeeding was 40.5% and the rate of exclusive breastfeeding for six months was 46.8%.

There are many factors that inhibit breastfeeding. Breast related problems are a significant component of breast feeding problems which occurred between 3-7 postnatal days (Sujatha et al, 2017¹). These could also be the socio-economic status and education level of the mother, misperceptions and social taboos associated with breastfeeding and in some cases the maternal health of the mother. In their study, Yngvel and Sjo Estro Em9 (2001) found that that the initiation and duration of breastfeeding depended on socio-demographic, psycho-social, or health-care related factors of the mother.

OBJECTIVE

The object was a descriptive study to examine the impact of demographics like education and socio-economic status of

mothers as well as pre-natal and ante-natal counselling on breast feeding practices and to make suitable recommendations.

METHOD

This was a descriptive study of 250 mother-infant dyads admitted in postnatal wards between August 2014 and August 2015 in Niloufer Hospital for Women and Children, Hyderabad, which is a tertiary care hospital attached to the Osmania Medical College. The College Ethics Committee approved the study. Only mothers who were willing to participate in the study and healthy term and late pre-term babies (gestational age between 34 weeks, and 36 weeks and 6 days) were included in the study. Mothers were explained about the study and their informed consent was taken in writing. Exclusion criteria for the study was unwilling mothers, NICU admitted sick neonates, and preterm neonates (gestational age less than 34 weeks).

For this paper, the required information was extracted from the master data of a larger study. The master data was tabulated from the interviews conducted with the mothers using a semi-structured questionnaire, using local language where required. The questions used for this study covered demographic, social and economic status, and educational status of the mother. Information on antenatal history, current feeding practices, feeding problems in the present pregnancy, and whether the mother received any feeding advice or not was also recorded. The data used in this study does not permit the identification of any of the participants in the study, thus maintaining confidentiality of patient personal information.

STATISTICAL ANALYSIS

A master chart was prepared with all the data that was collected and transferred to MS Excel. Required data for sub-studies like this paper was extracted from this master data. Basis statistical tools were used to create tables and charts that could explain the data effectively. Chi-square test was performed wherever necessary.

RESULTS

The total number of mother-infant dyads in the study were 250. 151 mothers out of 250 (60%) started breastfeeding their babies within one hour of delivery fitting the definition of early initiation of breastfeeding.

Social Status and Early Initiation of Breast-feeding

To determine the socio-economic status of the mothers, the

Kuppuswamy socio-economic scale, the most widely used scale for urban populations, was used. This scale was devised by Kuppuswamy¹⁰ in 1976. The Kuppuswamy scale is a composite score of education and occupation of the head of the family along with monthly income of the family, which yields a score of 3-29. This scale classifies the study populations into high, middle, and low SES. A modified Kuppuswamy¹¹ scale was used for this study to classify the mothers into 5 socio-economic classes—1 to V. Education, occupation and income were the three factors used to arrive at the modified Kuppuswamy class (Tables 1 to 3).

Table 1--Educational Score		
1	Profession or Honours	7
2	Graduate or post graduate	6
3	Intermediate or post high school diploma	5
4	High school certificate	4
5	Middle school certificate	3
6	Primary school certificate	2
7	Illiterate	1

Table 2--Occupational Score		
1	Profession	10
2	Semi-Profession	6
3	Clerical, Shop-owner, Farmer	5
4	Skilled worker	4
5	Semi-skilled worker	3
6	Unskilled worker	2
7	Unemployed	1

Table 3--Monthly Family Income Score		
1	≥32050	12
2	16020 – 32049	10
3	12020-16019	6
4	8010- 12019	4
5	4810-8009	3
6	1601-4809	2
7	<1600	1

Based on these scores, the mothers were placed in one of the five following classes of Table 4. The actual distribution of mothers in the modified Kuppuswamy class is shown in Table 5.

Total score	Class
26-29	UPPER CLASS (I)
16-25	UPPER MIDDLE CLASS (II)
11-15	MIDDLE/LOWER MIDDLE CLASS (III)
5-10	LOWER/LOWER UPPER CLASS (IV)
<5	LOWER CLASS (V)

Table 4—Modified Kuppuswamy Class		
	n=250	Percentage
Lower class	10	4%
Upper lower	49	19.6%
Lower middle	131	52.4%
Upper middle	52	20.8%
Upper class	8	3.2%

The result of early initiation of breastfeeding based on the socio-economic status of the mother is shown in Table 6 below.

Kuppuswamy Class	EI* Yes	EI No	Total	% Yes
I	8	0	8	100%
II	28	24	52	53.85%
III	78	53	131	59.54%
IV	32	17	49	65.31%
V	5	5	10	50.00%
Total	151	99	250	60.40%

Table 6—Modified Kuppuswamy Social Status				
*EI= Early Initiation of Breast-feeding				

Analysis of this data in Table 6 shows that there is no statistically significant relationship between class and early initiation of breast-

feeding at P values of 0.05%. The sample size of Class I of only 8 mothers is too small to make any statistical correlations.

Educational Status of the Mother and Early Initiation of Breast Feeding At the time of the survey, the educational qualifications of the mother were taken. These were classified into the following seven groups and the abstract is shown in Table 7.

1. Illiterate: The person who cannot read and write.
2. Primary School: Studied up to 5th Class
3. Middle School: Studied up to 7th class.
4. High School: Studied up to 10th
5. Intermediate: Studied up to Class 12 or post-10th class diploma
6. Graduate: One with graduate degree
7. Post-graduate: one with post graduate degree or diploma

Education	n=250	Percentage
Professional or Honours	4	1.6%
Graduate or postgraduate	82	32.8%
Intermediate	35	14%
High school certificate	58	23.2%
Middle school certificate	32	12.8%
Primary school certificate	21	8.4%
Illiterate	18	7.2%

Table 7—Educational Class			
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The result of early initiation of breastfeeding based on the education status of the mother is shown in Table 8 below.

Early Initiation of Breast-Feeding				
Education Level	Yes	No	Total	% Yes
Professional	4	0	4	100.00%
Graduate or PG	57	25	82	69.51%
Intermediate	17	18	35	48.57%
High School	32	26	58	55.17%
Middle School	20	12	32	62.50%
Primary School	10	11	21	47.62%
Illiterate	11	7	18	61.11%
Total	151	99	250	60.40%

Table 8—Education and EI of Breast-Feeding				
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Analysis of this data in Table 8 shows that there is no statistically significant relationship between education and early initiation of breast-feeding at P values of 0.05%. The sample size of mothers with professional education of only 4 mothers is too small to make any statistical correlations.

Ante-natal counselling and Early Initiation of Breastfeeding

Out of 250 mothers, ANC advice regarding breastfeeding was given to 35 (14%) mothers, 80% mothers didn't receive any ANC advice regarding breastfeeding. The result of early initiation of breastfeeding and ANC given to the mother is shown in Table 9 below.

ANC Advice Given	Yes	No	Total	% Yes
Total Sample	35	215		14
Of Yes, Early Initiation	31	4	35	88.6
Of No, Early Initiation	120	95	215	55.8

Table 9				
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Out of a total of 250 mothers, only 35 or 14% were given ante-natal counselling. Of these 35, 31 mothers or 88.6% resorted to early initiation of breast-feeding. Out of the 215 mothers who did not receive any ante-natal counselling, 120 or 55.8 % resorted to early initiation of breast-feeding. Out of the total sample size of 250, 60.4% of the mothers were early initiators. The rates of initiation at 88.6% for those who had ante-natal counselling and 55.8% for those who did not have ante-natal counselling are statistically significant at P value of 0.05 in a chi-square test. Thus there appears to be a correlation between ante-natal counselling and early initiation of breast-feeding

DISCUSSION

The research on educational levels and social status relationship to early initiation to breast-feeding is mixed. In a longitudinal study in Quebec, Canada, it was found that mothers' education level was the strongest factor of influence on breastfeeding from birth to 3 months, and its impact increases with baby's age. Family income, family type and parents' working situation do not influence exclusive breastfeeding at 4 months (Dubois and Girard, 2003¹²). In a regression analysis, Riva et al¹³ (1999) found that mothers who received nursing guidance in the maternity ward ($p= 0.01$) and higher social class ($p= 0.03$) were positively associated with initiation of breastfeeding. They also suggest that mothers from lower social backgrounds and with lower levels of education need support with breastfeeding. Similar results were reported by Schy et al¹⁴ (1996) regarding educational level of the mother being related to expected length of breastfeeding.

The international experience shows that education level of the mother is related to early initiation of breastfeeding. The results on social status are mixed. This is possibly because of their perception that mothers with lower incomes or from lower social status may not resort to early initiation of breastfeeding. However, this is in relation to western countries where this situation is likely to exist. Our study has not shown a relationship between education and social status and early initiation of breastfeeding. In India, poor mothers and lower educated mothers are likely to breastfeed their babies, because it is culturally expected as well as economically beneficial.

The results of our study are similar to the results obtained in other studies as far as ante-natal counselling is concerned. In a study by Wiles¹⁵ (1984), it was found that primiparous women who received prenatal breastfeeding education reported a significantly higher frequency of success in breastfeeding than those who did not ($P= 0.01$). Pamela¹⁶ (1987) reports that six months after mothers who received a prenatal breastfeeding (BF) education program were found to be more knowledgeable about BF after instruction than those who did not receive the education program. It was also reported that women who attended prenatal breastfeeding classes had significantly increased breastfeeding at 6 months when compared to controls ($p = .01$) (Rosen, Krueger, Carney and Graham, 2008¹⁷). In a random trial of mothers, it was found that "antenatal breast feeding education and postnatal lactation support, as single interventions based in hospital both significantly improve rates of exclusive breast feeding up to six months after delivery" (Lin-Lin et al 2007¹⁸). In a similar random trial, Mattar¹⁹ et al (2007) write that mothers receiving individual counseling and educational material practiced exclusive and predominant breastfeeding both at 3 months and 6 months more often than mothers receiving routine care alone.

CONCLUSION

Ante-natal counselling appears to be the most effective way to encourage mothers to initiate breast feeding within one hour of delivery of the baby. Rosen, Krueger, Carney and Graham¹⁷ (2008) suggest that prenatal breastfeeding education can influence the amount of time women breastfeed. They recommend that all health care providers of prenatal care should consider offering such classes in order to improve breastfeeding rates. Duffy, Percival and Kershaw²⁰ (1997) have suggested that midwives should use a practical 'hands on' antenatal group teaching as an effective strategy to increase breast feeding rates. The WHO and UNICEF²¹ have also made this recommendation and have also developed a 40 hour breastfeeding counselling module. Antenatal counselling is a low cost and effective strategy to provide natural, healthy and nutritious food for the baby. It also appears to be the best way to achieve the common goal of international and national professional bodies of early initiation of breastfeeding. The present study also supports the need of effective breast feeding counselling in the immediate antenatal days.

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