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EFFECT OF MATERNAL EDUCATION ON BREAST FEEDING – A COMMUNITY-BASED STUDY AMONGST SLUM-DWELLING HOMEMAKERS

Paediatrics

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ABSTRACT

This cross-sectional, community-based study, using convenience sampling, was conducted among 649 slum-dwelling homemakers (mean age: 25.16 +/- 3.32 years) in a metropolitan city in Western India. The purpose of the study was explained to stake holders in the community and prospective participants. Homemakers who had given birth to healthy full-term live-born babies of either sex, in the two years preceding the study, who gave informed consent to participate in the study were interviewed by a female researcher, at a time and place convenient to the respondents. Though all the respondents were full-time homemakers, their educational attainment was found to be significantly related to the practice of exclusive breast feeding (Z=3.370; p=0.0007), not giving pre-lacteal feeds (Z=4.827; p<0.0001), and feeding colostrum (Z=2.998; p=0.002). Prenatal counselling for prospective mothers with involvement of husbands, mothers-in-law, elder women in the family will facilitate development of intra-family support systems to sustain efforts for successful breast feeding.

KEYWORDS

Breast feeding, Homemaker, Housewives, Maternal education, Urban slums

INTRODUCTION

Proof of the nutritional differences between formula and human milk is provided by the differences in the growth patterns of infants who are exclusively breastfed for 4 to 6 months and those who are fed formula milk. [1] Breast milk has nutritional, immunological, economic benefits, provides mother-infant bonding promotes optimal somatic growth and metabolic competence. Breast milk enhances cognitive development, response to infection, reduces allergic disease and has a wide range of anti-infective properties that will support the developing immune system. Protective properties of breast milk are attributed to active leukocytes, antibodies, antibacterial products, competitive inhibition, and augmentation of nonpathogenic commensal organisms and suppression of pro-inflammatory immune responses. [2]

Though breast feeding in India is almost universal, the beneficial effect of breast feeding is hindered by time of initiation of breastfeeding after birth and the duration of exclusive breast feeding (EBF). [3] Initiation of breast feeding was found to be low among very young mothers, women of lower socio-economic status, those with less than high school level education. [4, 5] The impediments in raising the exclusive breast feeding rate include lack of awareness, lack of preparation of pregnant women for breast feeding, levels of self-reported anxiety about inadequate milk supply, false beliefs and customs. [6]

The practice of breastfeeding exhibits inter-regional and inter-community differences. Before devising a community-based interventional programme, it is also necessary to determine the knowledge and practice of breast feeding among homemakers. The objective of this community-based study was to determine the knowledge and practices of breast feeding among homemakers / housewives, in whom; occupation will not be a barrier to exclusive breast feeding.

MATERIALS AND METHODS

This cross-sectional, community-based study was conducted among slum-dwelling urban women (all homemakers) in a metropolitan city in Western India. The purpose of the study was explained to stake holders in the community and prospective participants. Convenience sampling was used to select the study participants. The criteria for inclusion in the study were: homemakers / housewives who had given birth to healthy full-term live-born babies of either sex, in the two years preceding the study, who gave informed consent to participate in the study. Those with pre-term babies, babies with birth defects and congenital anomalies, and those with parity of four & above were excluded from the study. Respondents who satisfied the inclusion criteria were interviewed by a female researcher, at a time and place convenient to them, using a semi-structured pre-tested pre-validated questionnaire, which contained questions on demographics, obstetric details and breast feeding.

The data were statistically analyzed using EpiInfo Version 7.0 (public domain software package from the Centers for Disease Control and Prevention, Atlanta, GA, USA). Continuous data were presented as Mean and Standard Deviation (SD) and categorical data as percentages. The 95% Confidence interval (CI) was calculated as: [Mean-(1.96)*Standard Error)] – [Mean+(1.96)*Standard Error)]. The standard error of difference between two sample proportions was calculated. Statistical significance was determined at $p<0.05$.

RESULTS AND DISCUSSION

A total of 649 homemakers / housewives, participated in the study. Their mean age was 25.16 +/- 3.32 years (95% CI: 25.35 – 25.99 years), median age was 25 years and the ages of the oldest and youngest respondents were 35 years and 18 years, respectively. Religion-wise, 489 (75.34%) were Hindus, 149 (22.95%) Muslims, 6 (0.92%) Buddhists and the rest belonged to other religious groups. Parity of the respondents was as follows - 241 (27.13%) primiparous, 260 (40.06%) second para and 148 (22.80%) third para. During their previous pregnancy, 397 (61.17%) had full term normal delivery while 252 (38.83%) had undergone lower segment Caesarean section. 80 (12.32%) were illiterate, 413 (63.63%) had studied up to 10th Standard and 156 (24.05%) had studied beyond 10th Standard. Maternal educational status is an important determinant since women belonging to lower socioeconomic strata and those with less education reportedly initiate breast feeding at lower rate, when compared with their counterparts with higher socioeconomic status and more education. [4, 5]

Table-1: Effect of maternal education on knowledge versus practice of breast feeding

Parameter	Maternal education	Knowledge	Practice	Difference	Z value	'p' value
Exclusive Bf for 6 months	< 10 Std (n=493)	469	232	237	3.370	0.0007 *
	10 Std+ (n=156)	155	104	51		
No pre-lacteal feeds	< 10 Std (n=493)	394	391	03	4.827	<0.0001 *
	10 Std+ (n=156)	119	108	11		
Initiate Bf < 1 hr after birth	< 10 Std (n=493)	382	355	27	0.168	0.865

	10 Std+ (n=156)	115	107	08		
Bf on demand	< 10 Std (n=493)	307	290	17	2.236	0.025 *
	10 Std+ (n=156)	102	90	12		
Feeding colostrum	< 10 Std (n=493)	413	373	60	2.998	0.002 *
	10 Std+ (n=156)	135	129	06		
Bf for total of 1 yr	< 10 Std (n=493)	179	171	08	0.253	0.802
	10 Std+ (n=156)	62	59	03		

Bf = Breast feeding; Z = Standard error of difference between two proportions; * Significant

Table-2: Effect of maternal education on knowledge of certain aspects of breast feeding

Parameter	Maternal education	Knowledge	Z value	'p' value
Benefits of Bf to baby's health	< 10 Std (n=493)	326 (66.12%)	0.718	0.471
	10 Std+ (n=156)	108 (69.23%)		
Benefits of Bf to mother's health	< 10 Std (n=493)	146 (29.61%)	3.380	0.0007 *
	10 Std+ (n=156)	69 (44.23%)		
Contraceptive benefits of Bf	< 10 Std (n=493)	86 (17.44%)	0.326	0.741
	10 Std+ (n=156)	29 (18.59%)		
Knows technique of expressing breast milk	< 10 Std (n=493)	142 (28.80%)	0.470	0.638
	10 Std+ (n=156)	48 (30.76%)		
Storing expressed breast milk	< 10 Std (n=493)	64 (12.98%)	1.742	0.081
	10 Std+ (n=156)	29 (18.59%)		
Bf when mother is ill	< 10 Std (n=493)	284 (57.60%)	0.826	0.406
	10 Std+ (n=156)	84 (53.84%)		
Bf when baby has diarrhoea	< 10 Std (n=493)	308 (62.47%)	1.386	0.164
	10 Std+ (n=156)	107 (68.59%)		
Bf when baby has respiratory illness	< 10 Std (n=493)	334 (67.74%)	1.102	0.271
	10 Std+ (n=156)	113 (72.43%)		

Bf = Breast feeding; Z = Standard error of difference between two proportions; * Significant

The number of women who practiced EBF for six months varied significantly (Z=3.370; p=0.0007) with their educational status. (Table-1). Despite having knowledge of EBF for 6 months and initiation of breast feeding within one hour of birth, there was significant difference in the proportion of women actually practicing what they knew. (Table-1) Exclusive breast feeding till 6 months of age was 69.35% in Assam-based study [7] and 69.5% in Karnataka-based study [8] As per national survey data, only 56% of Indian mothers practiced EBF for the recommended duration of six months. [9] Studies from Uttarakhand [10] and West Bengal [11] have reported higher prevalence of 89% and 84.1%, respectively. Breast feeding practices display a striking relationship with prevailing social customs and beliefs. [12] A study [10] found that breast feeding was initiated within first hour of birth only for 21% of babies, probably due to inadequate counseling of the mother on breast feeding; 66.03% babies received pre-lacteal feeds, which was attributed to the belief that, the baby, after growing up, will take care of the person who administers the pre-lacteal feed. In the present study, 81.71% of babies received colostrum, which is comparable to the findings of studies from Uttarakhand, [10] Chhattisgarh, [13] Andhra Pradesh [14] and Chandigarh. [15]

The effect of maternal education on knowledge of certain aspects of breast feeding is outlined in table-2. The mother's mind-set towards breast feeding has been shown to be a stand-alone predictor of breastfeeding initiation [16] and her thought-process regarding breastfeeding is associated with successful sustenance of breast feeding for longer periods. [17]

CONCLUSION

Prenatal counselling for prospective mothers and educational sessions for adolescent girls would be necessary to bring about drastic changes in the actual practice of breast feeding. Separate educational sessions ought to be planned so that husbands, mothers-in-law, elder women in the family may be involved so that intra-family support systems are developed to sustain efforts for successful breast feeding.

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