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COMMUNITY-BASED STUDY ON KNOWLEDGE VERSUS PRACTICE OF BREAST FEEDING AMONG MOTHERS

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ABSTRACT

This cross-sectional, community-based study was conducted using convenience sampling technique in a metropolitan city in Western India to determine the knowledge and practices of breast feeding among mothers. Women who had given birth to healthy live-born babies of either sex, in the two years preceding the study, who had volunteered to participate in the study, were included. After explaining the purpose of the study was explained to stake holders in the community and prospective participants, those who satisfied the inclusion criteria and gave informed consent (n=722) were interviewed by a female researcher at a time and place convenient to them, using a semi-structured pre-tested questionnaire. The mean age of respondents was 25.73 ± 4.02 years, 83.24% were homemakers, and they were from diverse religious and educational backgrounds. The gap between knowledge and practice was significant regarding exclusive breast feeding for six months ($Z=19.678$; $p<0.0001$) and initiation of breast feeding within one hour of birth ($Z=3.348$; $p=0.008$). In order to bridge this gap between knowledge and practice, it is necessary to devise multi-pronged community-specific interventions, such as, prenatal education for prospective mothers and fathers on breast feeding, and "priming" educational sessions on breast feeding for adolescent girls. Involvement of family members in these interventions will help develop intra-family support system for breast feeding.

KEYWORDS: Breast feeding, Community, Knowledge-Practice Gap.

INTRODUCTION

The term "exclusive breast feeding" (EBF) implies that a baby is fed only breast milk by the biological mother or a wet nurse, or expressed breast milk, and no other liquids or solids, (not even water), with the exception of oral rehydration solution, drops or syrups consisting of vitamins, minerals supplements or prescribed medications.[1] The prescribed duration for EBF is six months. Though breast feeding in India is almost universal, it is hindered by time of initiation of breastfeeding after birth and the duration of EBF. National Family Health Survey (NFHS-4) data reveal that only 56% of Indian mothers practiced EBF for the recommended duration of 6 months.[2]

The composition of human breast milk is devised for more efficient and better digestion by the human infant and is dissimilar to that of animal milk or soya milk.[3] Breast milk promotes optimal somatic growth and metabolic competence. The differences in the growth patterns of infants who are exclusively breastfed for 4 to 6 months and infants who are fed formula artificial breast milk, provide proof of the nutritional differences between formula and human milk.[4] Breast milk has nutritional, immunological, economic benefits and also provides mother-infant bonding. 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.[5] Breast milk contains IgA, lactoferrin, K-casein, cytokines, growth factors, glutathione peroxides that have anti-infective, antioxidant, growth promoting properties[6] and significantly improves the Intelligence Quotient, brain size and white matter development.[7]

The beneficial effects of breastfeeding depend on the initiation of breastfeeding, the duration of EBF and the

age at which the breastfed child is weaned.[8] The differences in the growth patterns of infants who are exclusively breastfed for 6 months and infants who are fed formula milk have been documented.[4]

The practice of breastfeeding exhibits inter-regional and inter-community differences. Before devising a community-based interventional programme, it is necessary to determine the knowledge and practice of breast feeding among mothers. The objective of this community-based study was to determine the knowledge and practices of breast feeding among mothers.

MATERIALS AND METHODS

This cross-sectional, community-based study was conducted 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. Women who had given birth to healthy live-born babies of either sex, in the two years preceding the study, who had volunteered to participate, were included in the study. Mothers of pre-term babies and babies with birth defects, such as, congenital heart disease, cleft lip/cleft palate and congenital anomalies were excluded along with mothers with multiple gestations.

Respondents who satisfied the inclusion criteria and gave informed consent (n=722) were interviewed by a female researcher, at a time and place convenient to them, using a semi-structured pre-tested questionnaire, which contained questions on demographics, obstetric details, ante-natal check-ups, knowledge of breast feeding, source of information on breast feeding and respondent's actual practice of 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). The 95% Confidence interval (CI) was estimated and stated 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 722 women participated in the study. Their mean age was 25.73 ± 4.02 years (95% CI: 25.43 – 26.04 years). The ages of the oldest and youngest respondents were 40 years and 19 years, respectively; while the median age was 25 years. (Fig. 1).

601 (83.24%) were homemakers while the rest were employed. Religion-wise, 556 (77.01%) were Hindus, 155 (21.47%) Muslims, 6 (0.83%) Buddhists, 2 (0.28%) Christians while 3 (0.42%) belonged to other religious groups. 84 (11.63%) were illiterate, 109 (15.10%) had studied up to primary school, 182 (25.21%) up to secondary school, 147 (20.36%) had passed 10th Standard, 124 (17.17%) had passed 12th Standard and 76 (10.53%) were graduates. 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.[9,10]

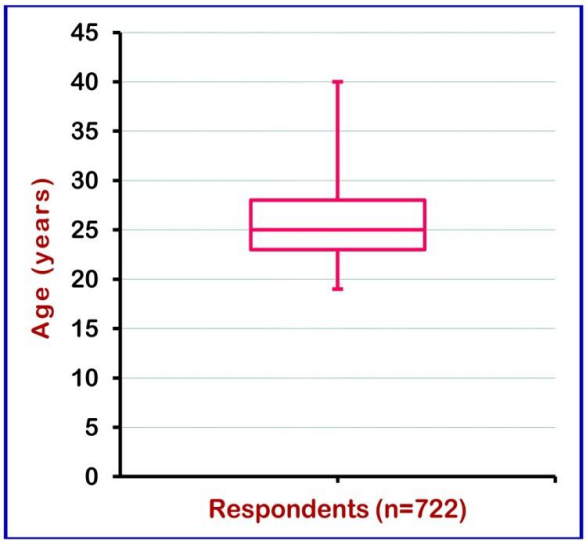

Fig-1: Box plot of age distribution of respondents.

During their immediate past pregnancy, 17 (2.35%) had only one ante-natal check-up prior to delivery, while 333 (46.12%) had more than four ante-natal check-ups. 406 (56.23%) had full term normal delivery while 316 (43.89%) had undergone lower segment Caesarean section.

Knowledge

667 (92.38%) knew about exclusive breast feeding. While some women attributed their knowledge to multiple sources, 390 out of 667 (58.47%) women revealed that the primary source of information on exclusive breast feeding were their family members. Health education by health care personnel was the source of information for 145 out of 667 (21.74%) women. 615 (85.18%) knew the importance of feeding colostrum to the baby. 626 (86.7%) agreed that breast feeding should be initiated within one hour of child birth while 570 (78.94%) responded that pre-lacteal feed were not required before initiating breast feeding. 556 (78.39%) thought that only breast milk should be given to a baby for the first six months and that it was adequate for the first six months. 487 (67.45%) knew that EBF prevents diarrhoeal and respiratory diseases, while 468 (64.82%) knew about demand feeding. 374 (52.09%) of the mothers responded that the total duration of breast feeding should be two years. While 528 (73.13%) knew the health benefits of breast feeding for the baby, only 255 (35.32%) were aware of the health benefits of breast feeding for the mother and 140 (19.39%) were familiar with the contraceptive benefits of breast feeding.

Awareness regarding continuation of breast feeding in various situations was as follows - mother's illness: 420 (58.21%); mother having tuberculosis: 114 (15.79%); HIV positive mother: 115 (15.99%); baby having diarrhea: 464 (64.27%); and baby having cough/cold/fever: 500 (69.25%). 523 (72.44%) opined that complementary feeds should be started only when the baby has completed 6 months of age. Familiarity with expressed breast milk was as follows – awareness: 336 (46.54%); knowledge of technique: 215 (29.78%); awareness about storage: 112 (15.51%).

Practice

In the present study, 44.18% of babies received EBF for six months. Only 34% of babies received EBF for six months in a study conducted in Salem district, Tamil Nadu.[11] A Jabalpur-based study, the 6-month EBF rate was reported to be 49%.[12] As per national survey data, only 56% of Indian mothers practiced EBF for the recommended duration of six months.[2]

515 (71.32%) had initiated breast feeding within one hour of delivery; 559 (77.42%) did not give any pre-lacteal feeds; 527 (72.99%) started complementary feeds after six months; 371 (51.82%) had breast fed their babies for a total duration of two years.

In the present study, 438 (60.75%) fed their babies on demand; while studies from Uttarakhand[13] and West Bengal[14] have reported higher prevalence of 89% and 84.1%, respectively. Breast feeding practices display a striking relationship with prevailing social customs and beliefs.[15]

A study[13] 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,[13] Chhattisgarh,[16] Andhra Pradesh[17] and Chandigarh.[18]

Knowledge versus Practice

There is a cause for concern because despite having knowledge of EBF for 6 months and initiation of breast feeding within one hour of birth, there was significant difference ($p<0.0001$ and $p=0.008$, respectively) in the proportion of women actually practicing what they knew. (Table-1).

The mother's mind-set towards breast feeding has been shown to be a stand-alone predictor of breastfeeding initiation[19] and her thought-process regarding breastfeeding is associated with successful sustenance of breast feeding for longer periods.[20]

Table 1: Knowledge versus practice of breast feeding.

Parameter	Respondents (n=722)		Z value	'p' value
	Knowledge	Practice		
Exclusive breast feeding for 6 months	667	319	19.678	<0.0001 *
Initiation within 1 hour of birth	570	515	3.348	0.008 *
Breast feeding on demand	468	438	1.632	0.103
Not giving pre-lacteal feeds	570	559	0.710	0.484
Complementary feeds after 6 months	527	523	0.236	0.810
Breast feeding till 2 years	374	371	0.158	0.872

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

CONCLUSION

There was significant difference between knowledge and practice of EBF for 6 months and initiation of breast feeding within one hour of birth though the participants had adequate knowledge of breast feeding. Various measures, such as prenatal education for prospective mothers and fathers on breast feeding, repeated "priming" educational sessions on breast feeding for adolescent girls (the future mothers). Stakeholders in the family (husbands, mothers-in-law, elder women in the family) may need to be involved in separate educational sessions so that intra-family support systems are developed and impediments to implementation of successful breast feeding are surmounted.

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