Breast Feeding Practices among Families of Armed Forces Personnel in a Large Cantonment

Lt Col PMP Singh*, Col R Bhalwar*

Abstract

Background: There seems to be a gap in the available literature and scientific knowledge about breast-feeding practices among families of armed forces personnel in our country, which needs to be studied.

Methods: A cross sectional epidemiological study design was undertaken on a randomly selected sample of 175 families of armed forces personnel staying in a large cantonment and having at least one child in the age group of 3-24 months.

Result: The study observed positive association between various breast feeding practices such as feeding colostrum, demand / scheduled feeding, exclusive breast feeding for 4-6 months, partial breast feeding for 6 - 18 months and various sociodemographic variables such as age, religion, socio-economic status of mother (military rank of husband), parity and place of residence of the mother (where childhood was spent) .

Conclusion : Higher proportion of mothers feeding colostrum was observed because of better educational status of mothers and organized health education activities available to the families of armed forces personnel. Majority (89.14%) gave demand feed and only 10.86% gave scheduled feed. On the other hand a relatively smaller percentage (47.43% and 29.32%) followed the correct practice about duration of exclusive and partial breast-feeding respectively.

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Key Words: Colostrum; Demand/Scheduled feeding; Breast feeding

Introduction

Indian studies show that the prevalence of breast feeding is around 94-98% [1-3]. However, there seems to be a gap in the scientific knowledge about breast-feeding practices among families of armed forces personnel in our country. This study was undertaken to ascertain aspects of breast-feeding practices among families of armed forces personnel and their association with various sociodemographic variables.

Material and Methods

The present study was undertaken using a field based, cross sectional epidemiological study design [4] among the armed forces community in a large cantonment. The total (reference) population was defined as “ families of armed forces personnel having at least one child in the age group 3-24 months”. Earlier studies [5-7], indicate that approximately 90% of the infants are likely to be breastfed. Therefore keeping the approximate estimate of parameters as 90% ($p=0.9$, $q=0.1$) and a view to estimate the parameter within a 95% confidence interval of 85-95% (i.e. accepted deviation = 0.05) and a conventional alpha error of 5%, the minimum sample size worked out on the basis of WHO guidelines [8] was 144. A sample of 175 breast-feeding mothers was studied. The sample was selected from the sampling frame by systematic random sampling method starting from a randomly selected

point. A questionnaire was developed based on research studies done earlier. The questionnaire was pretested and suitably modified through a pilot study. The data was collected using "personal interview technique", and the respondent was the mother of the child. All the data collected was compiled, calculated and analysed statistically using procedures as per guidelines given in standard text books of biostatistics [9,10].

Result

A large proportion (46.28 %) of the mothers belonged to the age group 25-29 years, followed by 44.57% in the age group 20-24 years while 9.15% belonged to the 30 years and above age group. Majority (87.4 %) were Hindus while Muslims, Christians and Sikhs together accounted for only 12.6% of the study population. 22.8% and 28.6% of the mothers, respectively, were educated up to primary school or secondary school level while 28% were either graduates (21.1 %) or postgraduates (6.9%). A small minority (4.6 %) of the mothers were illiterate. 79.6 % of mothers were wives of Other Ranks (ORs) or Non Commissioned Officers (NCOs).

First and second para mothers constituted 34.86 % and 44.57 % respectively of the study population, while mothers with higher parity constituted a relatively small proportion. Majority (80 %) of the mothers had spent their childhood in rural areas and 20 % in urban areas. Out of the 175 subjects studied, 172 (98.78 %) had successful lactation while the

*DADH, HQ 21 Mountain Division, C/o 99 APO. *Professor and Head (Community Medicine & PSM), Armed Forces Medical College, Pune- 411040.

Table 1**Practice of feeding colostrum and its association with educational status of the mother**

Practice of feeding colostrum	Illiterate (%)	Primary (%)	Secondary (%)	Higher secondary (%)	Graduate (%)	Postgraduate and above (%)	Total (%)
Colostrum given	3 (37.5)	25 (62.5)	33 (66.0)	20 (71.43)	35 (94.59)	12 (100)	128 (73.14)
Colostrum not given	5 (62.5)	15 (37.5)	17 (34.0)	8 (28.57)	2 (5.41)	0 (0.00)	47 (26.86)
Total	8 (100)	40 (100)	50 (100)	28 (100)	37 (100)	12 (100)	175 (100)

 $\chi^2 = 14.17$; $df = 2$; $p < 0.001$ (highly significant)**Table 2****Practice of feeding colostrum and its association with place of residence of the mother (where childhood was spent)**

Practice of feeding colostrum	Place of residence of mother (where childhood was spent)		Total (%)
	Rural (%)	Urban (%)	
Colostrum given	108 (77.14)	20 (57.14)	128 (73.14)
Colostrum not given	32 (22.86)	15 (42.86)	47 (26.86)
Total	140 (100)	35 (100)	175 (100)

 $\chi^2 = 4.74$; $df = 1$; $p < 0.05$ (significant)

remaining three (1.22 %) experienced problems in lactation.

Of the 175 mothers surveyed, 128 (73.14%) practised while 47 (26.86 %) did not practice feeding colostrum. 100% mothers who were wives of officers fed colostrum to their newborn and the corresponding figures for mothers who were wives of JCOs, NCOs or ORs was much lower. The difference was statistically highly significant ($p < 0.001$). It was seen that a higher proportion of first para mothers (83.61 %) fed colostrum to their newborn as compared to mothers with higher parity. This difference was statistically significant ($p < 0.001$). Association of feeding colostrum with place of residence of the mother (where childhood was spent) is shown in Table 2.

In this study 156 (89.14%) mothers practised demand feeding, while 19 (10.86%) practised scheduled feeding. 92.16% of Hindu, 75 % of Muslim, 53.85 % of Christian and 100% of Sikh mothers practised demand breast feeding. It therefore seems that Sikh and Hindu mothers are more likely to practice demand breast feeding as compared to mothers belonging to other religions. The difference was found to be statistically significant ($p < 0.01$). 58.44 % of the mothers who were educated upto higher secondary level or more, exclusively breast-fed their child for 4-6 months while the figure was 38.78 % for those educated upto secondary level and below. The difference was statistically significant ($p < 0.02$). A higher proportion of mothers who were wives of officers exclusively breast fed their child for 4-6 months (70.59%), as compared to the mothers who were wives of JCOs, NCOs or ORs. The difference was statistically highly significant ($p < 0.01$). It was seen that 68.57 % of mothers from urban background exclusively breast fed their child for 4-6 months as compared to 42.14% of mothers from rural background. The difference was statistically highly significant ($p < 0.01$).

It was seen that out of those mothers who belonged to 30 years age group, a higher proportion (58.33%) partially breast fed their child for 6-18 months, with much lower figures being

observed for younger mothers. The difference was found to be statistically significant ($p < 0.05$). A higher proportion of Sikh mothers (75%) partially breast fed their child for 6-18 months. The corresponding figure was 25.86% for Hindu, 33.33% for Muslim and 50% for Christian mothers. The difference was found to be statistically significant ($p < 0.05$). It was seen that 62.96 % of mothers who were wives of officers partially breast-fed their child for 6-18 months. The figures for mothers who were wives of NCOs / ORs were much lower. The difference was statistically significant ($p < 0.001$).

It was seen that 66.67 % of mothers from urban background partially breast fed their child for 6-18 months as compared to only 19.81 % of mothers from rural background. The difference was found to be statistically highly significant ($p < 0.001$).

Discussion

Indian studies done earlier [7,11,12] show that 40- 83% of mothers discarded colostrum. The higher proportion of mothers who fed colostrum, as observed in this study may be because of better educational status of mothers and better-organised health education activities available to the families of armed forces personnel. Kalra et al [13], in their study concluded that most mothers do not follow any strict schedule and mostly breast feed by demand whenever the baby cried. They observed that mothers belonging to lower educational status were more likely to exclusively breast feed their babies for longer duration as compared to mothers with higher educational status. Agarwal et al [11], in their study observed that supplementary milk feeds were initiated earlier by mothers belonging to higher educational status as compared to mothers belonging to lower educational status. The findings of the present study differ from both the above studies. This may be due to the reason that knowledge about duration of exclusive breast-feeding improves with improvement in educational status.

Ghosh et al [14], found that educational status of the mother was associated with practice about duration of partial breast-feeding. Kalra et al [13], observed that duration of partial breast feeding was associated with educational status of the mother. The previous workers noted that mothers who were educated above graduate level and higher socioeconomic status terminated breast-feeding early. These workers also observed that mothers

Table 3**Type of breast feeding (Demand/Scheduled) and its association with religion of the mother**

Type of breast feeding	Hindu (%)	Muslim (%)	Christian (%)	Sikh (%)	Total (%)
Demand breast feeding	141 (92.16)	3 (75.0)	7 (53.85)	5 (100)	156 (89.14)
Scheduled breast feeding	12 (7.84)	1 (25.0)	6 (46.15)	0 (0.00)	19 (10.86)
Total	153 (100)	4 (100)	13 (100)	5 (100)	175 (100)

 $\chi^2 = 4.12$, df = 1, $p < 0.01$ (highly significant)

Note : Columns 2, 3 and 4 were clubbed together for the purpose of statistical analysis as the figures in columns 2 and 4 were small.

Table 4**Practice about duration of exclusive breast feeding and its association with military rank of husband**

	Officer (%)	JCO (%)	NCO (%)	OR (%)	Total (%)
4-6 months (correct practice)	24 (70.59)	00 (00.00)	18 (50.00)	41 (39.81)	83 (47.43)
<4/>6 months (incorrect practice)	10 (24.41)	02 (100.0)	18 (50.00)	62 (60.19)	92 (52.57)
Total	34 (100)	02 (100)	36 (100)	103 (100)	175 (100)

 $\chi^2 = 9.72$, df = 2, $p < 0.01$ (highly significant)

Note: Columns 2, 3 and 4 were clubbed together for the purpose of statistical analysis as the figures in columns 2 and 4 were small.

from rural background continued partial breast feeding for longer duration as compared to those from urban background. The present study differs from the above studies on these aspects of breast-feeding. The possible reason may be that knowledge about various aspects of breast-feeding improves with improvement in educational status; and mothers from urban background are likely to belong to higher educational status as compared to mothers from rural background.

In view of the present study the following recommendations are made:

1. All health care workers must actively encourage the practice of breast-feeding.
2. Education material on breast-feeding must be made available for all personnel and their families.
3. A programme to educate the mothers must be carried out by health care personnel with emphasis on the importance of feeding colostrum, exclusive breast-feeding during first 4-6 months of life followed by breast-feeding with supplementation and wives of lower socioeconomic groups (Non Commissioned Officers, and Other Ranks) need to be targeted in the information, education and communication strategy for promotion of breast-feeding.
4. Assistance of voluntary organisations that can help in bringing about peer group effect as well as render assistance to the health functionaries (such as Army Wives Welfare association, i.e. AWWA) may be fully utilised for this purpose.

Conflicts of Interest

None identified

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