

Original Research Article

The practice of exclusive breastfeeding: its socio-demographic determinants in Kashmir, North India

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ABSTRACT

Background: Breastfeeding is a well-established and recommended intervention for the improvement of child nutrition. Formula feeding is a major public health problem. Objective of the current study was to know the significance of demography, socioeconomic, parental education and employment and mode of delivery on exclusive breast-feeding Kashmir, North India.

Methods: A prospective hospital-based study, carried out in the Department of Pediatrics, G.B Pant Hospital Srinagar Kashmir India over the period from 2014 July to June 2015. A teaching, research and tertiary care hospital at Srinagar Kashmir North India. All the mothers who were having infants in the age group 0 to 6 months were included in study. Procedure of this variables recorded were modes of feeding, demographics, socioeconomic status, literacy level, mode of delivery, place of delivery etc.

Results: A total of 600 mothers were included in study. Less than 35% of mothers were exclusively breast feeding their infants. Exclusive breast feeding was significantly high in babies born by normal vaginal delivery, more than 3 antenatal visits, mother knowing advantages of breast feeding and higher parental education.

Conclusions: Exclusive breast feeding is very low (less than 35%) in this part of world and formula feeding is a major public health problem.

Keywords: Breast Feeding, EBF, Kashmir India, Socioeconomic status

INTRODUCTION

The World Health Organization defines exclusive breastfeeding as the practice of feeding only breast milk (including expressed breast milk) to the baby and allows the baby to receive vitamins, minerals or medicine. Water, breast milk substitutes, other liquids and solid foods are excluded.¹ Breastfeeding is a well-established and recommended intervention for the improvement of child nutrition. Studies have demonstrated that it reduces deaths in infants and young children.²⁻⁵ It is one of the most important factors for growth and development of infants and is globally endorsed as being the best for any neonate. Universal (90%) coverage of breastfeeding is

estimated to prevent around 13% of all deaths among children under five years of age in low- and middle-income countries.⁶

However, globally only half of infants under 1 month of age and 30% of infants aged 1-5 months are exclusively breastfed.⁷ Exclusively breastfed infants have been shown to have lower rates of acute respiratory infections and diarrhea, to have better neurodevelopment outcomes and have better physical growth compared to mix-fed or non-breastfed infants. In areas where HIV prevalence is high, especially in sub-Saharan Africa, exclusive breastfeeding (EBF) has been shown to have an added advantage of reducing the rates of mother-to child transmission of HIV

(MTCT).^{8,9} Despite its demonstrated benefits, exclusive breastfeeding (EBF) prevalence and duration in many countries including Ethiopia are lower than the international recommendation of exclusive breastfeeding for the first six months of life which is 90%.¹⁰ There has been growing evidence of the significant impact of early initiation of breastfeeding, preferably within the first hour after birth, on reducing overall neonatal mortality.¹¹⁻¹³ In addition, breast milk carries antibodies from the mother that help combat disease, protecting babies from diarrhea and acute respiratory infections.¹⁴ Breastfeeding also stimulates an infant's immune system and response to vaccination and, according to some studies, confers cognitive benefits as well.¹⁵⁻¹⁷

METHODS

The present prospective study was aimed to define the significance of demographic, socioeconomic, parental education, employment and mode of delivery on exclusive breast feeding (EBF) Kashmir, North India. All the mothers who were having infants aged 0-6 months questioned in detail to fill the prescribed proforma. In present study overall 600 mothers having infants aged 0-6 months were included randomly over period of one year.

Statistical analysis

Data collected was analyzed using SPSS (version 20) software. Data were collected from 2014 July to June 2015 on structured questionnaire that inquired information on socio-demographic characteristics, obstetric, health service and breastfeeding related factors (initiation of breastfeeding, prelacteal feeding and colostrum feeding) and economic factors. Survey questionnaires were administered in native language (Kashmiri) of the respondents.

RESULTS

There were 53% male and 47% female infant. Among them 41.7% babies were first born and 58.3% second in birth order. 99.5% mothers that were more than 18 years of age. Few mothers had no formal education 3.3%, while 14.7% primary education and 82% had secondary level education. On the employment status, about 78.3% of the mothers were house wives and only 21.7 % working outside home. Almost all the mothers were Christians (96.0%), while the rest were Moslems (4.0%). Most of the mothers resided in the urban areas (81.2%), while the remaining was in the rural areas. There were 15.5% nuclear families and 84.5% were joint families. 25% families were below poverty line, 65% middle class and 10% upper class. Earlier breast-feeding education and its importance was received by 30% mothers and only 37% mothers had more than 4 antenatal visits. There were 92% institutional deliveries and 64.5% were born by LSCS.

Table 1: Socio-demographic characteristics of the mothers and infants.

Characteristics (N = 600)	N	%
Sex of the child		
Male	320	53.3
Female	280	46.7
Birth order of the child		
First born	250	41.7
Second and above	350	58.3
Mothers' age (years)		
≤18	3	0.5
>18	597	99.5
Mothers' education		
Illiterate (no education)	20	3.3
Primary education (completed grade 5)	88	14.7
Secondary or higher education (completed grade 10 and higher)	492	82
Mothers' employment status		
Housewife	470	78.3
Working outside home	130	21.7
Fathers' education		
Illiterate	20	3.3
Primary education	50	8.3
Secondary education	530	88.3
Type of family		
Nuclear	93	15.5
Joint and others	507	84.5
Socioeconomic status		
Below poverty line	150	25
Middle	390	65
Upper	60	10
Breastfeeding education received		
Yes	180	30
No	420	70
Number of ANC visits		
No visits	48	8
1-3	330	55
≥4	222	37
Place of delivery		
Institutional	542	92
Non-institutional	48	8
Type of delivery		
Normal	213	35.5
Caesarean	387	64.5
Assistance during delivery		
Doctor	480	80
Nurse/sisters and others	72	12
Traditional birth attendants	48	8

Table 2 depicts that factors like parental educational level, breast feeding education, nuclear family and antenatal visits have significant positive impact on exclusive breast feeding. Factors like Cesarean section, parental employment has negative impact on exclusive breast feeding.

Table 2: Bivariate analysis of factors which were important determinants for exclusive breastfeeding in first six months of baby.

Variables	Exclusive breastfeeding				OR (95% CI)	P-value
	Yes (n=210)		No (n=390)			
	N	%	N	%		
Sex of the child						
Male	92	43.8	220	56.4	8.18	0.004
Female	118	56.2	170	43.6		
Birth order of the child					5.34	0.01
First born n=250	75	30	175	70		
Second and above n=350	135	38.5	215	61.5		
Mothers' age (years)						
≤18 n=3	1	33.3	2	66.7	0.25	0.32
>18	40	36.7	69	63.3		
Mothers' education						
Illiterate n=20	12	60	8	40	5.15	0.009
Primary education (completed grade 5) n=88	56	63.6	32	36.4		
Secondary or higher education (completed grade 10 and higher) n=420	294	70	126	30		
Mothers' employment status						
Housewife n=470	200	42.5	270	57.5	8.8	0.003
Working outside home n=130	75	57.7	55	42.3		
Fathers' education						
Illiterate n=20	9	45	11	55	2.16	0.33
Primary education n=50	28	56	22	44		
Secondary education n=530	320	60.38	210	39.62		
Type of family						
Nuclear n=93	62	66.7	31	33.3	15.57	0.00001
Joint and others n=507	212	41.8	295	58.1		
Socioeconomic status						
Below poverty line n=150	70	46.7	80	53.3	3.09	0.19
Middle n=390	210	53.9	180	46.1		
Upper n=80	48	60	32	40		
Breastfeeding education received						
Yes n=180	120	66.7	60	33.3	8.8	*0.0003
No n=420	207	49.3	213	50.7		
No. of ANC visits						
No visits n=48	18	37.5	30	62.5	35.05	*0.0000001
1-3 n=330	160	48.5	170	51.5		
≥4 n=222	135	60.8	87	39.2		
Place of delivery						
Non-institutional n=48	21	43.75	27	56.25	0.18	0.96
Institutional n=542	245	45.2	297	54.8		
Type of delivery						
Normal n=213	133	62.5	80	37.5	23.75	* 0.000002
Caesarean n=387	155	40	232	60		

* shows that p value is less than 0.001 and is statistically significant.

DISCUSSION

Exclusive breast feeding is the best recommended infant feeding method for the first six months of life and has a protective effect against child morbidity and mortality.¹⁸ But it has not yet been universally practiced and the reduction in the rate of EBF is taken as a serious problem,

especially in developing countries.¹⁸ In present study, authors found prevalence of EBF was lower (35%), as compared to other states as was revealed by NHFS 6.¹⁹ Chudasama et al. reported prevalence of EBF to be 37% in Gujarat, India.²⁰ Another study from India among rural women in Tamil Nadu showed the prevalence to be 34%²¹ which is similar to present study.²¹

In India a marginal improvement was observed from 46.3 per cent in NFHS-1 to 48.6 percent in NFHS-3 in the proportion of infants <6 months old who were exclusively breastfed which was significantly lower than the WHO/UNICEF recommendation of 90 percent.¹⁹ The lowest rate of breast-feeding North Kashmir is due to many reasons like poor antenatal care, low level antenatal education about exclusive breast feeding and increased rate of deliveries by LSCS.

Present study revealed that a significant proportion mothers who were employed in gainful occupations had exclusively breastfed their babies' more than unemployed mothers. This association was also revealed in NHFS 3 and NHFS 6 in all three age segments studied.¹⁹ An explanation for this could be increased knowledge and awareness about advantages of EBF through interaction with other colleagues at workplace.

In present study authors found type of delivery has direct impact on EBF status. The mothers who delivered by caesarean section had lower rate of EBF than those who delivered by normal vaginal delivery. Ideally, all hospitals are required to practice ten steps to successful breastfeeding recommended by WHO, but it is seldom practiced.²² This could be one of the reasons why mothers who delivered by caesarean section did not practice EBF. As a result, the baby may be fed prelacteals even before breastfeeding is initiated for the first time. Second cesarean section is associated with more pain and discomfort to mother. Furthermore, the mother and her family often think that breast milk itself is not sufficient and infant formula is necessary which is easily available around the hospital premises. A study from China has reported that after surgery (c-section) mothers feel pain around the incision area and there is difficulty in movement because of catheterization and intravenous lines.²² The authors of this study argued that this could be a reason for non EBF. Similar explanation could also be valid for present study. Researchers from Nepal have also reported low EBF rates among mothers who delivered by caesarean section.²³ Further studies are needed to better understand the influence of caesarean section on EBF.

In present study authors found that the mothers from upper socioeconomic class richer had higher frequency of EBF than those belonging to lower socioeconomic strata. This finding can be explained by the fact that mothers belonging to richer wealth quintile may have better education level, easier access to social media and health services which may have increased their awareness and made them relatively more conscious about EBF. Women with higher family incomes, those who had or whose partners had higher education levels, and women who had or whose partners had professional or executive occupations were more likely than their counterparts to breastfeed. After adjustment for many potential confounders, maternal and paternal education remained positively associated with breastfeeding, while income and occupation were no longer significant. Compared

with other racial or ethnic groups, foreign-born Latina women were the most likely to breastfeed. These findings were consistent with study done by Heck KE, Braveman P et al.²⁴ As the association between a mother's educational status and her likelihood of early initiation of breastfeeding increases, long-term approaches to prioritizing education for women and girls should be explored. In the short term, uneducated mothers should be targeted with breastfeeding promotion strategies such as counseling and peer education.²⁵

CONCLUSION

The prevalence of EBF (36%) in Kashmir is lower than the national figure (64%). These findings indicate that the breastfeeding support provided by health services is weak and immediate measures to promote exclusive breast feeding are of utmost importance to decrease the infant mortality rate to targeted single digit. Further, there were no breastfeeding promotional activities going on in Kashmir. Future breastfeeding promotion programmes in Communities, Aanganwadies, Schools, Government and Private hospitals is must and should give special attention to those women who are not practicing EBF. Hence, promotion of EBF during the first six months of life and continuation of breastfeeding after six months along with appropriate complementary feeding and focus on the factors associated with EBF need to be addressed. Meanwhile caesarean section (c-section) rate in present study is 64.5 %, well above the 5-15 % of deliveries suggested by the World Health Organization in 2009.

Emergency and planned C-sections adversely affect breastfeeding initiation, milk supply and infant breastfeeding receptivity compared to vaginal deliveries. Therefore, it is imperative to address the overuse and misuse of lower section cesarean sections in state, which in long term will decrease both maternity and infant mortality rates.

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