

Breastfeeding practices in an indigenous minority community group in Nepal: a cross-sectional study

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Abstract

Background: Promotion of breastfeeding has been identified as one of the effective evidence based interventions to improve health of infants and young children. Various factors play an important role in breastfeeding practices which are not sufficiently explored in communities like Chepang in Nepal. The objectives of the study were to identify the knowledge and practices of Chepang mothers on breastfeeding and its associated factors.

Methods: A cross sectional descriptive study was carried out in which 203 Chepang mothers with child under one year of age were randomly selected and interviewed. Quantitative method was applied for data collection. Analysis of association was done using logistic regression.

Results: Practice of mothers on breastfeeding was found better than knowledge. About one fourth (23%) of them knew the appropriate time for early initiation of breastfeeding, however, 36% had practiced it. Exclusive breastfeeding practice under 6 months was 88%, although 60% knew about the recommended duration. Literate mothers were more likely to initiate breastfeeding at appropriate time [AOR: 4.24 (95% CI: 2.20-8.19)] than illiterate.

Conclusions: Breastfeeding practices like colostrum feeding and exclusive breastfeeding were found better in Chepang communities than national average, however, early initiation of breastfeeding needs to be improved which could be improved through counseling during antenatal and postnatal visits.

Keywords: breastfeeding, Chepang, Nepal

Introduction

Feeding practices directly influence nutritional status of children which ultimately impacts their survival¹. Morbidity and mortality in children are due to poor dietary intake during the first months of life². Evidence suggest lack of breastfeeding, especially exclusive breastfeeding is an important risk factor for such morbidity and mortality³. It has been found that adequate breastfeeding and complementary feeding can prevent 19% of childhood deaths in low-income countries whereas proper breastfeeding alone could prevent 13% of the current under five mortality rate⁴. World Health Organization (WHO) has recommended the need of exclusive breastfeeding for early 6 months of age which has multiple positive benefits to the child and the mother. It is also recommended for introduction of complementary feeding and continued breastfeeding after 6 months⁵. Promotion of breastfeeding is considered as one of the important component of 45 interventions in 36 low and

middle income countries to reduce child under nutrition².

Breastfeeding is a natural act, however, it is a learned behavior. Different factors like access to accurate information, family and community support, culture and health care system influence proper breastfeeding³. In Nepal, breastfeeding is nearly universal with mean duration of 29 months. Early initiation of breastfeeding is 45% while exclusive breastfeeding rate is 70%. However wide differences in coverage are observed in different regions of the country in relation to mother's education, wealth quintile and ecological variation⁶.

This study was carried out in minority Chepang communities of Makawanpur district of central development region, Nepal which is about 100 kilometers west from the capital city, Kathmandu and at a walking distance of more than 2 hours from the east-west highway of Nepal. Total population of Chepang constitutes 0.29% of the country's population and the literacy rate is 29%.

Some of them have followed shifting cultivation pattern. Joint and nuclear family system were equally popular with average household size of five⁷. Some Chepangs are living a nomadic life while majority of them are engaged in agriculture with heavy dependence on forest for food and fodder. Most of them are still living in rugged and harsh topography in the western part of the district. Due to difficult topography and long walking distance, it is difficult for them to reach government health institutions located in every village development committee (VDC) to receive health services.

Chepang have their own language, however, many of them understand Nepali language. There is lack of understanding on the breastfeeding practices in minority ethnic communities, Chepang, living in hard to reach areas as even the national demographic and health surveys do not provide ethnicity based information. Hence, this study was conducted with the objective to identify breastfeeding knowledge and practices of mother and its association with socio-demographic and health related factors.

Methods

Study design, place of study and sampling

This study used a descriptive cross-sectional design. Field work of the study was conducted during August and September 2010 in Chepang communities living in western part of Makawanpur district of Nepal. Of the total 43 VDCs in the district, 6 of them (Raksirang, Kankada, Bharta, Kalikatar, Manahari and Handikhola) were selected purposively which were mainly inhabited by Chepang. Mother with her under two year child was considered as the sampling unit. Of the sampling frame 960, obtained from Vitamin A register and verified by female community volunteers in each VDC, 360 mother with child under two years were randomly selected⁸. From the sample of 360, in this study, 203 mother-infant pairs were considered for further analysis.

The study sample was obtained using simple random sampling technique and method of data collection employed was face-to-face interview in home setting. Structured questionnaire was used to collect the data. Data on child feeding practices of the mother, at the time of survey, was based on 24-hour recall.

Inclusion criteria

Mothers with child under one year of age were included for analysis.

Exclusion criteria

Mother or the child with severe sickness, unable to respond and caretakers other than the mother were excluded in the study.

Data entry and analysis

All filled up forms were manually checked to ensure completeness and correctness. At first, the enumerators cross-checked each other's filled up forms and then the researcher randomly checked 30% of them in the field. Enumerators were asked to complete the incomplete forms by revisiting the respondents. Data was entered in Epi-Info version 3.5.1 while analysis was done using SPSS version 17.0. Bivariate and multivariate analyses were used to find out the association of early initiation of breastfeeding and exclusive breastfeeding with demographic, socio-economic and health related factors. Confidence interval (CI) for odds ratio (OR) was set at 95% and p value of < 0.05 was taken as significant. Factors, found significant during bivariate analysis, were further analyzed by step wise logistic regression. Since, the outcome variable of breastfeeding was dichotomous, it was adjusted with individual independent variable to find out the association using logistic regression model. The goodness-of-fit for regression models was assessed with Hosmer and Lemeshow test.

Results

Socio-demographic characteristics

Table 1: Socio-demographic characteristics of infant and respondent mother (n=203)

Characteristics	Number	%
Sex of child		
Male	108	53.2
Female	95	46.8
Age of child		
0-5 months	99	48.8
6-8 months	57	28.1
9-11 months	47	23.2
Birth order		
First	91	44.8
Second	49	24.1
Third or more	63	31.1
Age of mother (in years)		
< 20	106	52.3
20-34	89	43.8
≥ 35	8	3.9
Education status of mother		
Illiterate	114	56.2
Literate	89	43.8
Occupation of mother		
Agriculture	152	75.0
Job/small scale business	51	25.0

Socio-demographic characteristics of mother and infant are summarized in Table 1. Of the total 203 infants, more than half (53%) were male. Nearly half (49%) of them were in the age group 0-5 months and the median age was 6 months. Likewise, half (52%) of the mothers were less than 20 years of age with median age at marriage of 16 years. Pertaining to the educational status of mothers, only 44% were literate with primary or secondary level of education. Agriculture was the main occupation of most of the mothers (75%). Joint family system was common (51%) followed by nuclear family (45%).

Health service utilization

Table 2: Health service related characteristics (n=203)

Characteristics	Number	%
Antenatal care (ANC)		
Yes	104	51.0
No	99	49.0
Median ANC visits = 3		
Postnatal care (PNC)		
Yes	49	24.0
No	154	76.0
Median PNC visits = 2		
Growth monitoring		
Yes	112	55.0
No	91	45.0
Median growth monitoring visits=2		
Place of delivery		
Home	158	78.0
Health facility	29	14.0
Others (Jungle, workplace etc.)	16	8.0
Self-delivery practice	35	22.0

Table 2 presents characteristics related to health service. Utilization of health services was not common among Chepang mothers. Nearly half (51%) of them received antenatal care (ANC) service but only about one-fourth visited health facility for postnatal care (PNC). Growth monitoring coverage was 55%. Majority of the mothers practiced home delivery (78%) and among those who delivered at home, 22% of them delivered without other's assistance, not even family members or neighbors supported during child birth.

Knowledge and practice regarding breastfeeding

Table 3: Knowledge and practice of mothers regarding breastfeeding (n=203)

Characteristics	Knowledge		Practice	
	Num-ber	%	Num-ber	%
Breastfeeding initiation				
After one hour	136	67.0	131	65.0
Within one hour	67	33.0	72	35.0
Colostrum feeding				
Yes	138	68.0	145	71.0
No	65	32.0	58	29.0
Prelacteal feeding				
Yes	22	11.0	9	4.0
No	181	89.0	194	96.0
Exclusive breastfeeding for 6 months (For knowledge n=203) (For practice n=99)				
Yes	122	60.0	92	88.0
No	81	40.0	12	12.0

Table 3 shows the knowledge and practices of mothers regarding breastfeeding. Practices of mother were found relatively better than their knowledge. One third (33%) of the Chepang mothers replied that the appropriate time for initiation of breastfeeding was within one hour after birth however, 35% of them practiced it. Prelacteal feeding was rare in Chepang communities, only 4% fed prelacteal to their child. Knowledge about exclusive breastfeeding was 60% but 88% of them fed their breast milk exclusively for 6 months.

Factors influencing initiation of breastfeeding

Characteris-tics	Num-ber (%)	Unad-justed OR (95%CI)	Adjusted OR (95%CI)
Family type			
Joint/ex-tended	111 (55)	1	1
Nuclear	92 (45)	0.25 (0.13-0.46)	0.34 (0.17-0.66)*
Education of mother			
Illiterate	114 (56)	1	1
Literate	89 (44)	4.84 (2.60-9.00)	4.24 (2.20-8.19)*
Occupation of mother			
Agriculture	152 (75)	1	1
Job/small scale business	51(25)	3.34 (1.73-6.44)	2.63 (1.24-5.57)*

*p<0.05

□ Adjusted for family type, education status and occupation of mother

Table 4 shows the univariate and multivariate model obtained by logistic regression for the factors associated with initiation of breastfeeding within one hour after birth. Sex of child, birth order, age of mother, ANC and place of delivery, analyzed in the univariate model, were not found statistically associated with early initiation of breastfeeding, however, family type, mother's education level and occupation had statistical significance. Infant born to literate mothers were more likely to receive mother's breast milk within one hour of birth. Literate mothers had 4 times (AOR: 4.24, 95% CI: 2.20-8.19) higher odds of practicing early initiation of breastfeeding compared to the illiterate. Likewise, mothers who were involved in occupation other than agriculture were found to initiate breastfeeding early (AOR: 2.63, 95% CI: 1.24-5.57).

Factors influencing exclusive breastfeeding

Socio-demographic factors (sex of child, education level and occupation of mother, family type and birth order) and health related factors (antenatal and postnatal care visit, place of delivery and growth monitoring of children) were considered for univariate logistic regression model with exclusive breastfeeding. However, statistically significant associations were not observed and hence, were not subjected to multivariate logistic regression model.

Discussion

This study explored breastfeeding practices and its associated factors in Chepang communities of Makawanpur district. Breastfeeding practices of Chepang mothers were found relatively better than the knowledge. Although 33% knew about initiation of breastfeeding within one hour, 35% of them had practiced it. Exclusive breastfeeding practice for 6 months was 88%, however only 60% of them knew about the appropriate duration.

The prevalence of early initiation of breastfeeding (35%) in the study population was similar to the average of Nepal Demographic and Health Survey (NDHS) 2006 (35%)⁹ but was lower than the average of NDHS 2011 (45%)¹⁶ and Multiple Indicator Cluster Survey 2014 (49%)¹⁰. However, prevalence of exclusive breastfeeding practice under 6 months (88%) was greater than both NDHS 2006 and 2011 which were 53% and 70% respectively. A hospital based study carried out in Nepal showed higher prevalence of early initiation of breastfeeding but lower prevalence of exclusive breastfeeding at 6 months¹¹. Lower prevalence of early initiation of breastfeeding in Chepang communities could be due to illiteracy and ignorance of mothers on the importance of early breastfeeding, however, higher prevalence of exclusive breastfeeding could be the result of their traditional practices.

Colostrum feeding practice was more common (71%) and prelacteal feeding was remarkably less (4%) as

compared to the average of central hilly region (17%) and the national average (28%)⁶, which was a good practice. Traditional practices could be the convincing reason as ethnicity is related to cultural identity including child feeding practices.¹²

Breastfeeding practice is nearly universal in Nepal⁶, however, socio-economic and other factors such as access to information, education and health could have played an important role in the regional and ethnic disparities observed^{3,13}. Mothers in nuclear families were found to initiate breastfeeding late than their counterparts in joint/extended families. Literate mothers were found to initiate breastfeeding four times early than their illiterate counterparts, though other studies have shown inconsistent findings^{14,15}. Study conducted in Nigeria has shown association between mother's education and breastfeeding initiation¹⁶ but a study carried out in Nepal¹⁷ showed no significant association with mothers education status.

Demographic and health related factors such age of mother, sex of child, birth order, ANC visits and place of delivery were not found to be associated with early breastfeeding practice in this study while a study in Nepal found mother's age, sex of child and birth order as the determinants¹⁷. A cross-sectional survey in Nepal concluded that adequate prenatal care utilization was associated with early initiation of breastfeeding¹⁸.

Likewise, significant association of exclusive breastfeeding with factors like age and education status of mother, sex and birth order of the child, place of delivery and postnatal care visit of the mother were not found in the study. Higher education status of mother was found to be negatively associated to on-demand breastfeeding for infants 6-11 months in a study conducted in Uganda¹⁹. Study conducted in Bangladesh²⁰ also showed no significant association of exclusive breastfeeding with mother's education status. Comparative study conducted in four Asian countries found lower rate of exclusive breastfeeding with the increase in age of mother²¹, in contrast, a study in Nigeria showed positive association¹⁶. Despite being a hard to reach area with very limited access to media exposure and other social influences, most of the mothers had exclusive breastfeeding practices which could be due to the dominance of traditional practice.

Health service related factors like ANC and growth monitoring were also not found to be significantly associated with exclusive breastfeeding in the study. Studies showed inconsistent results. Rates of exclusive breastfeeding was found lower in mothers who attended antenatal clinics in Nepal but the rate was higher with the higher number of ANC in India²¹.

Traditional cultural practices may have some role in determining breastfeeding which were beyond the scope of this study. Continuation of their traditional practices

and less exposure to the media could be the reason of such practices as less educated women were found to properly breastfed their babies in non-industrial communities ²².

Conclusion

Practices of Chepang mothers were found better than their knowledge about breastfeeding. Breastfeeding practices like colostrum feeding and exclusive breastfeeding were found better than national average. District health program planners could get a hint that better practices existing in such communities need to be promoted and breastfeeding awareness programs need to be designed based on the specific needs of communities.

Conflict of interest: None declared

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