

Factors Associated with Discontinuing Exclusive Breastfeeding among Mothers of Infants Aged 0-6 Months

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ABSTRACT

Introduction

Knowing breastfeeding is one of the easiest and cost-effective ways to maintain a good child health, majority infants are not exclusively breastfed for the recommended 6 months of age. Thus, the aim of the study was to find out the factors associated with discontinuing exclusive breastfeeding (EBF) among mothers of infants' aged 0-6 months.

Methods

A analytical study design was used to find out the factors associated with discontinuing EBF among mothers of infants' aged 0-6 months in Nepal. A total of 380 mothers of infants whose child were 0-6 months old were selected using non-probability purposive sampling technique through online survey as people are advised to stay at home during the Covid-19 outbreak. Data was collected using structured questionnaire with interview technique.

Results

Study findings revealed that half (50.5%) of the mothers exclusive breastfed their infants with mother's mean age being 27.39 ± 3.64 years. Discontinuation of EBF varied with mothers age, ethnicity, mother's educational level, initiation of breastfeeding and sources of information regarding EBF as newspaper/articles and relatives/friends/neighbors ($p < 0.005$). The factors related to mother that are associated with discontinuation of EBF were found to be perceived insufficient milk, cesarean section delivery, jobholder mother ($p < 0.001$) respectively.

Conclusions

Only half of respondents exclusively breastfed their infants for the recommended age in which only factors related to mother were significant with discontinuation of EBF rather than infants'. Findings of the study emphasizes on counselling the mothers regarding the benefits of EBF to both child and mother during hospital visits.

Keywords: Exclusive breastfeeding; factors; under 6 months; EBF.

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INTRODUCTION

World Health Organization (WHO) and United Nations Children's Fund (UNICEF) recommend giving infant only breast milk and no additional food, water or other fluids with the exception of medicine, vitamin or mineral drops for the first six months of life after birth.¹

According to Global Breastfeeding Scorecard survey in 194 countries, Nepal was able to adopt exclusive breastfeeding practice above 60%.² The exclusive breastfeeding rate for 6 months age in Nepal was 66% in 2016. This comparison put Nepal in having higher exclusive breastfeeding rate. However, the condition is still not satisfactory³ because breast milk is best source of nourishment for infants containing antibodies that protect against some common childhood illnesses⁴ and gap has to be covered for better child health and reduce child mortality.

The objective of this study was to assess the factors associated with discontinuing exclusive breastfeeding among mothers of infants' aged 0-6 months.

METHODS

Analytical study design was used to find out the factors associated with discontinuing exclusive breastfeeding among mothers of infants' aged 0-6 months in Nepal. The required sample for this study was calculated using Cochran, 1977 formula for infinite population with a reference proportion of 34%³ which was 380 by adding 10% non-response rate.

The data was collected through online survey from Nepali nationality who are residing in Nepal at that moment. As people are advised to stay at home during the Covid-19 outbreak, thus the researcher attempted to collect the data online. The study population for this study comprised of mothers of infants' aged

0-6 months of Nepalese nationality where non-probability purposive sampling technique was be used for data collection. Structured questionnaire with interview technique was be used to assess the factors associated with non-exclusive breastfeeding among mothers under 6 months postpartum in Nepal. Ethical approval was taken from CMSTH-Institutional Review Committee (IRC), Bharatpur-10, Chitwan. Verbal consent was taken from the each respondent.

The data was coded and entered in EPI data 3.1 and exported into the IBM SPSS version 20 for analysis. Data was summarized using descriptive statistics such as frequency, percentage, mean and standard deviation. Chi square test was used to find out the association between exclusive breast feeding and selected variables at 0.05 level of significance.

RESULTS

Table 1. Socio-demographic Characteristics of the Respondents		
Variables	Frequency	Percentage
Mother's age		
20- 25 years	114	30.0
26-30 years	195	51.3
31 years and above	71	18.7
<i>Mean age (in years) ±SD 27.39 ± 3.64; Min= 20, Max= 37</i>		
Mother's educational level		
Secondary level	16	4.2
Higher secondary	100	26.3
Bachelor and above	264	69.5
Father's educational level		
Secondary level	33	8.7
Higher secondary	84	22.1
Bachelor and above	263	69.2

Place of residence		
Urban area	306	80.5
Rural area	74	19.5
Ethnicity		
Dalit	3	0.8
Janjati	68	17.9
Madhesi	5	1.3
Brahmin	199	52.4
Chhetri	102	26.8
Others	3	0.8
Religion		
Hindu	360	94.7
Boudhha	12	3.2
Muslim	3	0.8
Christian	4	1.1
Others	1	0.3
Mother's occupation		
Housewife	178	46.8
Business	45	11.8
Job	148	38.9
Agriculture	6	1.6
Others	3	0.8
Family Type		
Nuclear family	138	36.3
Joint family	236	62.1
Extended family	6	1.6

SD-standard deviation Min-minimum Max- maximum

Table 1 shows that out of 380 respondents, 30% are aged 20-25 years and 18.7% are aged 31 years and above. The mean age of the respondent was 27.39 ± 3.64 . Regarding mother's and father's educational level 69.5% and 69.2% studied bachelor and above respectively whereas 4.2% and 8.7% studied till secondary level respectively. Regarding place of residence majority (80.5%) resided in urban area. Regarding ethnicity

more than half (52.4%) were brahmin and 0.8% were dalit. Regarding religion majority (94.7%) were hindu whereas 0.8% were muslim. Out of 380 respondents 46.8% of the mothers' were housewife and majority (62.1%) of the families lived in joint family.

Table 2. Distribution of respondents according to child's characteristics

Variables	Frequency	Percentage
Child's age		
Birth to 3 months	176	46.3
Above 3 months to 6 months	204	53.7
Mean age (in months) \pm SD		
3.62 ± 1.70		
Child's sex		
Male	226	59.5
Female	154	40.5
Gestation age of the child at birth		
Term (37 weeks)	325	85.5
Preterm (<37 weeks)	55	14.5
Child born with any congenital anomaly		
Yes	10	2.6
No	370	97.4
If yes, which congenital anomaly (n=10)		
Club foot	2	20
Congenital Heart disease	2	20
Others	6	60
Child admitted to hospital after delivery		
Yes	48	12.6
No	332	87.4
If yes, the cause for hospital admission (n=48)		
Birth asphyxia	14	29.2
Jaundice	3	6.2
Pneumonia	3	6.2
Fever	11	23
Others	17	35.4

SD-standard deviation Min-minimum Max- maximum

Table 2 shows that out of 380 respondents, 53.7% had child aged 3-6 months and 46.3% had child aged 0-3 months with 59.5% male child and 40.5% having female child.

Regarding gestation age of child at birth 85.5% babies were term and 14.5% babies were preterm. Regarding babies born with any congenital anomaly only 2.6% were born with congenital anomaly among which 20% each were club foot and congenital heart disease. Out of 380 children of the respondents 87.4% children were not admitted to hospital whereas 12.6% were admitted among which 35.4% were due other causes most of which were breathing problems and transient tachypnea of newborn.

Table 3. Distribution of Respondents according to Obstetric Characteristics

Variables	Frequency	Percentage
Frequency of ANC visit		
1 time	5	1.3
2 times	4	1.1
3 times	10	2.6
4 times	48	12.6
4 times and above	313	82.4
Parity during this child		
Primiparus	277	72.9
Multiparous	103	27.1
Pregnancy related condition		
No any	308	81.1
Preeclampsia	31	8.2
Eclampsia	11	2.9
Others	30	7.9
Information obtained on exclusive breastfeeding during ANC checkup		
Yes	184	48.4
No	196	51.6
Heard about exclusive breastfeeding		

Yes	342	90
No	38	10
Source of information regarding exclusive breastfeeding* (n=342)		
Health personnel	171	45
Mass Media	135	35.5
Newspaper/ Articles	72	18.9
Relatives/ friends/ neighbors	124	32.6
Books	111	29.2
Others	15	3.9
Delivery place		
Hospital	379	99.7
Home	1	0.3
Type of delivery		
Normal vaginal delivery	161	42.4
Caesarean Section	219	57.6

* multiple response

Table 3 shows that out of 380 respondents, 82.4% of the respondents went ANC visits for more than 4 times whereas 1.1% of the respondents went for 2 ANC visits throughout their pregnancy. Regarding parity 72.9% respondents were primiparous whereas 27.1% were multiparous. Regarding pregnancy related condition majority (81.1%) had no pregnancy related health issues whereas 2.9% had eclampsia. Regarding information on exclusive breastfeeding during ANC visit 48.4% said they received whereas 51.6% said they did not receive any. Out of 380 respondents majority (90%) had heard about exclusive breastfeeding among which 35.5% of the respondent's source of information was mass media. Regarding the place of delivery 99.7% delivered at hospital and 0.3% delivered at home. Regarding the type of delivery 42.4% had normal vaginal delivery whereas 57.6% had caesarean section.

Table 4. Distribution of Respondents according to Breast Feeding Practices		
Variables	Frequency	Percentage
Initiation of breastfeeding after delivery		
Within 1 hour	137	36.1
Within 3 hours	58	15.3
Within 6 hours	25	6.6
Within 24 hours	41	10.8
After 24 hours	119	31.3
First feeding to child after birth		
Breastmilk	180	47.4
Honey	3	0.8
Cow/ Buffalo milk	1	0.3
Formula milk	196	51.6
Cause for not giving breastfeed immediately after delivery* (n=200)		
Perceived insufficient breast milk	85	22.4
Family suggestion	1	0.3
Caesarean section	119	31.3
Breast problem	7	1.8
Others	11	2.9

* multiple response

Table 4 shows that out of 380 respondents, 36.1% initiated breastfeeding within 1 hour after delivery whereas 6.6% initiated within 6 hours. Regarding first feeding to the child after delivery 51.6% fed formula milk and 47.4% fed breastmilk. Regarding cause for not giving breastfeeding immediately after delivery 31.3% said due to caesarean section and 0.3% said due to family suggestion.

Table 5. Distribution of respondents according to Exclusive Breast Feeding		
Variables	Frequency	Percentage
Exclusive breastfed to baby		
Yes	188	50.5
No	192	49.5

Table 5 shows that out of 380 respondents, 50.5% exclusively breastfed their child whereas 49.5% did not.

Table 6. Causes for discontinuation of Exclusive breast Feeding.		
Variables	Frequency	Percentage
Causes related to child for discontinuing exclusive breastfeeding* (n=192)		
Twins baby	1	0.3
Sick baby	1	0.3
Crying baby	46	12.1
Others	6	1.6
Causes related to mother for discontinuing exclusive breastfeeding* (n=192)		
Perceived insufficient breast milk	161	42.4
Caesarean section	29	7.6
Job holder mother	31	8.2
Lack of family support	5	1.3
Lack of breastfeeding skills	5	1.3
Suggestion from relatives/ neighbors/ friends	7	1.8

* multiple response

Table 6 shows that out of 192 respondents who did not exclusively breast feed their child, the majority (42.4%) cause was related to mother as perceived insufficient breastmilk whereas 0.3% each was cause related to child as twins baby and sick baby.

Table 7. Association between Variables with Discontinuation of Exclusive Breast Feeding			
Variables	Exclusive Breast Feeding		p – value
	Yes No. (%)	No No. (%)	
Mother's age			
20-25 years	65 (57)	49 (43)	0.004
26-30 years	100 (51.3)	95 (48.7)	
Above 30 years	23 (32.4)	48 (67.6)	
Ethnicity			
Janjati	33 (48.5)	35 (51.5)	0.034
Brahmin	92 (46.2)	107 (53.8)	
Chhetri	53 (52)	49 (48)	
Others	10 (90.9)	1 (9.1)	
Mother's educational level			
Secondary level	11 (68.8)	5 (31.2)	0.015
Higher secondary level	59 (59)	41 (41)	
Bachelor and above	118 (44.7)	146 (55.3)	
Initiation of breastfeeding after delivery			
Within 1 hour	81 (59.1)	56 (40.9)	0.006
In 3 hours	28 (48.3)	30 (51.7)	
In 6 hours	14 (56)	11 (44)	
Within 24 hours	22 (53.7)	19 (46.3)	
After 24 hours	43 (36.1)	76 (63.9)	
Cause for not giving breastfeed immediately after delivery* (n=200)			
Perceived insufficient breastmilk	29 (34.1)	56 (65.9)	0.001
Source of information on exclusive breast feeding* (n=342)			
Newspaper/Articles	28 (38.9)	44 (61.1)	0.046
Relatives/Neighbors/Friends	51 (41.1)	73 (58.9)	0.024
Causes related to mother for discontinuing exclusive breastfeeding (n=192)			
Perceived Insufficient breastmilk	6 (3.7)	155 (96.3)	<0.001
Caesarean section	1 (3.4)	28 (96.6)	<0.001
Job holder mother	3 (9.7)	28 (90.3)	<0.001
Lack of breastfeeding skills	0 (0)	5 (100)	0.026

Significance level at 0.05

*multiple response

Table 7 shows that there is statistically significant association between discontinuing exclusive breast feeding and mother's age ($p=0.004$), ethnicity ($p=0.034$), mother's educational level ($p=0.015$), time of initiation of breastfeeding after delivery ($p=0.006$) and cause for not giving breastmilk immediately after delivery due to perceived insufficient breast milk ($p=0.001$). There is also statistically significant association between discontinuing exclusive breast feeding and the source of information on exclusive breastfeeding as newspaper/articles ($p=0.046$) and relatives/neighbors/friends ($p=0.024$). Regarding the association between discontinuing exclusive breastfeed and its causes related to mother there was statistically significant association to perceived insufficient breast milk ($p<0.001$), caesarean section ($p<0.001$), job holder mother ($p<0.001$) and lack of breastfeeding skills ($p=0.026$).

DISCUSSION

In this study, mean age of the respondent (mother) was 27.39 ± 3.64 years and that of child was 3.62 ± 1.70 months which was similar to the mean age of mothers 25.38 ± 4.14 years, but not to that of infants which was 9.98 ± 2.26 months because this study only included infants under 6 months of age.⁵ In the present study, maternal education was above secondary level whereas contrary findings were present in a similar study where almost half (47.5%) had above primary level education. This difference might be due to the data collection technique in the current study via online where only educated people with internet access got chances to participate.⁶

Mother's occupation of almost half (46.8%) was housewife where similar results has been noted in a study of 53.5% mothers being a housewife.⁷ The normal vaginal delivery mothers' had during this current child in this study was 42.4% whereas higher incidence was found in a study where normal vaginal delivery was 73.38%. This difference is due to increase in the rate of

caesarean section deliveries in Nepal over the time.⁸

According to the data of present study, the prevalence of exclusive feeding until 6 months is 50.5% which is lower to the national data of 2016 that is 66% at 6 months.³ The decrease in the prevalence might be due to the current study's method of data collection via online due to COVID pandemic where respondents' who had access to internet could only participate and those not having were excluded which can also be seen in the data as respondents level of education was high and area of residence was mostly (80.5%) urban area.

In the present study, the discontinuation of EBF was significantly associated with mother's age and mother's educational level which is in accordance in a study done in India.⁶

The timing of initiation of breastmilk was significantly associated with discontinuation of EBF where the late the initiation the more discontinuation of exclusive breastfeeding was found in the present study which was in accordance with a study in Ethiopia where not initiating breastfeeding early (within 1 hour) was one of the variable associated with cessation of EBF.⁷ This similarity is due to evidences supporting the increase in the likelihood of exclusive breastfeeding for one to four months of life as well as the overall duration of breastfeeding if initiated early breastfeeding.⁹

In a similar study in Taiwan the factors associated with cessation of exclusive breast feeding was perceived low milk quantity, Caesarean birth, lack of tertiary education of mother and mother's return to work¹⁰ which was similar with the current study where perceived insufficient milk, job holder mother and caesarean section delivery was significantly associated with discontinuation of EBF but mother's lack of tertiary education was not the factor in the present study which might be due to not sufficient (51.6%) antenatal

counselling regarding benefits of EBF despite of having higher degrees of education.

CONCLUSIONS

The findings of this study revealed that prevalence of exclusive breast feeding was 50.5% which was lower than the national data and national/international recommendation on breastfeeding. Variables like mother's age, educational level, ethnicity, initiation of breastfeeding after delivery, source of information on breastfeeding as newspaper/articles, friends/relatives/neighbors were significantly associated with discontinuation

of EBF. The factors related to mother where perceived insufficient milk, cesarean section delivery, job holder mother and lack of breastfeeding skills were found out to be associated with discontinuation of EBF. It is suggested the exclusive breastfeeding can be increased and promoted through breastfeeding education or training of mothers' knowledge, awareness and practices especially during antenatal checkup and followed up during postnatal checkup and vaccination of their babies.

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