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Factor Associate with Early Initiation and Exclusive Breastfeeding Practice During the First Six Months of Age at Ghorahi, Dang, Nepal.

**Bikash Lamichhane¹, Basant Lamichhane², Radha Darlami³,
Stuti Bhattarai⁴, Bishal Pokhrel⁵**

¹ Vice-Chancellor, Rapti Academy of Health Sciences, Ghorahi, Dang, Nepal

² Department of Obstetrics and Gynecology, Rapti Academy of Health Sciences, Ghorahi, Dang, Nepal

³ Institutional Review Committee, Rapti Academy of Health Sciences, Ghorahi, Dang, Nepal

⁴ Research Assistant, Rapti Academy of Health Sciences, Ghorahi, Dang, Nepal

⁵ HOD, Department of Community Medicine, Repti Academy of Health Sciences, Ghorahi, Dang, Nepal

Correspondence to:

Dr. Bikash Lamichhane

Vice-chancellor, Rapti Academy of Health Sciences, Ghorahi, Dang,

E-mail: bikash_moon1@yahoo.com

Abstract

Introduction: Breastfeeding is the right for the new born infant and should be feed with in first hour after birth. Exclusive breastfeeding promotes optimal neonate and infant growth as it contributes to 100% of the daily nutrition requirements. Exclusive breastfeeding protects the neonates and infants from various communicable and non-communicable diseases. In additional it reduce total family and social expenditure, reduce health care cost, which is the single most cost-effective intervention for reducing child mortality in resource constrained setting like Nepal. Knowledge of the mothers on breastfeeding practice also hinders early initiation and exclusive breastfeeding practice. The aim of the study is “To assess the prevalence of early initiation on breastfeeding and exclusive breastfeeding on mother of 6 to 11 months of age children who visiting the immunization clinic of Rapti Academy of Health Sciences.

Methods: A cross-sectional study was conducted in Rapti Academy of Health Sciences, Ghorahi, Dang, Nepal. Total 340 children of 6 to 11 months mothers were included in the study. The semi-structured questionnaire was used, include socio-demographic variables, knowledge and practice on early initiation on breastfeeding and exclusive breastfeeding are the tools for data collection. All collected data were analyzed by using SPSS-25 version software. Chi-square test was applied to measure association between knowledge and practice on early initiation on breastfeeding and exclusive breastfeeding. P-value is set at alpha $\alpha=0.05$.

Results: Out of 340 respondents 204(60%) respondents don't know timing of early initiation of breastfeeding. In practice of early initiation of breastfeeding 178(52.4%) respondents practice to breastfeeding their child within an hour. 339(99.7%) respondents have knowledge about exclusive breastfeeding. 210(61.8%) respondents practice more than 12 times for exclusive breastfeeding per day. Mode of delivery and birth order of children are strongly associated with knowledge and practice on early initiation on breastfeeding and exclusive breastfeeding.

Conclusion: The participants are aware of colostrum and exclusive breastfeeding benefits but lack knowledge on early initiation. The mode of delivery and birth order significantly influence early and exclusive breastfeeding, highlighting the need for targeted education.

Keywords: EBF, RAHS, WHO, Breastfeeding, Association

Introduction

Exclusive breastfeeding (EBF) is defined as giving an infant only breast milk from birth up to 6 months of age, without giving other liquids or solids, not even water, except for oral rehydration solution, or vitamins, minerals, and medicines.¹ Various strategies have been initiated by UNICEF and WHO for promoting optimal breastfeeding practices². EBF promotes optimal neonate and infant growth as it contributes to 100 % of the daily nutrition requirement of children.³ Globally, around 48% of babies are breastfed within one hour of birth and only 44% of infants under six months of age are exclusively breastfed.⁴ In Southern Asia, only 39% of children were engaged in early initiation of breastfeeding and 61% were exclusively breastfed for the first 6 months of life.⁵ According to NDHS 2022, only 55% of children initiated breastfeeding within 1 hour of birth, and 56% of 0-6 month children are exclusively breastfed.⁶ EBF for the first 6 months of life followed by optimal complementary feeding are critical public health measures that help in reducing and preventing morbidity and mortality in young children.⁷ In addition, EBF reduces total healthcare costs; the money saved from not having to buy formula could also reduce the total family and social expenditure.⁸ Exclusive breastfeeding protects the infant from lower respiratory tract infection, diarrhea, asthma, and allergy, and increases this effect up to six months of age as well as decreases the risks of sudden infant death syndrome (SIDS), atopic diseases, and neonatal mortality.^{9,10} It has been suggested that 13% of the current under-five mortality rate could be reduced by promoting proper breastfeeding practices¹¹, which is the single most

cost-effective intervention for reducing child mortality in resource-constrained settings such as in Nepal.¹² In developing countries like Nepal; socio-demographic factors like maternal age, education, employment, residency, cultural and religious practices, living arrangement, antenatal care practices, home delivery, and professional assistance at birth were associated with suboptimal breastfeeding practices.^{13, 14,15,16,17,18,19} Similarly, social class, lack of parental support, parity, child's rank among siblings, type of delivery, etc. also have an important impact on optimal breastfeeding practices.^{20,21,22,23} Besides socio-demographic and maternal factors, the knowledge of mothers on breastfeeding practice also hinders early initiation and exclusive breastfeeding practice.^{24,25}

So, factors associated with breastfeeding are keys to improving breastfeeding practices. This study was to be conducted with objectives to identify the factors associated with breastfeeding in the Ghorahi sub-metropolitan city, of Dang district.

Materials and Methods

Study design: A descriptive cross-sectional study was conducted.

Study methods: The study was quantitative cross-sectional study method to know exclusive breast feeding practice during the first six months of age at Ghorahi, Dang, Nepal.

Study population: The study population was the mother of 6 to 11 months of age children who visiting the immunization clinic of Rapti Academy of Health Sciences. For immunization service.

Sample size: sample size is calculated by using the formula of

$$Nz^2pq/d^2 (N-1) + z^2pq^{26}$$

Where,

N=Total population ie target population of 6-11 months children of GhorahiSub-metropolitan

$$(FY2079/80)^{27} = 1655. q = 1-p = 1.0.56 = 0.44.$$

d= allowable

z= 1.96 at 95% confidence interval.

p= Proportion of exclusive breastfeeding in Nepal²⁸ = 56% = 0.56.

d= allowable error=0.05.

So, sample size= 308.53= 309.

After adjusting 10% of non-response rate

Hence sample size is 340.

Inclusion and exclusion criteria: Mother children of 6 to 11 months of age were enrolled in the study. Those mother children of 6 to 11 months who were not present during data collection were excluded.

Results

Table 1. Knowledge and practice on early initiation of breastfeeding.

Characteristics	Frequency	Percentage
Known-ness on timing of Early initiation of breastfeeding (N=340)		
Within an hour	102	30.0
After an hour	34	10.0
Don't know	204	60.0
Total	340	100
Knowledge on Benefits of Early Initiation of breastfeeding (N=340)		
Mother-child bonding	22	6.5
Provide nutrition to child	86	25.3
Both	232	68.2
Total	340	100
Practice of Early Initiation of Breastfeeding (N=340)		
Within an hour	178	52.4
After an hour	111	32.6
Don't remember the timing	51	15.0
Total	340	100
Reasons for not practicing Early initiation of Breastfeeding (n=162)		
Due to issues in breastfeeding	27	16.7
Maternal illness	104	64.2
Newborn illness	27	16.7
Others	4	2.5
Total	162	100

Pre-testing of tools: About 10% of study sample was taken and pretested in similar characteristics and setting of Province Hospital, Tulsipur, Dang and necessary modification was done as required after pre-testing.

Data Collection technique: Semi structured questionnaire was followed by the mothers of 6 to 11 months children. One time interviews for each participants was conducted with the mothers during immunization clinic visit. Written maintained by coding each questionnaire. Anonymity was maintained.

Data management and analysis: The collection data was entered in EpiData 3.1 version and was transferred into SPSS-25 version for statistical analysis. Descriptive analysis was included as frequency, percentage, cha-square test was used to assess the association with variable. P-value less than 0.05 was set for significant association.

Ethical Consideration: The ethical approval was obtained from Nepal Health Research Council (NHRC) Ref: 3215 at 26th May 2023.

Table 1. Represent about the knowledge and practice of early initiation of breastfeeding which revealed that more than half 60% of participants does not know timing of early initiation of breastfeeding. 68.2% mothers with knowledge regarding early initiation of breastfeeding provide

byboth, mother child bonding and provision of nutrition to the child. 52.4% mothers had knowledge to provide breast milk within half an hour and half of the mothers 64.2% does not practice early initiation of breastfeeding is due to her illness.

Table 2. Knowledge and practice on colostrum milk.

Characteristics	Frequency	Percentage
Know about colostrum milk (N=340)		
No	148	43.54
Yes	192	56.5
Total	340	100
Knowledge on benefits of Colostrum milk (n=200)		
Protection from Disease	51	25.5
Give Strength to child	20	10.0
Immunity	33	16.5
Nutrition	52	26.0
Other	4	2.0
Don't know	40	20.0
Total	200	100
Feed colostrum milk (n=192)		
Yes	189	98.4
No	3	1.6
Total	192	100
Reasons for not feeding colostrum milk (n=3)		
Problem in breast	2	66.7
Cultural practice	1	33.3
Total	3	100

Table 2. Among 340 mothers 56.5% have knowledge and practice on colostrum milk. 25.5% mothers have knowledge about benefit of colostrum milk which protect from diseases and

98.4% mothers feed colostrum milk to their child and 66.7% mothers do not feed colostrum milk is due to problems in the breast.

Table 3. Knowledge and practice of exclusive breastfeeding.

Characteristics	Frequency	Percentage
Know about Exclusive breastfeeding (N=340)		
Yes	339	99.7
No	1	0.3
Total	340	100
Done exclusive breastfeeding (N=340)		
Yes	270	79.4
No	70	20.6
Total	340	100
Knowledge on timing of breastfeeding during Exclusive Breastfeeding (N=340)		
On demand	30	8.8
0-8 times	19	5.6
8-12 times	59	17.4
More than 12 times	142	41.8
Don't know	90	26.5
Total	340	100
Practice on timing of breastfeeding during exclusive breastfeeding (N=340)		
On demand	30	8.8
0-8 times	23	6.8
8-12 times	77	22.6
More than 12 times	210	61.8
Total	340	100
Reasons for not practicing Exclusive breastfeeding (n=70)		
Mother's employment	3	4.3
Breast milk isn't sufficient	64	91.4
Others	3	4.3
Total	70	100
Knowledge on ideal position of breastfeeding (N=340)		
Correct	335	98.5
Incorrect	5	1.5
Total	340	100
Knowledge on ideal contact point during breastfeeding (N=340)		
Correct	322	94.7
Incorrect	18	5.3
Total	340	100

Table 3. About knowledge and practice of exclusive breastfeeding 99.7% mothers know about exclusive breastfeeding and 79.4% mother practice about it. Regarding knowledge about time of breastfeeding 41.8% mothers say that they feed their child more than 12 times a days and

reasons regarding not practicing exclusive breastfeeding 91.4 mothers say due to not sufficient of breast milk. 98.5% mothers have proper knowledge regarding ideal position of breastfeeding and 94.7% mothers had knowledge on ideal contact point during breastfeeding.

Table 4. Association between socio-demographic and health service related factors with early initiation of breastfeeding.

Characteristics	Early Initiation of Breast Feeding		P-value
	Yes n (%)	No n (%)	
Place of Child Birth			
Home	5 (100)	0	0.032*
Health Facility	173 (51.6)	162 (48.4)	
Mode of delivery			
Normal	158 (85.4)	27 (14.6)	0.000*
Instrumental	6 (85.7)	1 (14.3)	
Cesarean section	14 (9.5)	134 (90.5)	
Birth order of Child			
First	66 (44.9)	81 (55.1)	0.016*
Second and more	112 (58.0)	81 (42.0)	
Religion			
Hindu	166 (51.6)	156 (48.4)	0.016*
Christian	10 (90.9)	1 (9.1)	
Others	2 (28.6)	5 (71.4)	
Education of mother			
Illiterate	9 (81.8)	2 (182)	0.028*
Literate	7 (70.0)	3 (30.0)	
Primary	17 (51.5)	16 (48.5)	
Secondary	68 (59.1)	47 (40.9)	
Higher secondary and above	77 (45.0)	94 (55.0)	
Ethnicity			
Brahmin/Chhetri	78 (49.4)	80 (50.6)	0.664
Janajati	67 (54.9)	55 (45.1)	
Dalit	19 (59.4)	13 (40.6)	
Others	14 (50.0)	14 (50.0)	
Receive counselling on breastfeeding			
Yes	108 (49.8)	109 (50.2)	0.205
No	70 (56.9)	53 (43.1)	

*Statistically Significant

Table 4. Shows the association between socio-demographic and health service related factors with early initiation of breastfeeding. The ethnicity and receiving counselling on breastfeeding where found to be no significant

association but place of delivery, mode of delivery, birth order of the children, religion and education of the mothers shows highly degree of association.

Table 5. Association between socio-demographic and health service related factors with exclusive breastfeeding.

Characteristics	Exclusive Breastfeeding		P-value
	Yes n (%)	No n (%)	
Place of Child Birth			
Home	1 (20)	4 (80)	0.974
Health Facility	69 (20.6)	266 (79.4)	
Mode of delivery			
Normal	28 (15.1)	157 (84.9)	0.014*
Instrumental	3 (42.9)	4 (57.1)	
Cesarean section	39 (26.4)	109 (73.6)	
Birth order of Child			
First	39 (26.5)	108 (73.5)	0.018*
Second and more	31 (16.1)	162 (83.9)	
Religion			
Hindu	66 (20.5)	256 (79.5)	0.222
Christian	1 (9.1)	10 (90.9)	
Others	3 (42.9)	4 (57.1)	
Education of mother			
Illiterate	2 (18.2)	9 (81.8)	0.864
Literate	2 (20)	8 (80)	
Primary	7 (21.2)	26 (78.8)	
Secondary	20 (17.4)	95 (82.6)	
Higher secondary and above	39 (22.8)	132 (77.2)	
Ethnicity			
Brahmin/Chhetri	40 (25.3)	118 (74.7)	0.024*
Janajati	18 (14.8)	104 (85.2)	
Dalit	3 (9.4)	29 (90.6)	
Others	9 (32.1)	19 (67.9)	
Receive counselling on breastfeeding			
Yes	25 (20.3)	98 (79.7)	0.928
No	45 (20.7)	172 (79.3)	

*Statistically Significant

Table 5. Shows the association between socio-demographic and health service related factors with exclusive breastfeeding. The place of delivery, religious, education of the mothers and

receiving counselling on breastfeeding were found to be no significant association but, mode of delivery, birth order of the children, and ethnicity shows highly degree of association.

Discussion

The study shows 270 mothers practice exclusive breastfeeding to their child which is almost 80% and more than national average of exclusive breastfeeding practice (56%).⁹ While, looking at the early initiation of breastfeeding, only 178 (52.4%) mother practice the early initiation of breastfeeding, which is lower than the national status of 55%.⁹ And almost all mothers (98.4%) have practiced the colostrum milk feeding to their newborn.

The present study showed the pattern of early initiation and exclusive breastfeeding practice. The breastfeeding practices in Nepal are considered the best in South East Asia. Exclusive breastfeeding rate is high in the mother who has more than one child 59.1% and occupation of mother in homemaker is high 72.6%. This finding was similar to other finding.^{10,11} Knowledge regarding exclusive breastfeeding in our study was 99.7% and most of the child was in health facility 98.5%. This finding was similar to other finding.²⁹

Mode of delivery in normal was 85.4%, education of mother depends on higher education 45.0% and most of the mother receive counselling on breastfeeding 49.8% which was not similar to the other finding.^{13,15}

Conclusions

From the finding of the study, the study reveals a critical gap in awareness regarding the early initiation of breastfeeding, with many participants lacking knowledge about its importance. However, there is a notable understanding of the benefits of colostrum and the principles of exclusive breastfeeding. The findings also underscore significant associations between the mode of delivery and the birth order of the child with both early initiation and exclusive breastfeeding practices. These insights suggest that targeted educational interventions are necessary to enhance knowledge about early breastfeeding practices and address the factors influencing these practices. By focusing on these areas, healthcare providers can better support new

mothers in adopting optimal breastfeeding behaviors for the health of their infants.

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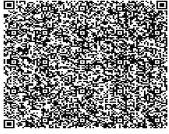
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