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Infant and Young Child Feeding Practices among Mothers at Chapagaun VDC

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ABSTRACT

Background: Since childhood under nutrition and mortality are high in Nepal, promotion of infant and young child feeding practices among children is most critical intervention,which contributes to improved nutrition, health and development of children ultimately having impact on child survival. The objective of the study was to identify infant and young child feeding practices.

Methods: A descriptive cross-sectional study was carried out among mothers visiting Chapagaun Primary Health Care and Resource Centre (PHCRC) with child aged 6-23 months between January1-14, 2016. Interview of 62 respondents was done by using structured questionnaire. The obtained data was analyzed by using Statistical Package for Social Sciences (SPSS) version 20 and Chi square test was performed.

Results: Majority (72.6%) initiated breastfeeding within 1 hour of delivery and gave colostrum as the first feed to the child. The rate of exclusive breastfeeding was 61.3%. Some of the children were initiated complementary feeding after 6 months, while 58% mothers practiced complementary feeding after the recommended age and 38.6% even before the recommended age. One fifth of the children received dietary diverse meal. Only 12.9% received complementary food with recommended frequency, 40.3% with appropriate consistency and 12.9% with adequate amount. Statistically there was significant association of practice with age of mother and mode of delivery.

Conclusions: The practice of breastfeeding was good while complementary feeding practices were poor. The feeding practices were found to be sub-optimal. The findings from the study highlight the importance of education at immunization clinic in order to improve the practices.

Keywords: Breastfeeding; complementary feeding; Infant and Young child; feeding; PHCRC.

INTRODUCTION

Infant and young child feeding practices have a direct effect on the nutritional status of under two children which ultimately impact child survival.[1] Under five mortality is estimated to be 9.5 million among which two thirds of these deaths occurred in the first year of life and 35% of child death is associated with undernutrition. In developing countries around 32% of under 5 children are stunted and 10% are wasted. About 1.4 million deaths and 10% of the disease burden in children younger than 5 years is contributed by sub-optimal feeding, especially non-exclusive breastfeeding in the first 6 months of life.[2]

In Nepal, 41% of under five children are suffering from chronic under-nutrition, more than 10 % are acutely under-nourished while 41 % are stunted and 11% are wasted.[3] An estimation indicated 35% under five mortality is associated to under nutrition. It is a direct cause of mortality and also a major cause of diability among under five children. In a study conducted at Kathmandu, Lalitpur and Bhaktapur children from Newar ethnicity of Lalitpur district were found suffering from more severe form of malnutrition in comparison to other district. [4]Inappropriate breastfeeding and complementary feeding practices are the main causes of under nutrition. Exclusive breastfeeding for the first 6 months of life and continued breastfeeding with appropriate complementary feeding practices can prevent approximately 13% and 6% of under-5 mortality respectively each year.[5]

This study aims at identifying infant and young child

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feeding practices of mothers including practices of breastfeeding and complementary feeding as well as find out association of practices with socio-demographic characteristics.

METHODS

A descriptive cross sectional study was carried out at Chapagaun Primary Health Care and Resource Centre (PHCRC) Lalitpur, Nepal. A total of 62 mothers of child 6-23 months visiting immunization clinic of PHCRC were enrolled in the study between January1-14, 2016 after getting ethical clearance from Ethical Review Board of Nepal Health Research Council (NHRC), Kathmandu, Nepal.Children above 6 months were only included in the study in order to assess practice of exclusive breastfeeding for complete 6 months. Healthy and still breastfeeding children were only included in the study while children with any known diseases or malnutrition were not included.

The sample size was calculated using formula; $n= z^2pq/e^2$, where confidence interval was 90% with allowable error 10%, p= 0.509, q=0.491. And sample is calculated as: ns= n/1+(n-1/N), where N= total number of mothers visiting MCH clinic (564) at Chapagaun, PHCRC. Obtained sample was taken on basis of non probability purposive sampling technique on convenient basis. Data was collected after getting formal written permission from each respondent with detailed explanation of purpose, potential risk, benefit of the study and assurance of maintaining privacy, anonymity and confidentiality. The data was collected through interview method using a structured questionnaire. Questionnaire regarding feeding practices was developed using Infant and Young Child Feeding Practices Monitoring Tool by World Health Organization (WHO). After collection of data, the data was edited, organized, coded and entered into Statistical Package for Social Sciences (SPSS) version 20. Distribution of scores on level of practice of infant and young child feeding among mothers was interpreted by summarizing into two categories such as good and poor. The association between demographic characteristics and practice was assessed by using chi-square test.

RESULTS

Out of the total 62 respondents, around one third (35.5%) children were less than 10 months. Among studied children, 61.3% were male and rest was females. More than half (59.7%) mothers were less than 25 years.Majority of respondents (87.1%) had delivery at health facility. Likewise, majority (75.8%) had vaginal deliveryand have had Antenatal Care(ANC) visit more than 4 times.

Table 1.Demographic Characteristics of Respondents.

Variables	Frequency (f)	Percentage (%)
Age of child (in month)		
≤10	22	35.5
11-15	24	38.7
16 and above	16	25.8
Mean±SD: 1.9± 0.8		
Sex(child)		
Male	38	61.3
Female	24	38.7
Age of mother (in year)		
≤25	37	59.7
26-30	21	33.9
30+	4	6.5
Mean±SD: 1.5± 0.6		
Occupation of mother		
Housewife	31	50.0
Housewife with agriculture	13	21.0
Business	8	12.9
Service	7	11.3
Education of mother		
No education	10	16.1
Literate	6	9.7
Primary	8	12.9
Secondary	20	32.3
SLC +	7	11.3
Intermediate	11	17.7
Bachelor and above		
Religion		
Hindu	49	79.0
Buddhist	8	12.9
Christian	3	4.8
Muslim	2	3.2
Type of family		
Nuclear	28	45.2
Joint	23	37.1
Extended	11	17.7
Residence		
Rural	50	80.6
Income		
<10,000	13	21.0
10,000-50,000	36	58.1
>50,000	13	21.0
Median	29965.6	
Place of delivery		
Health facility	54	87.1
Home	8	12.9
Mode of delivery		
Vaginal	47	75.8
Cesarean section	15	24.2
Frequency of ANC visit		
Less than 4	13	21
4	7	11.3
More than 4	42	67.7

Majority of the respondents (72.6%) initiated breastfeeding within 1 hour of birth. Majority mothers (72.5%) offered their colostrum to the child as first feed and 22.6% mothers used infant formulas as first feed to their child whereas vey negligible number had offered the cow/buffalo milk and water as first feed to their child. Around two third (61.3%) did exclusive

breastfeeding up to 6 months to their child.

Table 2.Respondents' Practice of Breastfeeding.

Characteristics	Frequency (f)	Percentage (%)
Early initiation of breastfeeding		
Yes	45	72.6
No	17	27.4
First feed offered to the child after delivery		
Colostrum	45	72.5
Infant formula	14	22.6
Cow's/Buffalo's milk	2	3.2
Water	1	1.6
Feeding colostrum milk		
Yes	58	93.5
No	4	6.5
Exclusive breastfeeding up to 6 months		
Yes	38	61.3
No	24	38.7
Breastfeeding from both breast		
Yes	54	87.1
No	8	12.9
Use of bottle for feeding		
Yes	22	35.5
No	40	64.5
Frequency of breastfeeding		
8-12	23	37.1
16-18	26	42
More than 20	13	21.0

Only 3.2% initiated complementary feeding at 6 months. Two third of respondents (67.7%) fed their child less than required per day, 19.4% respondents fed their child as required and 12.9% fed more than required. Likewise, more than half fed either thick or thin food. Similarly, one in five mothers fed child appropriate amount of food.Among the respondents, only one fifth (24.2%) gave food from all four groups of food to their child i.e. minimum food diversification.

Table 3.Respondents' Practice of Complementary Feeding.

Characteristics	Frequency (f)	Percentage (%)
Initiation of complementary feeding		
<=2	3	4.8
3-5	21	33.9
6	2	3.2
7+	36	58
Use of marketed complementary food		
Yes	30	48.4
No	32	51.6
Use of separate container for complementary feeding		
Yes	49	79.0
No	13	21
Frequency of complementary feeding		
Less than required	42	67.7
As required	12	19.4
More than required	8	12.9
Consistency of complementary feeding		
Thick	13	21.0
Thin	24	38.7
Appropriate	25	40.3
Amount of complementary feeding		
Appropriate	14	22.6
More	8	12.9
Meal diversification Complementary food offered **		
Green vegetables and fruits	44	71.0
Fish/Meat/egg	19	30.6
Rice/Pulse	58	93.5
Dairy products	34	54.8
Fats and oils	55	88.7
Diversity of food offered from all four groups of food		
Yes	15	24.2
No	47	75.8

Table 4. Respondents' Level of Practice of Breastfeeding, Complementary Feeding and Infant and Young Child Feeding.

Characteristics	Frequency (N)	Percentage (%)
Practice of breastfeeding	14	22.6
Poor	48	77.4
Good	9	42
Practice of complementary feeding	2	10
Poor	38	61.3
Good	24	38.7
Infant and young child feeding practice		
Poor	17	27.4
Good	45	72.2

Infant and young child feeding practices is poor i.e. among 27.4% respondents. The practice of breastfeeding is good among 77.4%. Furthermore, the practice of complementary feeding is poor among majority of respondents i.e. 61.3%.

Age of mother and mode of delivery has statistically significant relationship with practice. Less the age of mother better is the practice similarly mother with vaginal delivery has good practice than mothers with delivery by cesarean section.

Table 5. Association of IYCF with selected variables.

	Poor		Good			
Variables	Frequency	Percentage	Frequency	Percentage	total	p value
Age(mother)						
≤ 25	12	19.4	25	40.3	37	0.015
26-30	2	3.2	19	30.6	21	
31+	3	4.8	1	1.6	4	
Mode of delivery						
Vaginal	8	47.1	39	86.7	47	0.002
Cesarean section	9	52.9	6	13.3	15	

DISCUSSION

This study was carried out to assess the practice of mothers regarding breast feeding and complementary feeding in terms of initiation time, quantity, quality as well as frequency and to determine the factors influencing the inappropriateness of feeding. The study revealed that Infant and Young Child Feeding (IYCF) practices being carried out by mothers regarding complementary feeding was poor. Age of mother and mode of delivery were found to be associated with ideal feeding practices.

The study showed that majority (72.6%) of respondents initiated breastfeeding within 1 hour of delivery. The finding was higher than the study conducted at Bhaktapur where 57% initiated breastfeeding within 1 hour of delivery [6]and also from study in Nepal where only 35.4% initiated breastfeeding within 1 hour of delivery.[7] The study revealed that 72.5% gave colostrum and 27.4% gave prelacteal feeds including marketed infant formula feeding, cow's/buffalo's milk and water to the child. The finding is quite similar to the finding by NDHS survey (2011) [3]and in Kathmandu where 87.3% of mothers used colostrum as first feed and the remaining mothers used infant formulas, cow/buffalos milk and water as first feed.[8] The rate of prelacteal feeding is lower than the finding at Kaski district where the rate of prelacteal feeding was 13.4%.[9] The rate is also higher than the finding in western Nepal where 30.2% provided prelacteal feeds.[10] In the current study 93.5% gave colostrums milk to their baby while remaining discarded the colostrums milk. The finding is similar to the finding in western Nepal where 92.4% provided colostrums.[10] Finding is also similar to the finding at Bhaktapur where 91% gave colostrum.[6]

This study revealed 61% of infants 0 to 6 months old were exclusively breastfed. The finding is comparable to NDHS (2011) i.e. 70% while higher than the worldwide exclusive breastfeeding rate of 34.8% [1]and higher than the prevalence rate of exclusive breastfeeding in developing countries.[11] The finding is much higher than the finding of study in China where the rate of exclusive breastfeeding was less than 10%.[12] The finding is higher than other studies at India and Zambia as well.[13,14] This difference might be due to different breastfeeding awareness programme conducted at PHCRC including celebration of World Breastfeeding Week every year which has increased knowledge about importance of exclusive breastfeeding for 6 months of life among mothers.

The practice of breastfeeding from both breasts during each feed was more than half. The practice of bottle feeding was found less than half i.e. 35.5% only practiced bottle feeding. The finding was higher than the finding of other studies in Nepal.

Only 3.2% initiated complementary feeding at the recommended age of 6 months. The finding is quite similar to the NDHS (2011) where majority of infants were not given complementary foods at the recommended age. [3]The finding is much less than the finding in Nepal where the rate of timely introduction of complementary feeding was 74.7%.[7] The finding is also less than the finding at Kathmandu valley[15] andKaski.[9] The finding might be due to elderly's influence, belief of mother's that breast milk is sufficient for baby even after 6 months and lack of knowledge about proper timing of initiation of complementary feeding.

Separate container for each child is recommended for feeding as it helps to reduce incidence of infectious diseases. It was found in the study that 79.1% used separate container for complementary feeding. About 48.4% gave marketed complementary feeding. The finding is similar to the finding in Kathmandu.[8] This could be due to easy availability of these foods and wide advertisement of commercial foods in the market. Feed from variety of food groups is very essential to ensure that nutritional requirements are met. In this study,only 24.2% gave dietary diverse meal including food from all the four groups of food. The finding is similar to the finding in Chepang communities in Nepal[16] while the finding is contrast to finding by NDHS.[17]

The study found that 19.4% of mothers were giving the feed at adequate frequency as per WHO guidelines. In contrary, the finding is much less than NDHS [17] and other studies in Kathmandu.[15] Such less finding might be due to lack of knowledge.

Consistency of complementary feeding is one of the important components of appropriate complementary feeding. This study found that 40.3% gave food with appropriate consistency, 38.7% with thin consistency and 21% with thick consistency. The finding is quite similar to the finding in Kathmandu where 50.9% fed their children with appropriate complementary food by consistency.[8]The amount of complementary feeding was appropriate in 22.6%. In contrary, the finding is much higher in studies at Kathmandu.[8,15] This variation might be due to the fact that majority of the respondents were from rural area and have less information.

Feeding practices were found to be statistically associated with age of mother and mode of delivery. In this study, feeding practices were found better among mothers of age group 25 years and less. This might be due to the willingness of younger mothers to know about the appropriate practices and their exposure to nutrition messages and information from different health and nutrition. The finding is in contrast to the finding in Italy where early introduction of solid foods occurred significantly mostly in younger mothers.[18] Similarly, feeding practices were found better among mothers with vaginal delivery than cesarean delivery. The finding is supported by other studies in Nepal.[19]This finding might be due to the good mother child bonding through early initiation of breast feeding among mothers with vaginal delivery and their willingness for better care of baby than with mothers with cesarean delivery who are unable for early initiation of breast feeding and might be less concerned for care of child due to pain of surgery and delayed mother child bonding.

CONCLUSIONS

The optimal feeding practices were poor with complementary feeding practices being particularly poor in terms of initiation time, consistency, frequency, amount as well as meal diversification. Thus the finding highlights the importance of carrying out educational programs and interventions to mother in immunization clinic regarding appropriate infant and young child feeding practices.

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