

# **Original Article**

# Knowledge, attitude and practice of mothers in breast feeding: A hospital based study

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#### **ABSTRACT**

Background and Objectives: Breastfeeding (BF) is a socially constructed and controlled practice. Although breastfeeding is a common practice in Nepal, proper breastfeeding is on the decline due to several factors. The impact of knowledge and attitude about breastfeeding practice, i.e., duration of breastfeeding, proper techniques, proper time of weaning is poorly understood. So, this study is designed to assess the knowledge, attitude and practice of mothers in breastfeeding.

Material and Methods: This is an observational descriptive cross sectional study carried out among 220 mothers of under 2 years old children attending the pediatric out-patient department (OPD) at Janaki Medical College teaching hospital (JMCTH), Janakpur, Nepal. Mothers were interviewed using pre-designed questionnaire constructed after proper literature review.

**Results:** All mothers have idea that they have to breast feed their babies, but they did not have adequate knowledge on the appropriate way of

breastfeeding. Only, 12.27% knew that they have to initiate breast feeding within 1 hour of birth, 15% had idea on pre-lacteal feed, 5% had idea on importance of colostrum, 10% knew the meaning of exclusive breast feeding, and 0% of the mothers had idea on importance of night feeding. Only 7.27% have knowledge on method on maintaining aseptic precaution during breastfeeding. Only 20.90% were practicing exclusive breast feeding, 70% mothers were practicing night feeds, 15% mothers practiced feeding one side at a time and 15% mothers were practicing appropriate attachment and positioning during BF. None of the mothers got any advice regarding breast feeding during antenatal care (ANC) visits. Only 15% mothers got proper method of breastfeeding advice after birth. 30% practiced burping after breastfeeding. 30% underwent practice of proper food to increase breast milk secretion.

Conclusion: Undesirable cultural practices such as late initiation of breastfeeding after birth, giving pre-lacteal feeds, delay in introduction of weaning foods, not exercising exclusive breastfeeding practice are still prevalent. The maternal knowledge, attitude and practice (KAP) in breastfeeding is still inadequate with a big gap between actual and desired practices and there is urgent need of mother educational program in this society.

**Keywords:** Breast feeding; Colostrum; Exclusive breast feeding; KAP; weaning

#### INTRODUCTION

Breastfeeding is a socially constructed and socially controlled practice [1]. Exclusive breastfeeding (EBF) is defined as giving breast milk alone to the infant, without any additional



food or drink, not even water in the first six months of life, with the exception of mineral supplements, vitamins, or medicines [2, 3]. The World Health Organization (WHO) and the United Nation Children's Emergency Fund (UNICEF) recommend initiation breastfeeding within the first hour after birth; exclusively breastfeed for the first six months of age and continuation of breastfeeding for up to two years of age or beyond in addition to adequate complementary foods [4, 5]. After birth the health of the baby depends upon the nurturing practice adopted by the family. The ideal food for the young infant is human milk which has the specific characteristics that match the growing infants' nutritional requirements. It is often presented as a natural practice, sadly corrupted and curtailed by cultures. The Innocenti Declaration of 1990 August, Florence, Italy presents breastfeeding as best practice for mothers and babies. As a global goal for optimal maternal and child health and nutrition, all women should be enabled to practice exclusive breastfeeding, and all infants should be fed exclusively on breast milk, from birth to 6 month of age (March 2001) [6]. Breastfeeding is nearly universal in Nepal and the median duration of breast-feeding is long (33 months) [7]. But on the contrary to the recommendations of WHO only 2/3 rd of children less than 6 months of age are exclusively breast fed [7]. Numerous barriers to breastfeeding like lack of accurate information and appropriate knowledge among the population in general have been identified. According to a published survey, a major barrier to successful in-hospital breastfeeding is inconsistency in information and nursery practices related to breastfeeding management [8]. This study was carried out to understand women's point of view towards breast-feeding. Their Knowledge, practice and

attitude towards breast feeding (BF) was studied.

# **MATERIAL AND METHODS**

This is an observational descriptive cross sectional study carried out among 220 mothers of under 2 year old children attending the pediatric out-patient department of Janaki Medical College Teaching Hospital (JMCTH), Janakpur from June to October 2021. The study subjects were lactating mothers, who attended pediatric OPD for the treatment of illnesses of their children. Information regarding patients' demographics, knowledge, attitude and practice towards breastfeeding were collected from these mothers on a predesigned and pretested proforma. Before collecting the information, permission was taken from the institute authority and verbal consent was taken from the respondents. The data was entered in SPSS 21 software package and analyzed.

# **RESULTS**

Total of 220 respondents participated in this study. They were mothers of children under two year of age visiting JMCTH. The characteristics of participants of the study (mothers) and their children are shown in table 1 and table 2.

# Knowledge of participants (mothers) on breastfeeding

Knowledge of mothers on different aspects of breastfeeding was observed and is presented in table 3. Knowledge of participants were not adequate. All mothers had the knowledge that they had to breast feed. Only 12.25% mothers knew they had to start breast feeding within 1 hr after birth, 15% had idea on pre-lacteal feed, only 10% mothers could say meaning of exclusive breast feeding, 5% mothers knew the importance of colostrum and no one had the idea of importance of night feed. Only,



7.27% of mothers had idea that they had to feed one side at a time. Similarly 60% mothers knew that they should continue breastfeeding till the age of 2 years.

Table 1: Characteristics of Participants

(mothers)

(mothers)					
S.N.	Background	Frequency	Percent		
1	Age(Years)				
	16-25	145	65.9		
	26-35	63	28.63		
	36-45	12	5.45		
2	Education				
	Illiterate	80	36.36		
	intermediate and	5	2.27		
	proficient	29	13.18		
	Basic	106	48.18		
	Below basic				
3	Occupation				
	Housewife	190	86.36		
	Employed	30	13.63		
4	Religion				
	Hindu	200	90.90		
	Muslim	15	6.81		
	Christian	2	0.90		
	Buddhist	3	1.36		
5	Address				
	Village	150	68.18		
	City	70	31.81		
6	No. of children				
	1	101	45.90		
	2 3	73	33.18		
	3	21	9.54		
	4	15	6.81		
	5	10	4.54		
7	Place of delivery				
	Home	103	46.81		
	Health centre	77	35		
	Hospital	40	18.18		

Five percent mothers knew that expressed breast milk could be given to their babies. 10% mother could at least say something on dangers of bottle-feeds. Only 25% mothers knew that complementary feed has to be started by age 6 months, whereas 75% mothers had no idea on complementary feed and had started either too early or late. 28.18% mothers knew the advantages of breastfeeding. Only 5% had idea on attachment and positioning during breastfeeding. 49.10% had known about burping after breastfeeding. Only 10% had knowledge on proper food intake by mothers to increase breast milk secretion and 5% had idea on maintaining aseptic precaution during breastfeeding.

Table 2: Characteristics of children

S.N.	Variables	Frequency	Percent	
1	Sex			
	Male	120	54.54	
	Female	100	45.45	
2	Age			
	<6 months	40	18.18	
	6-12 months	95	43.18	
	13-24 months	85	38.63	

# Attitudes of participants (Mothers') on BF

As shown in table 4, there are 4 questions used to assess women's attitude to breastfeeding, covering respondents' attitude about early initiation, discarding the colostrum, starting complementary foods only after six months, and BF is to be continued for a child for up to 2 years.36.37% of mothers agreed that giving breast milk for a newborn immediately within an hour is important, and 60% agreed thatFeeding the colostrum is good. Mother 70% of mothers had agreed of starting complementary foods only after 6 months is good and 40% agreed on continuation of breastfeeding at least 2 years is important.

# Practices of participants (Mothers') on BF

Mothers' practices about BF as shown in Table 5, there are twelve questions about practices on BF. It was seen that even though many mothers did not have adequate knowledge they are following the correct way of breastfeeding naturally.

It was seen that most of the mothers (90%) had given their infants colostrum even though they do not have adequate knowledge on importance on colostrum feeding. 45% of the mothers' breastfeed their child within 1st hour of life, only 15% of the mothers practiced



Table 3: Knowledge of participants (mothers) on breastfeeding

S.N.	Topics related to BF	Having idea		Having no idea	
		No.	%	No.	%
1	Have to breast feed	220	100	0	0
2	Initiation of breastfeeding within 1 hour of birth	27	12.27	193	87.72
3	Meaning of pre-lacteal feed	33	15	187	85
4	Exclusive breast feeding	22	10	198	90
5	Importance of colostrum feeding	11	5	209	95
6	Important of night feeding	0	0	220	100
7	To feed one side at a time	16	7.27	204	92.72
8	Continue breastfeeding at least for 2 years	132	60	88	40
9	Expressed breast milk can be used	11	5	209	95
10	Dangers of bottle feed	22	10	198	90
11	Complementary feed to start at 6 months	55	25	165	75
12	Advantage of breastfeeding	62	28.18	158	71.81
13	Attachment and positioning during breastfeeding	11	5	209	95
14	Burping after breastfeeding	108	49.10	112	50.90
15	Proper food intake by mothers to increase breast milk secretion	22	10	198	90
16	Method on maintaining aseptic precaution during breastfeeding	16	7.27	204	92.27

Table 4: Attitude of participants (mothers) on Breast Feeding

S.N.	Questions related to BF	Agree		Disagree	
		No.	%	No.	%
1	Giving breast milk for newborn immediately within one hour (early initiation) is important?	80	36.37	140	63.63
2	Feeding the first milk or colostrum is good?	132	60	88	40
3	Do you think of starting complementary foods only after 6 months is good?	66	70	154	70
4	Do you think to continue breastfeeding at least upto2 years is important?	88	40	132	60

exclusive breastfeeding. While 43.18% mothers had given pre-lacteal feed; Lactogen (20%), Glucose water (15%) and Honey (8.18%). Though 100% mothers did not have any knowledge on importance of night feeding, the practice of night feeding was good (70%). Nighttime feed was defined as feeds

between 10 p.m. and 6 am. 15% mother practiced feeding their babies one side at a time until whole breast was emptied. 85% practiced feeding bilaterally. Majority of the mothers (85%) did not practiced the appropriate way of attachment and positioning during breast feeding. Burping



Table 5: Practices of participants (mothers) on BF

S.N.	Questions related to BF	Yes			No	
		No.	%	No.	%	
1	Colostrum feeding	198	90	22	10	
2	Use of prelacteal feed	95	43.18	125	56.18	
	Lactogen	44	20	176	80	
	Glucose water	33	15	187	85	
	Honey	18	8.18	202	91.81	
3	Exclusive breastfeeding	46	20.90	174	79.09	
4	Night feeding	154	70	66	30	
5	Time between birth and 1st breastfeed at					
	<1 hour	99	45	121	55	
	1-6 hours	66	30	154	70	
	7-12 hours	7	3.18	213	96.81	
	13-24 hours	16	7.27	204	92.72	
	>24 hours	33	15	187	85	
6	Feeding pattern					
	One side at a time	33	15	187	85	
	Both side at a time	187	85	33	15	
7	Proper attachment and positioning during breastfeeding	33	15	187	85	
8	Burping after breastfeeding	66	30	154	70	
9	Got breastfeeding advice during ANC visits	0	0	220	100	
10	Got proper method of breastfeeding advice after birth till now	33	15	187	85	
11	Proper food taken by mothers to increase breast milk secretion	66	30	154	70	
12	Method on maintaining aseptic precaution during breastfeeding	16	7.27	204	92.27	

after breastfeeding was practiced by 30%. No one sought and got breastfeeding advice during ANC visits but 15% sought and got proper method of breastfeeding advice after birth till now. Proper food taken by mothers to increase breast milk secretion was practiced by 10% while maintaining aseptic precaution during breastfeeding was practiced by again 10% of mothers only.

# **DISCUSSION**

This study reflects knowledge, attitude and practices of mothers about BF in Janakpurdham and nearby area of Province 2, Nepal. Participants (breast feeding mothers)

were found to have varied knowledge, attitude and practices about BF.

Though answers on knowledge range from 0 to 100% in mothers regarding breastfeeding, the mothers' knowledge of BF was generally poor. All mothers knew they have to breast feed and were practicing. Nepal demographic health survey (NDHS) 2006 reported that breastfeeding nearly universally was practiced in Nepal, with 98 percent of children born in the five years preceding the survey having been breastfed at some time [9], whereas in Korea breast feeding rate was reported to be 16.9% in 1994 [10]. It was reported to be 56% in United States in 1993.



According to the Food and Agriculture Organization (FAO) guidelines thresholds suggestive of nutrition intervention, a knowledge score of  $\leq$ 70% is considered urgent for nutrition intervention. All mothers who scored > 70% in the knowledge test were considered to have a high level of knowledge and those scoring  $\leq$ 70% were considered as having a low level of knowledge [11].

In addition to inadequacy in mothers' knowledge of EBF, the results of this study also indicate that most mothers also had inadequate knowledge of duration of Breastfeeding, colostrum, advantages of BF (benefits to mothers and babies), the danger of bottle-feeding, compared to the studies conducted in Italy [12], China [13], and India [14]. Therefore, this inadequacy in maternal knowledge should be taken into consideration for future interventions designed by health workers, policymakers, and health educators who should make a conscious effort to explain the benefits of breast milk, and colostrum initiation immediately after birth. Furthermore, the danger of bottle-feeding should be emphasized that it is unsafe for the child since it can cause childhood infections like vomiting, diarrheal diseases.

In our study, only 12.27% mothers had idea on starting breast feeding within 1 hr of birth (Table 3) and but in practice 45% mothers started breast feeding within 1hr of birth and 15% cases breastfeeding was given after 1 day. Data from 2006 NDHS showed that nearly 1 in 3 children were breast-fed within 1hr. According to NDHS 2001 data this was noted in 60% cases [15].

The use of colostrum and avoidance of prelacteal foods are cornerstones in early infant nutrition and may be prerequisites for the establishment of future exclusive breastfeeding. Since 2001, the WHO

recommends exclusive breastfeeding up to the age of 6 months (World Health Assembly Resolution 55.25). Colostrum was defined as the breast milk produced in the first five days after delivery. In this study though only 5% mothers had knowledge on benefits of first milk (Table 3) but in practice nearly 90% had received colostrum. This was 69 percent in data given by NDHS 2006 [9]. In another study all infants had received colostrum (94%, n = 475/504) [9]. Out of 220 mothers, 43.18% gave pre-lacteal feed. Pre-lacteal food was defined as food/liquid given to the infant before initiating breastfeeding for the first time. According to NDHS 2006, pre-lacteal feed is more in terrain where 2 in 3 children receive them [9]. Only 10% mothers knew meaning of exclusive breast feeding (Table 3) but in practice 20.90%were practicing exclusive breast-feeding (Table 5). Mothers not able to give exclusive breastfeed were 79.09%. Only 2/3 of children less than 6 months are exclusively breast fed according to NDHS 2006 [9]. In Bolivia, the exclusive breastfeeding rate in infants under 4 months of age was found to be above 50%, with 13.6 % of infants still being exclusively breastfed at 6–9 months of age [16]. In a second study, only 30% of infants in Bolivia had begun receiving solid foods by 4 months of age [16].

Prolactin is secreted after feed to produce next feed. As secretion of prolactin is more at night, suckling at night is encouraged. No mothers knew the importance of night feed but 70% mothers were practicing night feed (Table 5). This was due to baby's demand even at night.

Breast feeding at one side until whole breast is emptied out should be the practice among mothers. This way the baby gets the hind milk, which is required for brain development. Only 7.25% mothers knew that they had to breast feed on one side until whole breast was emptied only 15% were practicing. Eighty-five



percent were feeding on both sides for 10 minutes each, thinking that feeding on one side is not enough for the baby and some even thought that their breast size would be unequal on doing so.

According to the data of NDHS, the mean duration of breast feed in Nepal is 29 months [9]. In our study when asked for their opinion on the ideal duration of any breastfeeding, most mothers answered 24 months (60%). Improper attachment and position is one of the main causes for lactation failure. It was seen that 85% mothers did not have proper attachment and position during breastfeeding and required teaching on appropriate methods. Expressed breast milk can be used, and for working mothers this is one way to continue breast feed even when they are away from their babies. Only 5% mothers knew about expressed breast milk because they were using for their neonates admitted in neonatal intensive care unit (NICU).

Basically, positive maternal attitudes toward breastfeeding are associated with continuing to breastfeed longer and having a greater chance of successful breastfeeding. Besides, mothers with a positive attitude toward breast feeding were likely to breastfeed their infants correctly. According to the FAO guidelines thresholds suggestive of nutrition intervention, an attitude score of ≤70% is considered urgent for nutrition intervention. All mothers who scored > 70% in the attitude test were considered to have a positive attitude and those scoring ≤70% were considered to be less positive [11]. The results of this study indicate that few mothers (30-70%) had a positive attitude about breastfeeding questionnaires as in table 4 and the findings were similar to the studies conducted in Vietnam [17], India [18], Mexico [19], China [13], Saudi Arabia [20]. The previous studies conducted in East Africa by Maonga et al. [21] and Arts, M et al. [22] reported that other cultural beliefs mentioned "baby boy" need solid foods immediately because they make them strong and healthy, and if a child is breastfed on breast milk alone for six months, the bones get weak. This barrier was probably the consequence of inadequate knowledge and awareness of ensuring that mothers should exclusively breastfeed during first six months of their babies' lives, and indicates that future breastfeeding promotion programs should focus on improving this knowledge and attitude, and providing more support for mothers.It is so important to change their attitude from negative to positive.

Regarding practices of breastfeeding by participants of our study indicated that most of the mothers have breastfed their children, but only 20.90% of mothers had exclusively breastfed their child for the first six months, even though only 10% mothers have heard of EBF and consider it important for the health of the women and the baby. This study findings similar compared with conducted in the developed countries like Brazil 19% [23], in China 6.2% [24], in Italy 33.3% [12]. The WHO global target is 50% [2] but it was lower compared to the EBF of 90% as recommended by the WHO [25]. In Nepal there is a large provincial difference in the children aged 0-6 months who registered for growth monitoring and were exclusively breastfed in their first six months age. In FY 2075/76 [26], 33 percent of these children nationwide were exclusively breastfed which had increased in comparison to last two years but in FY 2076/77 [26], it has been decreased by 3 percent i.e. 30 percent. Fifty percent of 0-6-months old children were registered for growth monitoring were exclusively breastfed for their first six month of Karnali Province whereas only 16 percent the similar age



groupware exclusive breastfed in province 2 [26].

The majority of mothers 90% had given colostrum, even though only 5% of them had known about importance of colostrum. This finding was similar to a study conducted in Nepal previously where 83.3% of children received colostrum<sup>27</sup> and 95% received colostrum [28].

In our study 45% of the mothers, had initiated breastfeeding within one hour after delivery. This result was not matching recommendations of WHO and this result was lower with secondary analysis of the WHO Global Survey, 57.6% of mothers initiating breastfeeding within one hour after birth [29]. Our study was lower than the prevalence of other studies conducted in China 93.6% [30] and in India 95% [31]. This value indicates that healthcare providers who care for mothers should increase their efforts to promote BF and that there is a need for public policies which that ensure the living and working conditions of women are compatible with exclusive breastfeeding. Good feeding practice is important for the health and nutritional status of children, which in turn has dire consequences for their mental and physical development and it is important for mothers as well. Early suckling motivates the release of prolactin, which supports the production of milk, and oxytocin, which is accountable for the ejection of milk. It also stimulates contraction of the uterus after childbirth and reduces postpartum hemorrhage [32].

None of the mothers got any advice regarding breastfeeding during ANC. Many mothers in postnatal ward felt that they had not received enough support during prenatal period. Similar problem was seen in some other study {15], 91.9 % of the women had not been

informed about breastfeeding before the birth of their child. In our study 15% of mothers got proper method of breastfeeding advice after birth of baby because they got this during the consultation with pediatrician in another hospital or our hospital.

On the basis of this study, it is reasonable to advocate that in Nepal, breastfeeding information should be supplied before birth or perhaps even more importantly, on the maternity ward. Breastfeeding promotion programs on a maternity ward setting should include more than just verbal information; e.g. rooming-in, breastfeeding assistance and talks during hospitalization. The maternity ward may also provide mothers with a place to exchange ideas.

In this study, we evaluated knowledge and practice of mothers on proper food intake by mothers to increase breast milk secretion and method on maintaining aseptic precaution during breastfeeding. The results showed 10% of mothers had knowledge and 30% had practice proper food intake to increase breast milk secretion. The practice seems better because of delivery of male gender baby. Similarly the result showed 7.27% of mothers had knowledge and same 7.27% had appropriate practice on method on maintaining aseptic precaution during breastfeeding because they are medical and hospital staff.

# **CONCLUSION**

This study conclude that maternal knowledge, attitude and practices regarding breastfeeding is below the optimal level among the participants and in some areas, grossly deficient. So there seems a necessity of implementation of different public awareness programs likehealth education program to educate mothers and society on breastfeeding. These public awareness programs should



focus on: (1) Initiation of breast feeding within 1 hr after birth, (2) Exclusive breast feeding till 6 months of age, (3) Importance of night feed (4)Importance of breastfeeding including colostrum feeding (5) Continue breast feeding at least till 2 years, (6) Feed completely on one side at a time, (7) Use of expressed breast milk, (8) Proper attachment and positioning during breastfeeding(9) dangers of bottlefeeding, (10)Complementary feed at 6 months, (11)Burping after breastfeeding,(12)Method on maintaining aseptic precaution during breastfeeding, (13)Proper food intake by mothers to increase breast milk secretion (14) role of ANC visit and Obstetricians to influence on breastfeeding initiation(15)role of visit on Pediatrician to initiate safe practice of breastfeeding and to maintain durations.

This study also recommends further study on knowledge, attitude and practice of mothers on breastfeeding covering large sample in community level.

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# **CONFLICT OF INTEREST**

The authors declare that they have no conflict of interest.

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