

Original Article

Self-Efficacy and Social Support on Exclusive Breastfeeding among Mothers

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Abstract: Breast milk is a boon for babies. It meets the baby's daily nutritional requirements and helps fight infection. Breast feeding has several benefits for both the infants and mothers. Promotion of proper breastfeeding practices for the first six months of life is the most cost-effective intervention for reducing childhood morbidity and mortality. However, strong evidences in support of breastfeeding and its prevalence is not satisfactory in worldwide and also in Nepal. Different interventions have been launched in Nepal for promoting breastfeeding, but there is still lack of knowledge, attitude, self-efficacy and social support towards breastfeeding practice among Nepalese mothers. The aims of this study was to find out the knowledge, attitude, self-efficacy and social support towards EBF practices among breastfeeding mothers in Kathmandu Nepal. This study is a cross-sectional study conducted among 362 breastfeeding mothers with children 0-24 months of age who have visited immunization clinic at private hospital in Kathmandu. Respondents were given self-administered questionnaire based on knowledge, attitudes, practice, self-efficacy and social support of EBF which were assessed by Iowa Infant Feeding Attitudes Scale (IIFAS), Breastfeeding Self-efficacy Scale Short Form (BSES-SF) and Exclusive Breastfeeding Social Support Scale (EBSSS). Descriptive statistics, Chi-square test, correlation analysis, binary logistic regression and ordinal regression analysis was conducted. A 'p' value of <0.05 was considered statistically significant and the results were presented by tables. Results of the study showed that among the total number of 362 participants about near to two third of respondents i.e. 61.9% started breastfeeding within 1 hour of delivery, 97.8% did Colostrum feeding, all 100% participants didn't give the pre-lacteal feeding, one forth participants i.e. 25.1% didn't receive antenatal breastfeeding education. About 95.3% mothers had positive knowledge and attitude towards breastfeeding, 99.2% mothers had high selfefficacy for breastfeeding, 89.8% mothers had high social support for breastfeeding and nearly two third of participants i.e. 64.1% did EBF for 6 months. The present study concluded that the knowledge, attitude, self-efficacy and social support of breastfeeding were very high. However, the EBF practice was not very high as desired. Therefore, there is gap between actual and desired EBF practice. It is important to assess the gap between knowledge, attitude, self-efficacy, social support and EBF practice.

Keywords: Knowledge, Attitude, Self-efficacy, Social support, Breastfeeding mothers

1. INTRODUCTION

Breast milk is an ideal food for the baby. Breast milk is a dynamic fluid, changing composition from day to day and throughout the course of lactation, it contains antibacterial agents and provides nutrients in bioavailable forms that are essential for infant's healthy growth and development as well as protection against gastrointestinal, respiratory and ear infections,[1]. Exclusive Breastfeeding (EBF) is defined as the practice of only giving an infant breast milk for the first 6 months of life (no other food

or water [2]. EBF serves as a child's first immunization and has the single largest potential impact on child mortality of any preventive intervention [3]. EBF is a cornerstone of child survival and child health [4]. Breastfeeding is critical for achieving global goals on nutrition, health and survival, economic growth and environmental sustainability [5]. WHO and UNICEF recommends that breastfeeding is initiated within one hour after birth, continued exclusively for the first 6 months of life and continued with safe and adequate complementary foods, up to 2 years or beyond [6]. Globally, only 38% of infants aged 0 to 6 months were exclusively breastfed. In this proportion increased to 40%. The 2025 target for EBF is to achieve a rate of 50% at the global level. Since agreement on the 2025 targets, the Global Breastfeeding Collective was established under the leadership of WHO and UNICEF where a high level of ambition towards 2030 was suggested [7]. Breast feeding duration is shorter in high income countries than in those that are resource poor, with some exceptions [8]. Worldwide reduction in NEBF [9] would be achieved in 18 years between 2012 and 2030 from 62% in 2012 to 33% in 2030 of children that will not be exclusively breastfed in their first six months of life, or 67% of children that will be exclusively breastfed. The target of at least 70% EBF may be achieved by 2030. World Breastfeeding Week is celebrated every year from 1 to 7 August to encourage breastfeeding and improve the health of babies around the world [10]. There is risk of dying in the first 28 days of life, i.e. 41% higher for newborns who initiated breastfeeding 2–23 hour after birth, and 79% higher for those who initiated 1 day or longer after birth, compared to those newborns who initiated within an hour of birth. Global evidence shows that 45% reduction in risk of neonatal mortality if the baby is breastfed within 24 hour of birth followed by EBF. Suboptimal breastfeeding practices, including NEBF, contribute to 11.6% of mortality in children under 5 years of age, this was equivalent to about 804000 child deaths. In Nepal the high rate of under-nourished child remains a major problem despite a steady decline in recent years [11]. The Government of Nepal has policies and programs to improve nutrition, like promote breast feeding within one hour of birth, avoid pre-lacteal feeding, promote EBF for first six months, with the aim of achieving targets set by WHO [12]. Nepal has already signatory to the Sustainable Development Goals [13]. Breastfeeding is a social norm and universal practice in most communities, it is also a learned behavior and may be influenced by many factors including socio-economic, educational level and cultural. Breastfeeding intent was associated with higher maternal educational level. Maternal education has been described as one of the strongest determinants of practice of EBF [14]. Self-efficacy are important to address in health promotion, people must have motivation and perseverance to maintain a healthy behavior, beyond simply the knowledge of the health benefits. This can help health care providers to predict length of breastfeeding, and success rate of EBF, so that it helps to identify mothers who are at risk of early breastfeeding stop [15].

2. MATERIALS AND METHODS

A cross-sectional research design was used in the study. A cross-sectional study is a type of research design in which data are collected from many different individuals at a single point in time. In cross-sectional research, we observe variables without influencing them. The study was conducted in Nordic International Hospital which was purposively selected according to researcher's convenience. It is one of the leading corporate 150 bedded super specialty hospital located in Thapathali. Private hospital was selected as there is an assumption that most of the respondents are employed/well educated and are likely to breastfeed. Also, most of them have high concern for body image in relation to exclusive breastfeeding. The study population for the study were breastfeeding mothers having children who were 0-24 months of age and were selected by using non-probability purposive sampling technique falling under inclusion criteria. Socio-demographic data and breast feeding practice of mothers were obtained using self-developed questionnaire. Knowledge and attitudes of mothers were assessed by the Iowa Infant Feeding Attitudes Scale (IIFAS). Self-efficacy of breast feeding was assessed by the Breastfeeding Self-efficacy Scale Short Form (BSES-SF). Social support of breast feeding was assessed

by the Exclusive Breastfeeding Social Support Scale (EBSSS). A self-developed questionnaire which included two sections, were used to collect participant's socio-demographic information and practice of breast feeding. The first section contained 10 structured questionnaire to collect mother's socio-demographic information including participant's age, religion, education, occupation, income, and baby's age, place of delivery, type of delivery, parity and source of breast feeding education. The second section contained 4 structured questionnaire to collect information of mother's practice including early initiation of breast feeding, Colostrum feed, pre-lacteal feed and duration of EBF. This scale was developed by Knowledge and attitudes of breast feeding were assessed by using the Iowa Infant Feeding Attitudes Scale (IIFAS). All 17 items are related to the health and nutritional benefits, the cost and the convenience with a five-point scale that ranged from 1 = strongly disagree to 5 = strongly agree. Approximately half of the items are negatively worded (i.e. 1, 2, 4, 6, 8, 10, 11, 14, and 17). Total IIFAS score ranged from 17 to 85, with higher scores reflecting more positive attitudes on breastfeeding. Total scores are grouped into three groups (1) positive attitude to breastfeeding (70-85), (2) neutral (49-69), and (3) positive attitude to formula feeding (17-48). Breastfeeding self-efficacy Information regarding the study participants' confidence in breastfeeding was gathered by using the Breastfeeding Self-efficacy Scale Short Form (BSES-SF) questionnaire, The BSES-SF consists of 14 items on a 5 point Likert scale questionnaire with response options from 1 = not at all confident to 5 = always confident, with scores ranging from 1 to 5. The minimum and maximum scores for the BSES-SF scale was 14 and 70 respectively, with scores less than 50 indicating a higher risk for breastfeeding cessation. When the respondent obtains between 14 and 32 points, considered to have Low efficacy, between 33 and 51 considered Moderate and between 52 and 70 considered High efficacy. Some of the information which were gathered include confidence in producing sufficient breast milk, exclusive breastfeeding, using formula supplements, proper latching, and eagerness to breastfeed, breast-feeding in public, keeping up with the baby's demands, and satiety of the baby. Social support for EBF was assessed by using exclusive breastfeeding social support scale. It consists of three point Likert scale: 1. not help at all or much less than you would like, 2. less than you would like, 3. as much as you would like. The 16 items were divided into three groups: instrumental, emotional and informational factors. The Instrumental factor consisted of three items reflecting tangible support received by participants (e.g., "Did Task"). The Emotional factor consisted of seven items reflecting emotional support (e.g., "Showed Concern"). The Informational factor consisted of six items that captured informational support that was beneficial. The total score range from 16-48, higher the score, higher the social support. Participants were identified and informed written consent were obtained. The structured questionnaires were briefed and self-administered to the participants. Filled up questionnaire were collected on the same day. All variables presented were coded with numeric values. The data were checked for errors before double-entry in computer input. SPSS (Version 23.0) software was used for data analysis. Descriptive statistics included mean, standard deviations, minimum, maximum, frequency and percentages were used to describe demographic data, knowledge, attitudes and practice, self-efficacy and social support scores. Kolmogorov-Smirnov test was used to assess normality distribution of all variables. Chi-square test was used because the variables were categorical. The Chi-square test measures the significance of the knowledge, attitudes, practice, self-efficacy and social support between groups according to demographic characteristics. A correlation analysis was performed to quantify the association between the knowledge, attitudes, practice, self-efficacy and social support. Binary logistic and ordinal regression analysis was conducted to explore the net effect of socio-demographic factors on the knowledge, attitudes, practice, self-efficacy and social support. A 'p' value of less than 0.05 was considered statistically significant. The results were presented by tables.

3. RESULTS & DISCUSSIONS

Almost all 361 (99.7%) of participants strongly agreed that breast milk is the ideal food for infants and breast milk is more easily digested than formula. Majority 358 (98.9%) strongly agreed that breastfeeding is less expensive than formula. Majority 357 (98.6%) strongly agreed that breastfeeding increases mother-infant bonding. Majority 355 (98.1%) strongly agreed that breastfeeding is more convenient than formula feeding. Majority 353 (97.5%) strongly agreed that breast fed babies are healthier than formula fed babies. Majority 312 (86.2%) strongly agreed that breast fed babies are more likely to be overfed than formula fed babies. Majority 282 (77.9%) strongly agreed that mothers who formula feed miss one of the joys of motherhood. Majority 351 (97%) strongly disagreed that the nutritional benefit of breast milk last only until the baby is weaned from breast milk, majority 347 (95.9%) strongly disagreed that women should not breastfeed in public places such as restaurants. Majority 345 (95.3%) strongly disagreed that formula feeding is more convenient than breastfeeding. Majority 329 (90.9%) strongly disagreed that formula is as healthy for an infant as breast milk. Majority 303 (83.7%) strongly disagreed that formula feeding is the better choice if mother plans to work outside the home. Majority 293 (80.9%) strongly disagreed that formula-fed babies are more likely to be overfed than breastfed babies. Majority 290 (80.1%) strongly disagreed that father feels left out if mother breast feeds. Majority 290 (80.1%) strongly disagreed that a mother who occasionally drinks alcohol should not breastfeed her baby. More than three forth 274 (75.7%) strongly disagreed that breast milk is lacking in iron (table 2). Majority of respondents 345 (95.3%) had positive attitude towards breast feeding and 15 (4.1%) participants were neutral and only 2 (0.6%) participants had positive attitude towards formula feeding (table 3).

Table 01: Mothers knowledge and attitude towards breast feeding on Iowa Infant Feeding Attitudes Scale (IIFAS) (N = 362)

Item	1	2	3	4	5	Mean (SD)
	n (%)	n (%)	n (%)	n (%)	n (%)	
The nutritional benefit of breast milk last only until the baby is weaned from breast milk.	351 (97)	7 (1.9)	1 (0.3)	2 (0.6)	1 (0.3)	4.95 ± 0.35
Formula feeding is more convenient than breastfeeding.	345 (95.3)	11 (3)	1 (0.3)	1 (0.3)	4 (1.1)	4.91 ± 0.49
Breastfeeding increases mother-infant bonding.	2 (0.6)		2 (0.6)	1 (0.3)	357 (98.6)	4.96 ± 0.34
Breast milk is lacking in iron.	274 (75.7)	16 (4.4)	63 (17.4)	4 (1.1)	5 (1.4)	4.54 ± 0.91
Formula-fed babies are more likely to be overfed than breastfed babies.	293 (80.9)	20 (5.5)	38 (10.5)	4 (1.1)	7 (1.9)	1.38 ± 0.86
Formula feeding is the better choice if mother plans to work outside the home	303 (83.7)	24 (6.6)	17 (4.7)	8 (2.2)	10 (2.8)	4.66 ± 0.89
Mothers who formula feed miss one of the joys of motherhood.	7 (1.9)	1 (0.3)	13 (3.6)	58 (16)	282 (77.9)	4.69 ± 0.74

Women should not breastfeed in public places such as restaurants.	347 (95.9)	5 (1.4)	4 (1.1)	1 (0.3)	5 (1.4)	4.9 ± 0.54
Breast fed babies are healthier than formula fed babies.	4 (1.1)	1 (0.3)		4 (1.1)	353 (97.5)	4.94 ± 0.44
Breast fed babies are more likely to be overfed than formula fed babies.	5 (1.4)	1 (0.3)	34 (9.4)	10 (2.8)	312 (86.2)	1.28 ± 0.76
Father feels left out if mother breast feeds.	290 (80.1)	48 (13.3)	18 (5)	1 (0.3)	5 (1.4)	4.7 ± 0.7
Breast milk is the ideal food for infants.	1 (0.3)				361 (99.7)	4.99 ± 0.21
Breast milk is more easily digested than formula.	1 (0.3)				361 (99.7)	4.99 ± 0.21
Formula is as healthy for an infant as breast milk.	329 (90.9)	29 (8)		1 (0.3)	2 (0.6)	4.85 ± 0.85
Breastfeeding is more convenient than formula feeding	1 (0.3)		1 (0.3)	5 (1.4)	355 (98.1)	4.97 ± 0.26
Breastfeeding is less expensive than formula	3 (0.8)		1 (0.3)		358 (98.9)	4.96 ± 0.38
A mother who occasionally drinks alcohol should not breastfeed her baby.	290 (80.1)	22 (6.1)	43 (11.9)	2 (0.6)	5 (1.4)	4.63 ± 0.82

Note: The item 1, 2, 4, 6, 8, 10, 11, 14 and 17 were reversed when calculating the score

IIFAS score mean 75.28, SD ± 3.84, minimum 37 and maximum 84

1 = strongly disagree, 2 = disagree, 3 = neutral, 4 = agree, 5 = strongly agree

N = number, % = percent, SD = standard deviation

Table 02: IIFAS score group (N = 362)

IIFAS score group	N	%
Positive attitude toward formulas feeding	2	0.6
Neutral	15	4.1
Positive attitude toward breast feeding	345	95.3

Note: IIFAS = Iowa Infant Feeding Attitudes Scale

In 13 item of BSES-SF scale more than 80% respondents stated that they were very confident in breast feeding and 77.9% stated not at all confident in item 'I can always finish feeding my baby on one breast before switching to the other breast' (table 4). Almost all 359 (99.2%) respondents had high self-efficacy and only 3(0.8%) participants had moderate degree of self-efficacy (table 5).

Table 03: Breastfeeding Self-efficacy Scale Short Form (BSES-SF) (N = 362)

Item	1	2	3	4	5	Mean (SD)
	n (%)	n (%)	n (%)	n (%)	n (%)	
I can always determine that my baby is getting enough milk.	1 (0.3)		4 (1.1)	55 (15.2)	302 (83.4)	4.81±0.46
I can always successfully cope with breastfeeding like I have with other challenging tasks.			8 (2.2)	56 (15.5)	297 (82)	4.8 ± 0.46
I can always breastfeed my baby without using formula as a supplement.			7 (1.9)	67 (18.5)	288 (79.6)	4.78 ± 0.46
I can always ensure that my baby is properly latched on for the whole feeding.			2 (0.6)	60 (16.6)	300 (82.9)	4.82 ± 0.39
I can always manage the breastfeeding situation to my satisfaction.			3 (0.8)	53 (14.6)	306 (84.5)	4.84 ± 0.39
I can always manage to breastfeed even if my baby is crying.			5 (1.4)	54 (14.9)	303 (83.7)	4.82 ± 0.42
I can always keep wanting to breastfeed.			3 (0.8)	46 (12.7)	313 (85.5)	4.86 ± 0.37
I can always comfortably breastfeed with my family members present.				48 (13.3)	314 (86.7)	4.87 ±0.34
I can always be satisfied with my breastfeeding experience.			1 (0.3)	41 (11.3)	320 (88.4)	4.88 ± 0.33
I can always deal with the fact that breastfeeding can be time consuming.				44 (12.2)	318 (87.8)	4.88 ± 0.33

I can always finish feeding my baby on one breast before switching to the other breast.	282 (77.9)	3 (0.8)		7 (1.9)	70 (19.3)	1.84 ± 1.61
I can always continue to breastfeed my baby for every feeding.		1 (0.3)	3 (0.8)	44 (12.2)	314 (86.7)	4.85 ± 0.39
I can always manage to keep up with my baby's breastfeeding demands.			5 (1.4)	39 (10.8)	318 (87.8)	4.86 ± 0.381
I can always tell when my baby is finished breastfeeding.				40 (11)	321 (88.7)	4.92 ± 0.62

Note: BSES-SF mean 64.84, SD ± 4.37, minimum 48, maximum 76

1 = not at all confident, 2 = not very confident, 3 = sometime confident, 4 = confident, 5 = very confident

N = number, % = percent, SD = standard deviation

BSES-SF = Breastfeeding Self-efficacy Scale Short Form

Table 04: BSES-SF score group

BSES-SF score group	N	%
Moderate efficacy	3	0.8
High efficacy	359	99.2

N = number, % = percent

In all items of EBSSS scale more than two third of respondents answered that they had social support as much as they would like (table 6). The range is used for classification of EBSSS score in two group (high and low). Majority of them 325 (89.8%) had high level social support and only 37 (10.2%) had low level social support for Exclusive Breastfeeding (table 7).

Table 05: Exclusive Breastfeeding Social Support Scale (EBSSS) (N = 362)

Domain	Item label	Items	1	2	3	Mean (SD)
			n (%)	n (%)	n (%)	
Home task	Did task	Did tasks I would normally do so that I could exclusively breastfeed.	4 (1.1)	38 (10.5)	320 (88.4)	2.87 ± 0.37
	Meals	Prepared meals.	4 (1.1)	38 (10.5)	320 (88.4)	2.87 ± 0.37
	Laundry	Did laundry	4 (1.1)	43 (11.9)	315 (87)	2.86 ±0.38
Emotional	Approved EBF	Approved of me exclusively breastfeeding my baby.	5 (1.4)	50 (13.8)	307 (84.8)	2.83 ± 0.41

	Cared well	Told me I was doing well caring for my baby.	6 (1.7)	70 (19.3)	286 (79)	2.77 ± 0.46
	Feel confident	Made me feel confident even when I made mistakes.	6 (1.7)	82 (22.7)	274 (75.7)	2.74 ± 0.48
	Listened	Listened to me talk about the new baby.	6 (1.7)	85 (23.5)	271 (74.9)	2.73 ± 0.48
	Good mother	Believed that I am a good mother	8 (2.2)	92 (25.4)	262 (72.4)	2.7 ± 0.5
	Concern physical	Showed concern about my own physical condition and health.	8 (2.2)	70 (19.3)	284 (78.5)	2.76 ± 4.55
	Concern sad	Showed concern when I felt sad or depressed.	6 (1.7)	69 (19.1)	287 (79.3)	2.77 ± 0.47
	Praised EBF	Praised me for my efforts to exclusively breastfeed.	7 (1.9)	70 (19.3)	285 (78.7)	2.81 ±0.44
Informational	Answered questions	Answered my questions about breastfeeding.	7 (1.9)	53 (14.6)	302 (83.4)	2.81 ± 0.42
	Advice EBF	Gave me advice and suggestions About how to exclusively breastfeed.	5 (1.4)	57 (15.7)	300 (82.9)	2.82 ± 0.42
	Get help	Told me where I could get help if I had questions about breastfeeding or caring for my baby.	5 (1.4)	55 (15.2)	302 (83.4)	2.82 ± 0.42

	Showed EBF	Showed me how to breastfeed.	7 (1.9)	52 (14.4)	303 (83.7)	2.82 ± 0.44
	Taught care	Taught me how to take care of myself	6 (1.7)	53 (14.6)	303 (83.7)	2.82 ± 0.43

Note: EBSSS mean 44.78, SD ± 5.93, minimum 16, maximum 48, range = 32

1 = no help at all or much less than you would like, 2 = less than you would like, 3 = as much as you would like

EBF = exclusive breastfeeding, N = number, % = percent, SD = standard deviation

EBSSS = Exclusive Breast Feeding Social Support Scale

Table 06: EBSSS score group

Social support	N	%
Low	37	10.2
High	325	89.8

N = number, % = percent

In chi-square test the association between age of mother and exclusive breastfeeding practice is significant $X^2 = 6.390^a$, p-value = 0.01, phi = -0.13. The association between occupation and exclusive breastfeeding practice is significant $X^2 = 10.656^a$, p-value = <0.001, phi = -0.17. The association between BSES-SF and breastfeeding practice is significant $X^2 = 5.399^a$, p-value = 0.02, phi = 0.12. The association between educational status, age of baby, income, place of delivery, type of delivery, antenatal breastfeeding education, parity, initiation of breast feeding, Colostrum feeding, IIFAS score, EBSSS score and exclusive breastfeeding practice were not significant (table 8)

Table 07: Demographic characteristics, IIFAS, BSES-SF, EBSSS and their relationship to the Exclusive Breastfeeding Practice (N = 362)

Characteristic	Complete <6 month n (%)	Complete 6 month n (%)	Chi-square	p-value	phi
Age of mother			6.390 ^a	0.01*	-0.13
≤25	46 (28.8)	114 (71.3)			
>25	84 (41.6)	118 (58.4)			
Education			1.523 ^a	0.22	-0.07
Illiterate and < SLC	54 (32.5)	112 (67.5)			

SLC pass and above	76 (38.8)	120 (61.2)			
Religion			0.715 ^a	0.39	- 0.04
Hindu	109 (35)	202 (65)			
Other	21 (41.2)	30 (58.8)			
Age of baby			3.545 ^a	0.06	- 0.01
less than 6 month	44 (30.1)	102 (69.9)			
6 month and above	86 (39.8)	130 (60.2)			
Income			1.646 ^a	0.2	- 0.07
<Rs. 30000	70 (33.2)	141 (66.8)			
=>Rs. 30000	60 (39.7)	91 (60.3)			
Place of delivery			0.341 ^a	0.57	- 0.03
Home delivery	4 (28.6)	10 (71.4)			
Health institution	126 (36.2)	222 (63.8)			
Type of delivery			1.065 ^a	0.302	- 0.05
Normal	81 (34)	157 (66)			
Caesarean	49 (39.5)	75 (60.5)			
Antenatal breast feeding education			0.458 ^a	0.49	0.04
Yes	100 (36.9)	171 (63.1)			
No	30 (33)	61 (67)			
Parity			0.215 ^a	0.64	0.02
Primipara	75 (36.9)	128 (63.1)			
Multipara	55 (34.6)	104 (65.4)			
Occupation			10.656 ^a	< 0.001*	- 0.17
Unemployed	104 (32.8)	213 (67.2)			

Employed	26 (57.8)	19 (42.2)			
Initiation of Breast feeding			3.626 ^a	0.057	-0.1
Within 1 hour	72 (32.1)	152 (67.9)			
After 1 hour	58 (42)	80 (58)			
Colostrum feeding			0.423 ^a	0.52	0.03
Yes	128 (36.2)	226 (63.8)			
No	2 (25)	6 (75)			
IIFAS			2.256 ^a	0.32	0.08
Positive attitude toward formulas feeding	1 (50%)	1 (50%)			
Neutral	8 (53.3%)	7 (46.7%)			
Positive attitude toward breast feeding	121 (35.1%)	224 (64.9%)			
BSES-SF			5.399 ^a	0.02*	0.12
Moderate	3 (100%)	0 (0%)			
High	127 (35.4%)	232 (64.6%)			
EBSSS			1.413 ^a	0.23	-0.06
Low	10 (27%)	27 (73%)			
High	120 (36.9%)	205 (63.1%)			

Note: * = p-value < 0.05, N = Number, % = Percent

IIFAS = Iowa Infant Feeding Attitudes Scale

BSES-SF = Breastfeeding Self-efficacy Scale Short Form

EBSSS = Exclusive Breastfeeding Social Support Scale

Statistically significant variable (religion) in Chi-square test was further examined using ordinal regression. Ordinal regression was performed to assess the impact of religion on the likelihood that respondents would report that they had positive attitude towards formula feeding, neutral or positive attitude towards breastfeeding. The model was statistically significant $\chi^2 = 11.089$, p-value 0.001, indicating that the final model gives a significant improvement over a baseline intercept only model. This means the model gives the better prediction than just guessed based on the marginal probabilities

for the outcome categories. The Pearson's chi-square value for the goodness of fit was 2.299 with significance level of 0.129, this value is larger than 0.05, therefore indicating support for the model. The model as a whole explained between 3% (Cox & Snell R Square) and 8.9% (Nagelkerke R Square) of the variance in knowledge and attitude of breastfeeding. Predicted response category for positive attitude towards breastfeeding was 90.3%. As shown in the table 9, religion made a unique statistically significant contribution to the model. The odds ratio of 6.081 (95% C.I = 2.230, 16.578) for religion, this indicated that respondents who were Hindu over 6 times more likely to report positive attitude towards breastfeeding than other religion, controlling for all other factors in the model.

Table 08: Factors influencing on IIFAS (N = 362)

Characteristics	B	S. E	Wald	df	Adjusted OR (95% C.I.)	p-value
Religion						
Hindu	1.805	.5117	12.443	1	6.081 (2.230, 16.578)	< .001*
Other	0 ^a				1	

Note: a = Set to zero because this parameter is redundant

* = p-value < 0.05

IIFAS = Iowa Infant Feeding and Attitude Scale

Statistically significant variables (education, income, place of delivery, type of delivery and Colostrum feeding) in Chi-square test were further examined using binary logistic regression. Direct logistic regression was performed to access the impact of number of factors on the likelihood that respondents would report that they had low or high level of social support for Exclusive Breastfeeding. The full model containing all predictors were statistically significant $\chi^2 = 39.29$, p-value <0.001, indicating that the model was able to distinguish between respondents who reported low social support and high social support. The Chi-square value for Hosmer-Lemeshow Test is 0.039 with a significance level of 0.843, this value is larger than 0.05, therefore indicating support for the model. The model as a whole explained between 10.3 (Cox & Snell R Square) and 21.3 (Nagelkerke R Square) of the variance in social support for Exclusive Breastfeeding, and correctly classified 90.3% of cases. As shown in the table 10, only three of the independent variables made a unique statistically significant contribution to the model (education, place of delivery and Colostrum feeding).The strongest predictor of reporting a high social support was Colostrum feeding, recording an odds ratio of 11.831 (95% C.I = 2.289, 61.144), indicating that the respondents who did Colostrum feeding were over 11 times more likely to report high social support as compare to those who didn't do Colostrum feeding, controlling for all other factors in the model. The odds ratio of 7.362 (95% C.I = 2.208, 24.542) for place of delivery, this indicated that respondents who had institutional delivery were over 7 times more likely to report high social support than those who delivered in home, controlling for all other factors in the model. The odd ratio of 3.618 (95% C.I = 1.535, 8.530) for education of mother, this indicated that respondents who had SLC passed and above education were over 3 times more likely to report high social support than who was illiterate and less than SLC pass.

Table 09: Factors influencing on EBSSS (N = 362)

Characteristics	B	S.E.	Wald	df	Adjusted OR (95% C.I.)	p-value
Education						

Illiterate and < SLC					1.000	
SLC pass and above	1.28 6	0.43 8	8.63 7	1	3.618 (1.535, 8.530)	0.003*
Place of delivery						
Home delivery					1.000	
Health institution	1.99 6	0.61 4	10.5 56	1	7.362 (2.208, 24.542)	0.001*
Colostrum feeding						
No					1.000	
Yes	2.47 1	0.83 8	8.69 3	1	11.831 (2.289, 61.144)	0.003*
Constant	- 2.52 0	0.98 0	6.61 2	1	0.80	0.010

Note: * = p-value < 0.05

EBSSS = Exclusive Breast Feeding Social Support Scale

Table 10: Factors influencing on Exclusive Breastfeeding Practice (N = 362)

Characteristics	B	S.E.	Wald	Df	Adjusted OR (95% C.I.)	p-value
Age of mother						
> 25					1.000	
≤ 25	0.524	0.229	5.256	1	1.689 (1.079, 2.644)	0.022*
Occupation						
Employed					1.000	
Unemployed	0.981	0.327	8.982	1	2.668 (1.404, 5.069)	0.003*
Constant	-0.492	0.314	2.454	1	0.611	0.117

Note: * = p-value < 0.05

The correlation between knowledge and attitude of breast feeding (measured by IIFAS), breastfeeding self-efficacy (measured by BSES-SF), exclusive breast feeding social support (measured by EBSSS) and exclusive breastfeeding practice was investigated using Spearman's (rho) correlations coefficient, because the data were non-parametric and categorical. There was a weak negative correlation between knowledge and attitude of breast feeding and breastfeeding self-efficacy, $\rho = -0.02$. The more breastfeeding knowledge and attitude respondents have, the less breastfeeding self-efficacy. There was a weak positive relationship between breastfeeding knowledge and attitude and exclusive breastfeeding social support and exclusive breastfeeding practice, $\rho = 0.011, 0.079$. The more breastfeeding knowledge and attitude respondents have, the more exclusive breastfeeding social support and exclusive breastfeeding practice. There was a weak positive relationship between breastfeeding self-efficacy and exclusive breastfeeding social support and exclusive breastfeeding

practice, $\rho = 0.007, 0.112^*$. The more breastfeeding self-efficacy respondents have, the more exclusive breastfeeding social support and exclusive breastfeeding practice. There was a weak negative relationship between exclusive breastfeeding social support and exclusive breastfeeding practice, $\rho = -0.06$. The more exclusive breastfeeding social support respondents have, the less exclusive breastfeeding practice (table 12).

Table 11: Spearman's (rho) correlations coefficient between IIFAS, BSES-SF, EBSSS and EBF Practice (N = 362)

	Variables	Knowledge attitude	& Self-efficacy	Social support	EBF practice
1	IIFAS	-	-0.02	0.011	0.079
2	BSES-SF		-	0.07	0.122*
3	EBSSS			-	-0.06
4	EBF practice				-

Note:- * = Correlation is significant at the 0.05 level (2-tailed)

IIFAS = Iowa Infant Feeding Attitudes Scale

BSES-SF = Breastfeeding Self-efficacy Scale Short Form

EBSSS = Exclusive Breastfeeding Social Support Scale

EBF = Exclusive Breastfeeding

3.1. Discussions

To the best of our knowledge, this was the first study in Nepal that utilized an internationally standardized instrument (IIFAS) to investigate the knowledge and attitude of mothers who feed their children through nursing. The findings of the current study revealed that they had knowledge and attitude on breastfeeding, and that they had a more positive attitude toward nursing generally [16]. There is a considerable connection between IIFAS and religious and spiritual practices. IIFAS scores were not shown to have a statistically significant association with factors such as the age of the mother, the education level of the baby, the income level of the mother, the place of delivery, the kind of delivery, the antenatal breastfeeding education, the parity of the mother, the occupation, the beginning of nursing, or the use of colostrum [17]. There was a correlation between a mother's favorable understanding and attitude towards breastfeeding and the success rate of breastfeeding. The current study found that 95.3% of women had a favorable opinion regarding breastfeeding [18]. According to the findings of a study that was carried out in India, women exhibited indifferent attitudes and a high level of knowledge regarding breastfeeding [19]. Seventy-eight percent of women in India had an average level of knowledge, fifty-five percent had a positive attitude, and seventy-two percent had a healthy nursing practice, according to another study [20].

4. CONCLUSIONS

According to the findings of the current study, breastfeeding was associated with very high levels of knowledge, attitude, self-efficacy, and social support. The EBF practice, on the other hand, did not rate particularly well in terms of knowledge, attitude, self-efficacy, and social support. Because of this, there is a gap between the actual EBF practice and the desired one. It is essential to undertake an evaluation of the disparity that exists between EBF practice and knowledge, attitude, self-efficacy, and social support. Three quarters of the respondents did not receive antenatal breastfeeding education, two and a half percent did not feed their infants colostrum, and around two thirds of the respondents began

breastfeeding within the first hour after birth. When compared to mothers who delivered their babies at a health institution, those who delivered their babies at home were less likely to report receiving social support. Additionally, mothers who were employed had a lower likelihood of engaging in EBF in comparison to mothers who were jobless. Because of this, it is necessary to adopt measures, such as providing working women with private rooms, refrigerators, and flexible scheduling, so that they can breastfeed their children. There is a hypothesis that the provision of amenities in the workplace could lead to an increase in the number of women who breastfeed their children. Therefore, it is essential to educate mothers, dads, and other members of the family on the significance of early commencement of breastfeeding, colostrum feeding, and institutional delivery, as well as the practice of exclusive breastfeeding, during antenatal visits, postnatal visits, and immunization clinics. Increasing the effectiveness of public health education campaigns to promote successful EBF practices by focusing on the occupational demands of mothers and effective EBF practices in particular with regard to mothers. It is essential to place an emphasis on giving moms with social support, which includes emotional support, material support, informational support, and encouragement.

5. CONCLUSIONS

The study contributes to the recommendation of a mother-friendly work environment for postnatal nursing mothers in order to boost EBF. Additionally, the hospital must make available counseling and recommendations about the practice of exclusive breastfeeding. To ensure that the findings of the study are applicable to a wider population, it is possible to conduct the research on a massive scale, incorporating additional medical facilities. There is also the possibility of conducting a comparative research between public and private hospitals. Considering that the findings of the study revealed a gap between knowledge and practice, it is possible to perform more research on behavioral factors as well.

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