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Optimal Breastfeeding Practice and Associated Factors among Mothers having Infants Aged 0 - 6 Months in Southern Ethiopia

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Abstract

Introduction: The purpose of this study was to assess optimal breastfeeding practice and its associated factors among mothers of infants aged 6 months in south Ethiopia, 2020.

Methods: The Sample size was calculated by using a single population proportion formula. A community-based cross-sectional study was conducted on 414 child-mother pairs. A two-stage sampling through a pretested semi-structured questionnaire with a face-to-face interview technique was conducted. Data were entered Epi data entry version 4.6.2 and exported to Statistical Product and Service Solutions version 25 for analysis. A predictor variable with a p-value < 0.25 at bi-variable analysis was included in the multivariable logistic regression model and the variable with a p-value < 0.05 in the final model was taken as statistically significant independent predictors with a 95% confidence interval.

Result: The optimal breastfeeding practice was 59.9%. Family planning utilization (AOR: 0.2; 95% CI (0.13 - 0.39), postnatal care (AOR: 0.25 ; 95% CI (0.11 - 0.57), infant age (AOR: 2.23; 95% CI (1.33 - 3.75), age of mother 25 – 34 yrs (AOR: 2.27 ; 95% CI (1.18 - 4.35) and ≥ 35 years (AOR: 3.65,95% CI; 1.34 - 9.91), delivery assistant (AOR: 0.29,95% CI; 0.15 - 0.59) and head of household (AOR:4.59,95% CI;1.87-11.33) were significant predictors of optimal breastfeeding practice.

Conclusion: The optimal breastfeeding practice was 59.9%. Child and maternal age, family planning, postnatal care, delivery assistant, and head of households were significantly associated with the outcome variable. Promotion of optimal breastfeeding through nutritional counselling during postnatal and family planning service to achieve the maximum rate of optimal breastfeeding practice has needed.

Keywords: *Gurage Zone; Lactating Mothers; Less Than 6 Months Child; And Optimal Breastfeeding Practice*

Abbreviations

AOR: Adjusted Odds Ratio; CHD: Community Health Day; EPI: Expanded Program Immunization; Epi data: Epidemiological data; PNC: Postnatal Care; SPSS: Statistical Product and Service Solutions; UNICEF: United Nations International Children's Emergency Fund; WHO: World Health Organization

Introduction

Breastfeeding is the right way to provide the best food, having all the balanced nutritional contents, for a baby's first six months of life [1]. Optimal infant and young child feeding practices, especially for the first two years of life are very important since this period is a "critical window" for the promotion of health, good growth, behavioral and cognitive development [2].

Optimal breastfeeding practices include timely initiation of breastfeeding (putting the newborn to the breast within one hour of birth), exclusive breastfeeding (breast milk with no other foods or liquids) for the first six months of life, followed by breast milk and complementary foods (solid or semi-solid foods) exactly since six months of age with the continuation of breastfeeding for at least one up to two years of age and beyond [1].

Sub-optimal breastfeeding practices are associated with a higher risk of disease and mortality not only in developing countries but also in highly developed countries [3]. It is a responsible cause for an annual death of 13% or 800, 000 under-five children[4].

Optimal breastfeeding rates globally remain low; only 43% of the world's new-borns are put to the breast within one hour of birth and 40% of infants aged 6 months or less are exclusively breastfed[5]. The burden of suboptimal breastfeeding disproportionately affects low-and middle-income countries [6]. Only 28% of infants in low and middle-income countries benefit from optimal early breastfeeding, with wide variation by region and childbirth location [7]. It has also been estimated that optimal breastfeeding practice could save 1.5 million children a year. Yet few of the 129million babies born each year receive optimal breastfeeding and some are not breastfed at all [8].

Globally, only 38% of infants aged 0 to 6 months are exclusively breastfed. Recent analyses indicate that suboptimal breastfeeding practices, including non-exclusive breastfeeding, contribute to 11.6% of death in children under 5 years of age [5]. Scaling up breastfeeding to near-universal levels could prevent up to an estimated 13.8% of deaths in children younger than 24 months globally each year [4,9].

In Ethiopia, the prevalence of exclusive breastfeeding (EBF) is 58%, which is lower than the national Health Sector Transformation Plan 2016-2020 [10].

Ethiopia has one of the highest infant mortality rates in the world and inappropriate feeding practice is a primary cause. A community-based cross-sectional study done in the Sidama zone revealed that only 14.4% of mothers practice optimal breastfeeding and this was a contributing factor for stunting [11].

Even though much research had been conducted in Ethiopia regarding this title, research in the study area is scares.

Aim of the Study

This study aimed to assess optimal breastfeeding practice and associated factors among mothers of children aged less than 6 months in Butajira town Guraga Zone SNNPR. The evidence generated would contribute to interventions such as breastfeeding promotions at the health institutions and the community by health providers.

Methods

This community-based cross-sectional study was conducted from March to April 2020 at Butajira town, which is the second big town in the Gurage zone, Southern Nations Nationalities and People's Region (SNNPR). Butajira town is located in the south-central part of Ethiopia at1900m-2400m above sea level, and at a distance of 166km from Hawassa, the capital city of the regional government seat, and 135km from Addis Ababa the capital city of Ethiopia. The town has one administrative sub-city and five kebele with an agro-ecological

zone of middle land the so-called "Weina-Dega". The recent population size estimate is found to be 51,470. From this, 24,642 are male and 25,648 are female. The number of children under five years of age accounts for 9,049 and the number of women at reproductive age (15 - 49years) accounts for 12,268 in the town. The town has one general hospital and one health center which serves the population from the vicinity and its catchments area [12]. All mothers with 0-6months of age children in Gurage Zone, Southern Ethiopia were the source population while a sample of mothers of children aged 0-6months at selected Kebele during the study period was the study population for this study. Mothers of infants aged 0-6months who lived/residence at the study area for at least six months were included whereas mothers living without their biological children and mothers who were severely ill or unable to respond were excluded from participating in the study.

The sample size (n) required for the study was calculated by epi info version 7 using the formula to estimate a single population proportion ($n = (Z\ \alpha\ /2)^2 p\ q/d^2$) assuming an expected prevalence for optimal breastfeeding practice of 37.3% with a finite population correction[13], the margin of error 5% and 95%CI.

The largest sample size is the one that is calculated for the first specific objective which is 360 and adding a 15% non-response rate it becomes 414.

Sampling procedure

Multi-stage sampling technique was used in the sampling of the study participants 414 mothers -child pairs under the age of six months in the town. From the total of five kebele (in the town, three kebele were selected using simple random sampling technique with lottery method. Several mothers who had children aged less than 6 months in selected kebele were identified by conducting a census at each kebele with HEWs. The study participants in each kebele were selected using population proportion to sample size.

Data collection procedure and tools

A structured questionnaire that addresses the objective of this study was used. Tenth-grade complete data collectors and supervisors with better experience in data collection were recruited. The training was provided for all interviewers and supervisors on ways of all data collection processes including how to maintain good data quality.

Data collection was made using a home to home visit, and households were selected systematically at the k^{th} interval. The first house was selected randomly then based on an interval, and visited houses were marked using chalk so that there was not be an overlap or double counting. In the presence of two or more eligible study participants in a house, a randomly selected participant was included. In the absence of a respondent, visits were repeated three times to minimize the non-response rate as possible.

Six core feeding practices include:

1. Early initiation of breastfeeding (within 1hour of delivery) (Yes or No)
2. Colostrum feeding (yes or no)
3. On-demand breastfeeding (yes or no)
4. Exclusive breastfeeding (infant fed only breast milk except medicines and vitamins ordered by health professionals one day (24 hours) before the survey was conducted) (yes or no)
5. Continue breastfeeding when either the infant or the mother is sick (yes or no)

6. Pre-lacteal feeding (yes/no) was used to measure the dependent variable. All suboptimal breastfeeding practices were scored as zero while recommended breastfeeding practices scored as one. when study participants provide a correct response (1) for all breastfeeding practice questions, then they are categorized as having optimal breastfeeding practice [14].

Knowledge of breastfeeding was measured by asking 5 breastfeeding knowledge questions developed based on Infant feeding recommendations [15]. A knowledge score was calculated for each participant based on the number of questions correctly answered in the knowledge section. Each correct response was scored (1) and the incorrect response was scored (0). The mean value was used to categorize respondents as having good knowledge or poor knowledge about breastfeeding. Based on this, values less than the mean was categorized as having poor knowledge and the value greater than or equal to the mean was categorized as good knowledge.

Attitude towards breastfeeding was evaluated by a Likert-scale questionnaire. Nine questions with a five-point Likert rating scale, from strongly disagree to strongly agree were used to assess women's attitude towards breastfeeding [15]. Responses to the attitude questionnaire range from 9 - 45. The mean value was used to categorize respondents as having a positive or negative attitude towards breastfeeding. Respondents who scored below the mean value are categorized as having a negative attitude and who scored equal to or greater than the mean are categorized as having a positive attitude.

Data quality control and analysis

Data collection tools for this study were first prepared in English, translated to the local language (Amharic), and re-translated back to English to prove its consistency. All data collectors and supervisors were informed about the tools and the participants. Before the actual data collection period, a pre-test on 5% of the sample was conducted and modification was done accordingly. Data were monitored and checked for completeness on daily basis during data collection. Data were entered into EPI DATA version 4.6.2 and analysis was done by using the Statistical Product and Service Solutions version 25 for analysis. Binary logistic regression analysis was done to show the association between dependent and independent predictors. Variables with a P-value of < 0.25 in the bi-variable analysis were screened as eligible for further multivariable analysis. Finally, the degree of association was declared by using AOR with 95%CI. Multicollinearity was ruled out through a co-linearity diagnostic check. Model fitness to the dependent variable with the predictors was checked by Hosmer and Leme show test for goodness of fit that was about 86%.

Ethical Consideration

Ethical clearance was obtained from the southern nation and nationalities people's republic (SNNPR) Health Bureau. A support letter was given to Butajira town health offices (the place where the actual study was conducted). The study was also done following the declaration of Helsinki. Informed written and verbal consent was secured from each respondent after explaining the purpose and the procedures of the study.

Results

Socio-demographic characteristic of the study population

A total of 414 infant-mothers pairs were interviewed with a 100% of response rate. The mean (± SD) age of the respondent was (28.15 ± 4.69) years. Most (68.9%) of the respondents were in the age range between 25 to 34 years at the time of the survey. About 48.6%) of infants were in the age range of 4-6months while only 9.2% were < 1months. The mean (± SD) age of the index child was (3.58 ± 1.57) months. Nearly all (93.2%) were urban dwellers. Regarding marital status, almost all (97.3%) were currently in a marital union. Three hundred forty-three (82.9%) households were headed by the husband. Over half (58%) of the mother had attended primary education while only 9.7% were illiterate. About half (50.5%) of respondents had two and more than two under-five children in the households

Variables	Frequency	Percent (%)
Sex of child		
Male	206	49.8
Female	208	50.2
Age of child in a month		
<1	38	9.2
2-3	175	42.3
4-6	201	48.6
Age of mother in the year		
15-24	74	17.9
25-34	289	69.8
≥35	51	12.3
Place of residence		
Urban	386	93.2
Rural	28	6.8
Marital status		
Currently not in marital union	11	2.7
Currently in a marital union	403	97.3
Head of households		
Husband	343	82.9
Wife	71	17.1
Maternal educational status		
Not formal education	40	9.7
Primary education	240	58.0
Secondary and above	134	32.4
Paternal education		
Not formal education	19	4.6
Primary education	160	38.6
Secondary and above	235	56.8

Table 1: *Sociodemographic characteristics of study participants in southern region Butajira town, August 2020.*

Socio-economic characteristics of study participants

Most (63.3%) of mothers were housewives and 34.8% of fathers were a merchant in occupation. The majority (72.5%) of households had an income level of more than 1500ETB (Table 2).

Variables (n = 414)	Frequency	Percent (%)
Maternal occupation		
Housewife	262	63.3
Government employee	47	11.4
Merchant	83	20.0
Daily laborer	22	5.3
Paternal occupation		
Merchant	144	34.8
Government employee	107	25.8
Daily laborer	90	21.7
Private owner	68	16.4
Farmer	5	1.2
Income(Ethiopian birr)		
<500	34	8.2
500-1000	72	17.4
1001-1500	8	1.9
>1500	300	72.5

Table 2: *Socio-economic characteristics of households with infants-age less than 6months in Butajira town southern Ethiopia, August 2020.*

Service, obstetric, and medical-related factors of respondents

In the current study, almost all (96.9%) of mothers had followed antenatal care (ANC). The majority (71.7%) of these had four ANC follow up. Of the total study participants, 90.6% had postnatal follow-up and 73.9% had currently used family planning. Most (93.5%) mothers were given their births in a health facility and (85.5%) were assisted by health care professionals. The majority (91.5%) of mothers had a vaginal delivery and 56.8% had 1 - 2 live births. Almost all (98.6%) pregnancies were intended. Fifty-four (13%) of mothers had a history of hypertension and 3.9% had gestational diabetic Mellitus during pregnancy. All (100%) of study participants had got breastfeeding counselling and had information about breastfeeding. Of these, most (72.9%) receive this information from health care workers.

Knowledge related characteristics of respondents

Regarding maternal knowledge, almost all (98.8%) and (99%) of mother knows early initiation of breastfeeding and colostrum feeding, respectively. Over half (57%) of mothers reported that pre-lacteal food should not be given to infants before six months of age. Overall, 396 (95.7%) of mothers had good knowledge about breastfeeding (Table 3).

Variables	Frequency	(%)
Breastfeeding started within 1hr of birth		
Yes	409	98.8
No	5	1.2
Colostrum feeding to child		
Yes	410	99.0

No	4	1.0
Continues exclusive breastfeeding up to 6months of age		
Yes	399	96.4
No	15	3.6
Pre-lacteal foods shouldn't be given during the first six months of age		
Yes	236	57.0
No	178	43.0
Continuation of breastfeeding up to 2 years and beyond		
Yes	397	95.9
No	17	4.1
Overall knowledge score		
Good knowledge	396	95.7
Poor knowledge	18	4.3

Table 3: *knowledge related characteristics of mothers of infants aged less than 6months in Butajira town southern Ethiopia, August 2020.*

Attitude related characteristics of respondents

Over half (58.9%) of mothers believed that initiation of breastfeeding within one hour of birth is important, about (49%) of mothers don't believe in discarding colostrum (first milk) during the first days of birth. Over half (57.7%) of mothers believed that lactating mothers should gain at least one additional meal throughout their lactation. Overall, 350(84.5%) of. mothers had a positive attitude towards optimal breastfeeding practice during the first six months of age (Table 4).

Variables	**Responses**				
	Strongly Disagree (1)	**Disagree (2)**	**Neutral (3)**	**Agree (4)**	**Strongly Agree (5)**
	N (%)	N (%)	N (%)	N (%)	N (%)
Giving breast milk to a newborn immediately within 1hr is important	6 (1.4)	2 (0.5)	5 (1.2)	244 (58.9)	157 (37.9)
Discarding colostrum is not important	102 (24.6)	203 (49)	8 (1.9)	58 (14)	43 (10.4)
Only breast milk is sufficient for infants to 6 months of age	94 (22.7)	197 (47.6)	16 (3.9)	73 (7.6)	34 (8.2)
Complimentary food shouldn't be started before 6 month	90 (21.7)	196 (47.3)	23 (5.6)	60 (14.5)	45 (10.9)
Breastfeeding is easier than formula	62 (15)	82 (19.8)	71 (8.4)	152 (36.7)	42 (10.1)
Breastfeeding decrease family expense	28 (6.8)	81 (19.6)	19 (4.6)	207 (50.6)	79 (19.1)
Breastfeeding should be continued when the mother/infant becomes sick	20 (4.8)	111 (26.8)	20 (4.8)	187 (45.2)	76 (18.4)
Breastfeeding has benefit to the mother	28 (6.8)	119 (28.7)	9 (2.8)	183 (44.2)	75 (18.1)
At least one additional meal is important for lactating mothers	8 (1.9)	33 (8)	1 (0.1)	239 (57.7)	133 (32.1)
Overall attitude score Positive Negative	350 (84.5%) 64 (15.5%)				

Table 4: *Attitude related characteristics of mothers of an infant aged less than 6months in Butajira town southern Ethiopia, August 2020.*

Prevalence of optimal breastfeeding practice

Almost all (99.8%) of mothers had ever breastfed their infants and 99.3% initiate it within one hour of delivery. The majority (98.1%) of mothers had given colostrum for their infants. All (99.3%) of mothers had practiced exclusive breastfeeding during the first 6 months of age. Four hundred five (97.8%) of mothers had practiced maximum frequency of breastfeeding (> 8 times/day). Hundred forty-nine (36%) of mothers gave pre-lacteal foods. the overall optimal breastfeeding practice in this study was 59.9% (95%CI 55.1 - 64.5).

Factors associated with optimal breastfeeding practice

On the bivariate analysis, ten variables like age of child and age of mother, pregnancy intention, family planning utilization, parity, postnatal care (PNC), head of households, attitude, household income, and delivery assistant were significantly associated with optimal breastfeeding practice (P < 0.25). However, after controlling the effect of confounding variables in the multivariate logistic regression analysis, Six (PNC, attitude, maternal age, child age, family planning utilization, and head of household had maintained their significant association (Table 5).

Variables	Breastfeeding practice				P-value
	Optimal N (%)	Suboptimal N (%)	COR (95%CI)	AOR (95%CI)	
Age of child					
<1month	26(68.4)	12(31.6)	2.18(1.05-4.58)	2.11(0.81-5.48)	0.126
2-3month	122(69.7)	53(30.3)	2.33(1.52-3.56)	2.29(1.33-3.95)	0.003*
4-6month	100(49.8)	101(50.2)	1	1	
Age of mother					
15-24years	34(45.9)	40(54.1)	1	1	
25-34years	172(59.9)	117(40.5)	1.73(1.03-2.89)	2.29(1.15-4.54)	0.018*
≥35 years	42(82.4)	9(17.6)	5.49(2.34-12.88)	3.45(1.22-9.73	0.019*
Postnatal follow-up					
Yes	237(63)	139(37)	1	1	
No	11(28.9)	27(71.1)	0.24(0.12-0.49)	0.21(0.09-0.49)	0.0001*
Family planning utilization					
Yes	212(69.3)	94(30.7)	1	1	
No	36(33.3)	72(66.7)	0.22(0.14-0.35)	0.24(0.13-0.42)	0.0001*
Head of household					
Husband	184(53.6)	159(46.4)	1	1	
Wife	64(90.1)	7(9.9)	7.7(3.5-17.7)	4.29(1.7-10.83)	0.002*
Attitude					
Positive	236(67.4)	114(32.6)	1	1	
Negative	12(18.8)	52(81.2)	0.11(0.06-0.29)	0.13(0.06-0.29)	0.0001*
Delivery assistant					
Professional	230(65)	124(35)	1	1	
HEWs	18(30)	42(70)	0.23(0.13-0.42)	0.73(0.32-1.67)	0.457
Parity					

1-2 live birth	131(55.7)	104(44.3)	1	1	
3-4 live births	102(67.5)	49(32.5)	1.65(1.08-2.53)	1.63(0.94-2.86)	0.081
≥4 live births	15(53.6)	13(46.4)	0.92(0.42-20)	0.98(0.35-2.76)	0.979
Pregnancy intention					
Intentional	246(60.3)	162(39.7)	1	1	
Unintentional	2(33.6)	4(66.4)	0.33(0.06-1.82)	0.29(0.03-2.79)	0.286
Income					
<500	13(38.2)	21(61.8)	0.32(0.16-0.67)	0.51(0.19-1.30)	0.159
500-1000	37(51.4)	35(48.6)	0.55(0.33-0.93)	0.78(0.41-1.49)	0.461
1001-1500	1(12.5)	7(87.5)	0.08(0.01-0.62)	0.18(0.02-1.69)	0.134
>1500	197(65.7)	103(34.3	1	1	

Table 5: *Factors associated with optimal breastfeeding practice among infants aged less than six months in Butajira town, southern Ethiopia, August 2020.*

Discussion

This study was aimed to assess the prevalence of optimal breastfeeding practice and its associated factors among mothers of under six-month infants in Butajira town, Gurage zone, southern Ethiopia, 2020.

The finding revealed that the prevalence of optimal breastfeeding practice in the study area was 59.9% (55.1 - 64.5). In the final logistic regression model, six variables (post-natal care, current family planning utilization, attitude, age of mother and child, and head of household were significantly associated with optimal breastfeeding practice.

World Health Organization (WHO) global and national infant and young child feeding guidelines recommend that all new-borns should be only breastfed for the first six months. Based on this, 99.3% of the study participants in our case were fed their infants only breast milk for the first six months of age, which is higher than most studies of our country. This difference might be attributed that in our study majority (63%) of study participants were house wife's whereby the probability of exclusive breastfeeding is expected to be higher. In addition, most (95.7%) and (84.5%) of the study participants had good knowledge and a positive attitude towards breastfeeding practice.

Overall, the prevalence of optimal breastfeeding practice in the current study was 59.9% (95%CI, 55.1-64.5). This figure is higher than a study done in the Hula district Sidama zone which reported that 43.1% of study participants had optimal breastfeeding practice [13]. Similarly, the finding of this study is much higher than a secondary data analysis done on EDHS data in Ethiopia. According to this secondary data analysis, over 80% of the study participants had sub-optimal breastfeeding practices. This difference may be due to the difference in the measurement tool. In the latter study, optimal breastfeeding practice includes bottle feeding as one measurement of breastfeeding practice [16]. But, in our study, bottle feeding was not used as a measurement of optimal breastfeeding practice which every in our community practice.

In the same manner, this figure is higher than a study done in Gondar town, northern Ethiopia among working mothers which was 36.5%. This difference is because in our study two-thirds (63%) of the study participants were housewives in occupation and might have a chance to stay home with their infants. In the latter study, all (100%) of the study participants were employee mothers [15]. Similarly, the finding of this research is much higher than a study done in Jimma zone Southwest Ethiopia in which only 24.6% of the study participants had breastfed their infants optimally. This difference might be due to the difference in knowledge about breastfeeding practice. In

our study, most (95%) of the study participants had good knowledge about breastfeeding whereas in the latter study 67% of the study participants had poor knowledge. In addition, the difference might also be due to the difference in the sample size [17]. In the same way, the result of this study is higher than a study done in the Misha district Hadiya zone which reported that 37.3% of the study participants had breastfed their infants optimally. This difference might be due to the difference in the study period [14].

In the current study, six variables had determined the prevalence of optimal breastfeeding practice. Age of child was significantly associated with optimal breastfeeding. Infants with the age range of 2 - 3 months were 2.29 times more likely to have optimal breastfeeding practice than infants in the age range of 4 - 6 months. This result indicates that when a child's age increased, optimal breastfeeding practice decreases which are consistence with the Ethiopian demographic and health survey (EDHS) which reported that the percentage of exclusively breastfeeding decreases with age from 74% of infants-age 0 - 1 month to 64% of those age 2 - 3 months and, further, to 36% of infants-age 4 - 5 months [18]**.** This finding is also consistent with a study done in the Misha district Hadya zone. According to this study, infants within the age group of 0 - 5 and 6 - 11 months were 2.6 and 2 times more likely to breastfeed optimally as compared to 18 - 24 month respectively [14]**.** A similar finding was reported in a study done in the Jimma zone which revealed that infants within the age interval of 0 - 2 and 3 - 4 months had 73% and 57% less likely to have non-exclusive breastfeeding than those infants with an age interval of 5 - 6 months [17]**.** The same finding was also reported among Iranian studies. Accordingly, the exclusive breastfeeding rate in the first five days of life was 82 percent, but it declined to 44 percent in the first month [19].

According to the finding of this study when the age of the mother increase, the proportion of optimal breastfeeding also increases. Maternal age intervals of 25 - 34 and ≥ 35 years were 2.29 and 3.45 times more odds of optimal breastfeeding respectively than their counterparts (15 - 24years). This might be because most mothers might be learned from their experience about the advantages of breastfeeding. This finding is consistent with findings from Debre Berhan town which reported that the maternal age group of 15 - 19 years reduced optimal breastfeeding practice by 90% more than those within the age range of ≥ 35 [20]**.** The same finding was reported from the Tanzanian study which revealed that breastfeeding rates were lower among young mothers [21].

Having postnatal care and family planning utilization were the other factors, which have a significant association with optimal breastfeeding practice. Not having postnatal follow-up (PNC) reduces the odds of optimal breastfeeding by 79%. This might be due to the information given during PNC about breastfeeding may make a change in the perception of breastfeeding practice. In addition, as this is one of the essential nutrition, action areas (ENA) contact points; important breastfeeding messages can be transmitted. This finding is in line with a study was done in Gondar town northern Ethiopia which revealed that mothers with PNC follow-up had 1.99times more odds of optimal breastfeeding practice than those without PNC)[15]. Another cross-sectional study in Goba woreda southeast Ethiopia also report a similar finding which revealed that mothers with postnatal counseling had 2.7 times more odds of exclusive breastfeeding practice than those without postnatal counseling [22]**.** Similarly, an interventional study done in Singapore reported that the incidence of any breastfeeding practice was higher in women who received postnatal support than in women not supported [23].

In addition, family planning utilization had a significant association with optimal breastfeeding practice. Mothers without family planning utilization had 76% less likely to have optimal breastfeeding practice than those who utilized. The possible justification for this might be because this service is one of the essential nutrition actions contacts points in which an important message about breastfeeding can be disseminated.

Our finding also revealed the head of household and attitude as significant predictors of optimal breastfeeding practice. As compared to husband-headed households, wife-headed households had 4.29 times more odds of optimal breastfeeding practice. This might be because when wives/mothers are involved in the decision-making process of the household including childcare, may have a positive influence on breastfeeding practice. This finding is by a study done in Tanzania which revealed that husband-headed households had a low exclusive breastfeeding rate [21].

Finally, optimal breastfeeding practice had a significant association with attitude. Compared to mothers with a positive attitude, negative attitude mothers had 87%times less likely to practice breastfeeding optimally. This might be because mothers who have a positive perception about breastfeeding might have a positive influence on breastfeeding. This finding is in agreement with a study conducted in the Gambia which revealed that participants with a positive attitude had 2.4 times more odds of exclusive breastfeeding practice than those with a negative attitude [24]. As a strength, this study used a relatively larger sample size which might increase the generalizability of the findings. This study also has some limitations. First, our study didn't include a qualitative type of study design that supports findings from the quantitative method. Second, the cross-sectional nature of the study design allows the assessment of the association between optimal breastfeeding practice and the associated factor but not the causal relationship.

Conclusions

The prevalence of optimal breastfeeding practice in the current study was low. Age of child, maternal age, attitude, postnatal follow-up, family planning utilization, and maternal head of households were found to be significant predictors of optimal breastfeeding practice. Even though most study participants had good knowledge and a positive attitude towards optimal breastfeeding practice, the rate of optimal breastfeeding practice is still not satisfactory. So, intervention initiatives should focus on other factors that reduce the practice of breastfeeding. In addition, to achieve the maximum optimal breastfeeding rate, nutrition counseling that focuses on breastfeeding during postnatal and family planning utilization services need to be increased. Finally, hence wife headed households had a positive effect on breastfeeding practice, involving these population groups in the family decision-making process should be considered.

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Competing Interests

Authors are declared that they have no competing interests.

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