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Research Article

PREVALENCE AND ITS ASSOCIATED FACTORS OF EXCLUSIVE BREASTFEEDING PRACTICE AMONG MOTHERS WITH CHILDREN 0–6 MONTHS AT FINOTE SELAM TOWN, NORTHWEST ETHIOPIA: A COMMUNITY-BASED CROSS-SECTIONAL STUDY

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ABSTRACT

Objective: This study was conducted to assess the prevalence of exclusive breastfeeding practice and its associated factors among mothers with children 0–6 months at Finote Selam town, Northwest Ethiopia.

Methods: A community-based cross-sectional study design was conducted on (n=415) women with children 0–6 months derived using simple and multistage sampling techniques. Data have been analyzed using univariate, binary, and multivariate logistic regression.

Results: The prevalence rate of exclusive breastfeeding practice in the study area was 67%. Results display that the vulnerable groups, such as mothers being illiterate, low-income group, and lived in rural regions, have come on a double burden of death throughout delivery and have much fewer practices of breastfeeding in comparison with different moms of children aged 0–6 months due to the fact that the respondents have variations in socioeconomic traits and how the way they're under the different cultural influence.

Conclusion: This study might allow policymakers, medical sociologists, and health extension practitioners to broaden extra powerful all-rounded interventions to minimize the poor exercise of exclusive breastfeeding.

Keywords: Exclusive breastfeeding practice, Finote Selam town, Northwest Ethiopia.

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INTRODUCTION

Sustainable development goal 3 (target 3.1 and 3.2) focused on reducing maternal mortality to <70/100,000 live births and reducing child mortality to at least as low as 25/1000 live births respectively at the end of 2030 [1]. Exclusive breastfeeding (EBF) is directly related with maternal and child health [2].

EBF is defined as "an infant's consumption of human milk with no supplementation of any type food and drinks apart from vitamins, minerals, and medications until 6 months" [3]. EBF within the first 6 months of life stimulates babies' immune systems and protects them from diarrhea and acute respiratory infections [2]. Globally, but 40% of infants under 6 months age are exclusively breastfeed, despite the documented benefits of breastfeeding. However, this reduces to 38% within the developing world including Africa [4]. Suboptimum breastfeeding, particularly non-exclusive breastfeeding, ends up in 1.4 million child deaths and 10% of disease burden in children under 5 years [5]. Global risk assessment of suboptimal breastfeeding indicates that 96% of all infant deaths in the developing countries are as a result of inappropriate feeding occurring during the primary 6 months of life [6]. In Africa, over 95% of infants are currently breastfed, but feeding practices are often inadequate; feeding water and other liquids to breastfed infants could be a widespread practice [4]. A study shows that this country found the prevalence of exclusive breastfeeding but 6 months were 29.3% [7]. In Ethiopia, only 43.6% of mothers practiced exclusive breastfeeding for the primary 6 months after delivery (Ethiopia Demographic Health Survey) [8]. This problem could one in every 17 children die before the primary birthday and one in every 11 children dies before the 5th birthday. Over 2/3 of those deaths are often related to inappropriate feeding practices and occur 1st year of life during this country [9]. There are a large range of things, such as sociodemographics and cultural beliefs affected the choice of mothers regarding the initiation and duration of exclusive breastfeeding [10]. Today in Ethiopia, poor exclusive breastfeeding practice among mothers with an infant aged 0–6 month and a paucity of research dedicated to investigate mothers exclusive breastfeeding practice in the general public health and sociology of health concern [7]. Therefore, this study aims to fill the above gaps by identifying the sociodemographic factors of exclusive breastfeeding practice among mothers with children aged 0–6 months in Finote Selam town, Northwest Ethiopia.

Prevalence of exclusive breastfeeding in Ethiopia from Ethiopian Demographic Health Survey

In Ethiopia, the prevalence of exclusive breastfeeding slightly increases from 2000 to 2016.

Objective of the study

The general objective of the study is to examine the determinants of exclusive breastfeeding practice among mothers with children 0–6 months Finote Selam town, Northwest Ethiopia.

Specific objectives of the study

The objectives of the study were as follows:

- To examine the prevalence of exclusive breastfeeding practice among mothers with children 0–6 months Finote Selam town, Northwest Ethiopia.
- To identify the sociodemographic determinants of exclusive breastfeeding practice among mothers with children 0–6 months Finote Selam town, Northwest Ethiopia.

STUDY METHODS

Study design and study period

A community-based cross-sectional study design was carried out from March 1, 2019, to March 30, 2019. The study used quantitative

approached to conduct a study of exclusive breastfeeding in the study area for the reason that this method affords numeric description of practices of mothers who have children in the age between 0 and 6 and it is also helpful to identify associated factors [11].

Source and study population

All mothers of children aged 0–6 months and living in Finote Selam town for at least 6 months were the source of the population for the study. Whereas, all those mothers of children aged 0–6 months and included in the study by the sampling technique of the study were study population in this study.

Inclusion criteria

All mothers of children aged 0–6 months and living for at least 6 months in the study area were included to participate in the study.

Exclusion criteria

Those all mother of children aged 0–6 months and who are sick and unable to give full response were excluded from participation in the study.

Sample size and sampling techniques of the study

The target population of the study were included the mothers of children aged 0–6 months but lived in Finote Selam town, Northwest Ethiopia. A multistage random sampling technique was used to identify the actual respondents by first selecting mothers of children aged 0–6 months in Ethiopia. Then, within these groups, a random sample of smaller subgroups such as mothers of children who lived in Finote Selam and four local administrations – kebeles (two urban kebeles: 03 and 04 and two rural kebeles: Shenbekuma and Bakel) were selected. Afterward, a sample of these smallest subgroups can be randomly selected to form a target population for the present study. After assessing the potential respondents and the study areas of the present study, the researchers distribute the questionnaires for all mothers (422) with children 0–6 months in the selected kebeles, however, 415 mothers were participated in the study.

To calculate the sample size of the study, single proportion formula was employed in the following manner.

$$n = \frac{(Z\alpha/2)^2 \, p \, (1-p)}{d^2}$$

Whereby, d^2 the prevalence of exclusive breastfeeding in Ethiopia at the national level (P) was considered as 58%, at a 95% confidence level, and 5% degree of desired precision (d). From this assumption, the sample was 375. However, the total sample size for the study area was 413 by considering 10% of the non-response rate. While, the study included all mothers with children aged 0–6 months in the selected kebeles.

Procedures

After selecting the actual respondents of the present study, the researchers used a paper and pencil questionnaire. The present study adopted some questions from related literatures and Ethiopia Demographic Health Survey (2016) and modified it to meet the basic objectives and considered the contextual understanding of the study area. The modified questions have checked the consistency of the questionnaire by conducting a pre-test in Bure town (a town that has a similar case of the study area), which was not included in the actual data analysis. After testing the sample questionnaire, corrections were made on unclear questions for the interviewers and interviewees. This reliability of the data was validated by Cronbach's alpha=0.81 indicated that the quality of data was good.

The participants' scoring system for the dependent variable was as follows

Respondents score on practice of EBF: Good (4–6 points), fair (2–3 points), and poor (0–1 point). For the same study, Mengesha [12] conducted used this similar measurements.

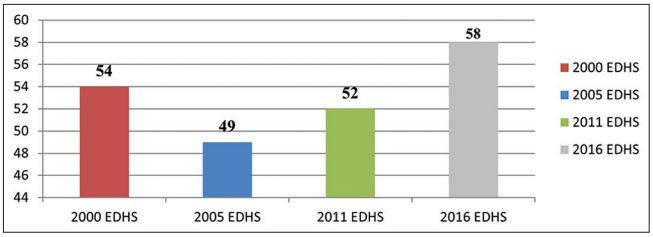

Fig. 1: Prevalence of exclusive breastfeeding. Source: Ethiopian Demographic and Health Survey 2000, 2005, 2011, and 2016

Data analysis

Quantitative data were analyzed starting from checking up the accuracy of the transcription of data and the translation of them from Amharic (local language) to English to checking the accuracy of the labels, the values, and level of measurement for all variables. After finishing this process as intended, the researchers conducted univariate analysis using the Statistical Package for the Social Sciences version 23 to identify the respondents' sociodemographic variables such as age, religion, ethnicity, marital status, place of residence, education, employment status, household monthly income, and distance between house and the health center, and to analyze descriptive statistics of the quantitative data. Binary and multivariate logistic regression was used to test the association between the dependent variable of exclusive breastfeeding practice (mothers of children aged 0–6 months carried out breastfeeding was good, coded as 1 while the poor practice is coded as 0 and sociodemographic variables). Breastfeeding practice and the sociodemographic variables were entered into the regression model and then were checked for exp(B) to ascertain 95% of the confidence intervals (CIs) for the odds ratio of predictor's contribution to the equation. The goodness of fit of the model was checked by Hosmer and Lemeshow test model using backward likelihood ratio method.

Ethical considerations

Before the beginning of data collection, the researcher was obtained permission letter from head Department of Population Studies to Amhara regional Health Bureau to inform Finote Selam town health center administration. At the time of data collection, a verbal consent had asked from the participants to confirm their willingness to participate. Confidentiality and privacy of responses were ensured throughout the data collection period.

RESULTS

Sociodemographic background

As outlined in Table 1, more than half of respondents were in the age group of 25–34 (55.4%), Orthodox Christian (92%), married (91.3%), unemployed (69.2%), illiterate (45.3%), and low family income (48.4%). However, only 61.2% of the participants were visited by health extension workers.

The practice of mothers toward exclusive breastfeeding

As shown in Table 2, a good practice of mothers was observed concerning breastfeeding immediately within 1 h after delivery (78.3%), but they gave butter to their children to swallow it after delivery (25.2%). Although 56.4% of mothers has a better practice that provided EBF for their children under 6 months, 49.4% of mothers offered to breastfeed to their children 8 times/day for 1–5 min duration (37.6%) with additional foods (43.6%) using bottle feed (33.8%). As well, after computing the total score of respondents, only 67% of mothers had a good practice of breastfeeding.

Association between sociodemographic variable and maternal practice toward EBF

Table 3 reveals the comparison of maternal practices of EBF across sociodemographics. Binary logistic regression's result indicated that the mothers who were between 25 and 34 years old are more than 1 time more likely to practice breastfeeding (UOR=1.4, 95% CI=[0.8, 2.2])

compared to respondents in the age of above 34 and between the ages of 15 and 24. In addition, mothers who lived in urban areas (compared to mother who lived in rural area) were over 2 times more likely to exercise breastfeeding (UOR=2.9, 95% CI=[1.9, 4.6], p<0.001; AOR=2.8, 95% CI=[1.6, 4.6], p<0.001). Besides, mothers who completed secondary school and above were not brought a significant change to the practice of breastfeeding, comparing with the mothers who completed primary school and below in an AOR of 1.1 (95% CI=[0.5, 2.1]), likewise the mothers who have a job and have not work in an UOR of 1.2 (95% CI=[0.8, 1.9]) and the mothers who classified under the "Upper" and the "Lower" income groups in an AOR of 1.6 (95% CI=[1.1, 2.5]), but the "Upper" income group practiced breastfeeding more than 2 times compared with mothers who were the "Lower" income group in more probability in an UOR of 2.1 (95% CI=[1.4, 3.2]).

Table 1: Sociodemographic results of respondents

Variables	Frequency	Percent
Age of mother (in years)		
15–24	108	26.00
25–34	230	55.40
35 and above	77	18.60
Marital status		
Single	5	1.20
Married	379	91.30
Separated	31	7.50
Place of residence		
Urban kebeles	178	42.90
Rural kebeles	237	57.10
Maternal education		
Cannot read and write	188	45.30
Primary (1–8)	121	29.20
Secondary and above	106	25.50
Employment status of mother's		
No employed (housewife)	287	69.20
Employee (GO, NGO, and private)	128	30.80
Educational status of the husband		
Not read and write	91	21.90
Primary (1–8)	192	46.30
Secondary and above	132	31.80
Employment status of the husband		
Not employed/housewife	211	50.80
Employed	204	49.20
Household monthly income		
0–1000 ETB	201	48.40
1001–3000 ETB	127	30.60
Above 3000 ETB	87	21.00
Distance between house and the health center		
<30 min	178	42.90
≥30 min	237	57.10
Visit of health extension workers after delivery at home		
No	161	38.80
Yes	254	61.20

Sample survey 2019

In relation to antenatal care, the mothers who visited health centers at least 1 time had more than 2 times more probability to practice breastfeeding compared to mothers who did not visit it (AOR=2.1, 95% CI=[1.1, 4.1], p<0.05). In turn, the history of ANC made mothers delivered in hospitals (AOR=2.6, 95% CI=[1.6, 4.3]) forced them more than 2 times more likely to practice breastfeeding compared to mothers who delivered in-homes. However, the mothers have not visited health centers at least a time to utilize postnatal health-care services in an UOR of 0.4 (95% CI=[0.24–0.6]) in the study area. Therefore, the poor practice of breastfeeding in the study area did not save any baseline variable, such as educational level, level of employment, and level of income. However, ages, place of residence, and place of delivery of mothers of children aged between 0 and 6 months have less likely affected to the poor practice of EBF.

DISCUSSION

Despite the fact that a plethora of literature tried to describe the factors that affecting EBF in different countries [5,10], a wide range of studies could not pay due attention to the determinant of maternal practices of EBF in Ethiopia. The major contribution of the present study lies in its attempt to show the prevalence of EBF practice and its association with sociodemographic factors.

The prevalence of good practice exclusive breastfeeding was only 67% which was greater than Ethiopian Demographic and Health Survey report, 2016 (58%). Much more this prevalence was less than a study conducted at Ambo Woreda 71.2% [13] and a study conducted at Arba Minch town (82.2%) [14].

Good practice of mothers in the study area was significantly associated with place of residence, monthly income of the household, visit of

Table 2: Maternal practice about EBF

Related questions with EBF practice	Alternative answers		Frequency	Percent
When did you start initiation of breastfeeding?	Immediately within 1 h after delivery		325	78.30
	Within 2–10 h		52	12.50
	After 1 day		38	9.20
Currently do you breastfeed for the infant?	No		16	3.90
	Yes		399	96.10
Do you give EBF for the infant currently?	No		181	43.60
	Yes		234	**56.40**
Frequency of breastfeeding/day	1–3 times/day		51	12.30
	4–7 times/day		159	38.30
	8 and above times/day		205	49.40
Duration of breastfeeding in once breastfeed	1–5 min/1 breastfed		156	37.60
	6–10 min/1 time breastfed		134	32.30
	More than 10 min/one breastfed		125	30.10
Did you give colostrum feeding for the infant?	No		200	48.20
	Yes		215	51.80
What types of food do you give for infant addition to BF under 6 month?	Butter and BF	No	175	85.80
		Yes	59	25.20
	Clean water and BF	No	64	59.00
		Yes	170	72.65
	Bottle feed and BF	No	155	81.00
		Yes	79	33.76
	Other liquids and BF	No	228	98.60
		Yes	6	2.56

Sample survey 2019, EBF: Exclusive breastfeeding

Table 3: Association between sociodemographic variable and maternal practice towards EBF at Finote Selam town, Northwest Ethiopia (n=415)

Variables	Maternal practice on EBF		COR	AOR
	Poor	Good		
	f (%)	f (%)		
Mothers age				
15–24	38 (35.2)	70 (64.8)	1	
25–34	66 (28.7)	164 (71.3)	1.4 (0.8–2.2)	
>or=35	33 (42.9)	44 (57.1)	0.7 (0.4–1.3)	
Place of residence				
Urban	36 (20.2)	142 (79.8)	2.9 (1.9–4.6)**	2.8 (1.6–4.6)**
Rural	101 (42.6)	136 (57.4)	1	1
Educational level of mothers				
Cannot read and write	72 (38.3)	116 (61.7)	1	1
Primary (1–8)	44 (36.4)	77 (63.6)	1.1 (0.7–1.7)	0.8 (0.5–1.3)
Secondary and above	21 (19.8)	85 (80.2)	2.5 (1.4–4.4)**	1.1 (0.5–2.1)
Employment status of the mother				
No employed	98 (34.1)	189 (65.9)	1	
Employed	39 (30.5)	89 (69.5)	1.2 (0.8–1.9)	
Income status of the family/month				
<1000 ETB	83 (41.3)	118 (58.7)	1	1
>or=1000 ETB	54 (25.2)	160 (74.8)	2.1 (1.4–3.2)**	1.6 (1.1–2.5)*
Place of delivery				
Hospital	94 (28.4)	237 (71.6)	2.6 (1.6–4.3)	
Home	43 (51.2)	41 (48.8)	1	
Distance from health center				
<30 min	39 (21.9)	139 (78.1)	2.5 (1.6–3.9)**	2.1 (0.9–3.4)
≥30 min	98 (41.4)	139 (58.6)	1	1
History of ANC				
No visit of ANC	33 (60.0)	22 (40.0)	1	1
At least one visit	104 (28.9)	256 (71.1)	3.7 (2.1–6.6)**	2.1 (1.1–4.1)*
History of PNC				
No visit of PNC	64 (48.9)	67 (51.1)	1	1
At least one visit	73 (25.7)	211 (74.3)	0.4 (0.235–0.6)**	2.3 (1.4–3.9)**
Visit of HEWs				
No	63 (39.1)	98 (60.9)	1	1
Yes	74 (29.1)	180 (70.9)	0.6 (0.4–0.9)*	1.2 (0.7–1.9)

Significant value at *p<0.05, **p<0.01

antenatal care, and postnatal care services. Mothers who were urban residents had nearly 3 times more likely to had good practice than mothers who lived in the rural site (AOR=2.8, 95%CI: 1.6–4.6, <=0.001). However, this finding was inconsistent with the study in Saudi Arabia as practice mothers from rural areas were 4.54 times higher than urban resident mothers [15]. This dissimilarity might be due to urban resident mothers were had an opportunity to had good knowledge and positive attitude toward EBF and this knowledge and attitude had also tend to good practice.

The poor practice of exclusive breastfeeding was high among mothers' monthly household income <1000 (ETB) than mothers' monthly household income of 1000 (ETB) or above (AOR=1.6, 95%CI: 1.1–2.5, p<0.05). This finding was also consistent with a study at Harar, Ethiopia [16], and a study conducted at Bahir Dar city [17]. The fact that household income can motivate mothers to go to health centers for obtaining knowledge on maternal and infant health protection and feeding procedure on what to and how to feed the infants.

Mothers visited antenatal care and postnatal care services were 2 times more likely had good practice of exclusive breastfeeding than those who did not visit antenatal and postnatal care services (AOR=2.1, 95%CI: 1.1–4.1, p<0.05 and AOR=2.3, 95%CI: 1.4–3.9, p<=0.001), respectively. This finding was much consistent with a study done in Addis Ababa [18] and study conducted at Bahir Dar city [6], indicated as mothers who received antenatal and postnatal counseling about breastfeeding were 2 times more likely to exclusively breastfeed compared to those who did not have visited antenatal care services and postnatal care services.

CONCLUSION AND RECOMMENDATION

The present study examined the determinant factors of exclusive breastfeeding practice among mothers with children 0–6 months in Finote Selam town, Northwest Ethiopia. The results showed that the prevalence of exclusive breastfeeding practice in the study area was 67%. Whereas, good practice of mothers in the study area was significantly associated with place of residence, monthly income of the household, visit of antenatal care, and postnatal care services.

Therefore, the study would allow policymakers, regional, zonal, and district health offices, medical sociologists, and health extension practitioners to develop more effective all-rounded interventions to minimize the poor practice of EBF.

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