Exclusive Breastfeeding Practice And Associated Factors Among Employed And Unemployed Mothers In Ethiopia: Comparative Cross Sectional Study Using EDHS 2016

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Research article

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**EXCLUSIVE BREASTFEEDING PRACTICE AND ASSOCIATED
FACTORS AMONG EMPLOYED AND UNEMPLOYED MOTHERS IN
ETHIOPIA:**

COMPARATIVE CROSS SECTIONAL STUDY USING EDHS 2016

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ABSTRACT

Introduction: Contrary to the recommendation, children under the age of 6 months be
exclusively breastfed, many infants are also fed with other liquids such as water, non-milk
liquids, and other milks before 6 months. Because of level of education and proportion of
employed women in Ethiopia has been increasing gradually. Consequently the practice of
exclusive breastfeeding became very lower.

The main objective of this study was to assess the magnitude and factors associated with the
practice of exclusive breastfeeding among employed and unemployed mothers in Ethiopia, using
dataset from EDHS 2016.

METHOD: Data was extracted from Ethiopia Demographic and Health Survey (EDHS-2016).

A total of 1089 mothers with infants aged 0 to 6 months in the data set were included in the analysis. Descriptive analysis, chi-square and binary logistic regression models were used.

RESULT: This study has demonstrated a 64.7%, 95%CI(58.9-70.5) and 75.4%, 95%CI(72.3-78.2) prevalence of EBF practices among employed and unemployed mothers respectively in the 24h preceding the survey. Other factors associated with EBF practice included being unemployed mother, larger to normal birth weight; infant aged 0-3 month old, infant being male, have radio in the house, infant being wanted, delivery by non CS mode and presence of ANC follow up during pregnancy were found to be significantly associated with exclusive breastfeeding practice.

Conclusion: the prevalence of exclusive breast feeding practice among employed mothers was significantly lower than that of unemployed mothers. Thus, Having in consideration the impact of appropriate infant and young children feeding practice on children's nutritional status and mortality rate, policy makers still need to give more emphasis on promotion of exclusive breastfeeding through creating an enabling environment targeting the extension of postnatal maternity leave up to the first six month.

Key words: Exclusive breastfeeding, maternal employment, EDHS, Ethiopia.

INTRODUCTION: World health organization(WHO) recommended that babies should be exclusively breastfed from birth until 6 months of age and thereafter continue breastfeeding with appropriate and sufficient complementary food(1). Breastfeeding is among the most effective ways to protect maternal and child health and promote healthy growth and optimal development in early childhood. Empowering and enabling women to breastfeed should be at the heart of countries' efforts to keep every child alive and to build healthy, smart and productive societies(2).

In spite of what is known about the WHO recommendation and benefits of exclusive breast feeding for children, mothers, families and society, practice of exclusive breastfeeding is unsatisfactory in many parts of the world. Globally, rates of breastfeeding are far lower than it is expected. Less than half of newborns begin breastfeeding in the first hour after birth. Nearly 40% of infants less than 6 months of age are exclusively breastfed, which is far from the target of Sustainable Development Goal 2030 agenda(70%)(3). The prevalence of exclusive breast feeding (EBF) is low in lower and middle income country (LMIC). It was 37% in 2016. The overall prevalence of EBF in sub Saharan Africa (SSA) was 36.0%, the prevalence was highest

in Rwanda and lowest in Gabon(4). According to maternal and child survival program (MCSP) Ethiopia ranked first by prevalence of early introduction of foods and liquids among Low- and Middle-Income Countries(5). In Ethiopian Contrary to the recommendation, children under the age of 6 months be exclusively breastfed, many infants are also fed with other liquids such as water, non-milk liquids, and other milks before reaching age 6 months. In this report, 11% of infants begin complementary foods before 6 months of age, with more than one-fifth of children consuming complementary foods by age 4-5 months(6). This inappropriate breastfeeding practices during infancy, and childhood expose them to malnutrition. The malnutrition contributes as underlying factor for the two top fatal diseases(diarrhea and pneumonia) among infant and children(7).

Different studies indicated that the low prevalence of EBF practice in most developing countries including Ethiopia is associated with many factors such as: socio-demographic, obstetric, health service and employment related factors (6, 8-10). Returning to work after giving birth is a major change for a woman and in her family's life. Returning to work while still breastfeeding is even more of a challenge and it is one of the main reasons that women stop breastfeeding(11). Studies in Ethiopia indicate that significant difference (10-30%) was observed between employed and unemployed mothers on practice of exclusive breastfeeding and the improvement on EBF is low(12)(13) (14, 15).

But there is limited studies that determine magnitude and factors associated with exclusive breast feeding among employed and non-employed mothers even all of these studies are constrained to town/community within one zone or districts. In this regard, there is a need to study this issue among the employed and unemployed mothers at national level to come up with strong evidence on the difference of their practice and to investigate and identify factors associated with EBF. Findings from this study help child bearing mothers and their child by improving exclusive breastfeeding and enable policy makers, stakeholders and public health researchers to develop interventions to improve exclusive breastfeeding in the country.

METHODOLOGY

Data source

This study used dataset from the EDHS 2016. The survey was conducted by the central Statistical Agency (CSA) along with the Federal Ministry of Health (FMoH) and the Ethiopian Public Health Institute (EPHI) from January 18, 2016 to June 27, 2016.

Study design

The current study design was a comparative cross-sectional study using the dataset. Practice and factors affecting the practice of EBF were compared between employed and unemployed mothers who have infants 6 month or less in the dataset.

Participants of current study

In EDHS 2016, 8 different datasets were used to categorize data. For current study data was extracted from kid's dataset. Women 15-49 years old with children six months or less old in the dataset were considered as the respondent.

Figure 2: Selection of Study Sample

Exclusion and inclusion criteria

Mothers with children aged six months or less in the dataset were included as the study population. Children who did not live with their mother, those children's who had incomplete information about last 24 hour feeding practice, children whose mothers occupational status was incomplete in the dataset, and mothers who were working in private business such as merchant and agricultural work were excluded from the study.

Data extraction

Data was extracted from kids' dataset in the EDHS 2016 using data extraction sheet. Data extraction sheet contained socio-demographic characteristics, household characteristics, infant characteristics, obstetric and health service related characteristics and exclusive breast feeding practice.

Variables of Interest

Dependant variable: practice of exclusive breastfeeding.

Independent Variables: Selection and categorization of independent variables in this study was based on literature review and availability of the variables. Socio-demographic characteristics of the mother and father, household characteristics, infant characteristics, obstetric and health service related characteristics (9, 16-19).

The operational definition

Exclusive breastfeeding: EBF was defined as feeding only breast milk (including milk expressed or from a wet nurse) without anything else in the last 24h preceding the interview except for ORS, drops, and syrups (vitamins, minerals, medicines) for therapeutic purposes(20)

Employed mothers: Mothers who were working full time in either governmental organization or NGOs by the time of data collection were considered as employed mothers(21).

Unemployed mothers: mothers who were housewives (without a job) were considered as unemployed in this study (21).

Data analysis

First dataset was downloaded from DHS center after registration and permission obtained. Then the analysis was performed on the basis of children whose age is six months or less; alive and living with their mother at the dataset that was extracted from the kid's recode dataset. To estimate the magnitude of exclusive breastfeeding practice, the proportion of women (with infants aged between 0 and 6 months) who stated to have fed their children only breast milk in the last 24-hours preceding the survey in the dataset, were expressed as an EBF percentage of the total number of children in the age group of 0-6 month. The other independent variables applicable to this study in the dataset were transformed and recoded in to category if important. Descriptive analysis was carried out to examine the distribution of each individual variable. Then, chi-square test was done to compare the distribution of independent variables between employed and unemployed mothers with p-value 0.05. Bivariate analysis was carried out to describe association between pairs of variables. Finally, factors which were significant for bivariate association were observed with p-value 0.25 and retained for subsequent multivariate analyses using logistic regressions to control for possible confounders. Odds ratios were used to

measure the strength of the association between dependent and independent variables. 95%CI and p-value was used to determine the significance of the associations. Data analysis was done using the SPSS (version 23). Findings was presented by use of frequency distribution, tables, charts and texts.

Ethics

Permission to use and analyze the dataset was obtained by registering on the Demographic and Health Survey (DHS) website.

Dissemination of Finding

The finding of this study was presented and submitted to Arba minch University health Science College and public health department. Attempt will be made to Disseminate and present the findings to the FMOH, different organizations that will have a contribution to improve the status of EBF in the Ethiopia. Various seminars and workshops, different journals and DHS center.

RESULT

Socio-Demographic Characteristics

The mean (SD) age of employed and unemployed mothers was 28(6.1) and 27(6.4) years respectively. Regarding to the educational status of mother, about 66(27.4%) of employed and 418(49.3%) of unemployed mothers were illiterate. More than half of employed 140(58.1%) and majority (82.8%) of unemployed mothers were residing in rural area. About forty one percent of employed and 61.7% unemployed participants were Muslim followed by orthodox. Among employed mothers nearly half (49.4%) of their children were in the age group 0-3 months, while among unemployed mothers four hundred seventy one (55.5%) of children were in the age group 0-3 months. Regarding to house hold wealth index, 52(21.6%) of employed mothers and 359(42.3%) of unemployed mothers were from poorest family. Among employed mothers about 45(18.7%) of mothers had three or more under five children while among unemployed mothers 233(27.5%) had such much children. One hundred sixteen (48.1%) of employed mothers perceived their child average in size during birth but it was 333(39.3%) among unemployed mothers. About 68(28.2%) of employed mothers had TV in their house but only 112(13.2%) of unemployed mothers had TV in their house

Table 1: Socio-demographic characteristics in Ethiopia, 2016

Variables	Category	Employed N=241(22%)	Unemployed N= 848(78%)	Total N=1089(100%)	X ² value	P value
women's age in year	15-19	18(7.5%)	85(10%)	103(9.5%)	9.4	0.093
	20-24	56(23.2%)	246(29.0%)	302(27.7%)		
	25-29	80(33.2%)	229(27.0%)	309(28.4%)		
	30-34	53 (22%)	145(17.1%)	198(18.2%)		
	35-39	27(11.2%)	113(13.3%)	140(12.9%)		
	40-49	7(2.9%)	30(3.5%)	37(3.4%)		
husband/partner 's age	<20	4(1.7%)	21(2.5%)	25(2.3%)	3.1	0.377
	21-40	197(81.7%)	660(77.8%)	857(78.7%)		
	41-60	33(13.7%)	149(17.6%)	182(16.7%)		
	>60	7(2.9%)	18(2.1%)	25(2.3%)		
educational status of the father or husband	Illiterate	93(38.6%)	532(62.7%)	625(57.4%)	73.3	<0.001
	Primary	79(32.8%)	229(27.0%)	308(28.3%)		
	Secondary	43(17.8%)	69(8.1%)	112(10.3%)		
	Higher	26(10.8%)	18(2.1%)	44(4.0%)		
educational status of the mother	No education	66(27.4%)	418(49.3%)	484(44.4%)	50.8	<0.001
	Primary	92(38.2%)	273(32.2%)	365(33.5%)		
	Secondary	39(16.2%)	98(11.6)	137(12.6%)		
	Higher	44(18.3%)	59(7%)	103(9.5%)		

173 **Table 1 continued.....**

Variables	Category	Employed N=241(22%)	Unemployed N=848(78%)	Total N=1089(100%)	X ² value	P value
current marital status of mother	Married	225(93.4%)	812(95.8%)	1037(95.2%)	2.4	0.124
	Others	16(6.6%)	36(4.2%)	52(4.8%)		
Type of place of residence	Urban	101(41.9%)	146(17.2%)	247(22.7%)	65.2	<0.001
	Rural	140(58.1%)	702(82.8%)	842(77.3%)		
Parental Religion	Orthodox	93(38.6)	168(19.8%)	261(24%)	42.8	<0.001
	Muslim	98(40.7%)	524(61.8%)	622(57.1%)		

	Other	50(20.7%)	156(18.4%)	206(18.9%)		
Preceding birth interval in (months)	<12	31(12.9%)	94(11.1%)	125(11.5%)	6.1	0.109
	13-24	36(14.9%)	154(18.2%)	190(17.4%)		
	25-60	131(54.4%)	494(58.3%)	625(57.4%)		
	≥61	43(17.8%)	106(12.5%)	149(13.7%)		
sex of child	Male	113(46.9%)	433(51.1%)	546(50.1%)	1.3	0.253
	Female	128(53.1%)	415(48.9%)	543(49.9%)		
current age of child in months	0-3	119(49.4%)	471(55.5%)	590(54.2%)	2.9	0.090
	4-6	122(50.6%)	377(44.5%)	499(45.8%)		
Number of household members	1-3	24(10.0%)	120(14.2%)	144(13.2%)	5.6	0.131
	4-6	133(55.2%)	405(47.8%)	538(49.4%)		
	7-9	72(29.9%)	266(31.4%)	338(31.0%)		
	≥10	12(5.0%)	57(6.7%)	69(6.3%)		
Under 5 children in household	1	96(39.8%)	278(32.8%)	374(34.3%)	8.6	0.014
	2	100(41.5%)	337(39.8%)	437(40.1%)		
	≥3	45(18.7%)	233(27.5%)	278(25.5%)		
Sex of household Head	Male	187(77.6%)	671(79.1%)	858(78.8%)	0.3	0.605
	Female	54(22.4%)	177(20.9%)	231(21.2%)		

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177 *Table 1 continued.....*

Variables	Category	Employed N=241(22%)	Unemployed N=848(78%)	Total N=1089(100%)	X ² value	P value
House hold wealth index	Poorest	52(21.6%)	359(42.3%)	411(37.7%)	83.3	<0.001
	Poorer	26(10.8%)	131(15.5%)	157(14.4%)		
	Middle	29(12.0%)	100(11.8%)	129(11.8%)		
	Richer	25(10.4%)	106(12.5%)	131(12.0%)		
	Richest	109(45.2%)	152(17.9%)	261(24.0%)		
Birth weight of infant	LBW(<2.5)	48(19.9%)	207(24.4%)	255(23.4%)	2.9	0.240
	NBW(2.5-4)	173(71.8%)	560(66%)	733(67.3%)		

Perceived Size of child at Birth	HBW(>4)	20(8.3%)	81(9.6%)	101(9.3%)		
	Very large	39(16.2%)	113(13.3%)	152(14.0%)	12.0	0.017
	Larger than average	21(8.7%)	114(13.4%)	135(12.4)		
	Average	116(48.1%)	333(39.3%)	449(41.2%)		
	Smaller than average	26(10.8%)	94(11.1%)	120(11.0%)		
	Very small	39(16.2%)	194(22.9%)	233(21.4%)		
Household has: TV	No	173(71.8%)	736(86.8%)	909(83.5%)	30.6	<0.001
	Yes	68(28.2%)	112(13.2%)	180(16.5%)		
Household has: radio	No	150(62.2%)	637(75.1%)	787(72.3%)	15.5	<0.001
	Yes	91(37.8%)	211(24.9%)	302(27.7%)		
Birth order of infant	1	61(25.3%)	193(22.8%)	254(23.3%)	3.0	0.229
	2-5	135(56.0)	453(53.4%)	588(54.0%)		
	>5	45(18.7)	202(23.8%)	247(22.7%)		

Prevalence of exclusive breastfeeding practice

The prevalence exclusive breast feeding practice among employed 156(64.7%), 95%CI (58.9-70.5) mothers was lower than that of unemployed mothers 639(75.4%), 95%CI (72.3-78.2) (P-Value =0.001). The percentage of employed mother (77.6) who initiated breast feeding within one hour after birth was higher than that of unemployed mother (70.2) (p = 0.049).

Table 2: prevalence of practice of exclusive breast feeding practice in Ethiopia, 2016

Variables	Category	Employed N=241(22%)	Unemployed N=848(78%)	Total N=1089(100%)	X ² value	P value
When child put to breast	Within first hour	187(77.6%)	595(70.2%)	782(71.8%)	6.0	0.049
1st time after birth	after Hours	37(15.4%)	188(22.2%)	225(20.7%)		
	after Days	17(7.1%)	65(7.7%)	82(7.5%)		
EBF	Yes	156(64.7%)	639(75.4%)	795(73%)	10.8	0.001

PRACTICE for last 24hrs	No	85(35.3%)	209(24.6%)	294(27%)	
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Obstetric and health service related factors

About 143(59.3%) of employed and more than three fourth of unemployed 652(76.8%) mothers were not informed about breastfeeding by health provider during their pregnancy or postnatal care. About 196(81.3%) of the employed and 533(62.8%) unemployed mothers have ANC visit by health professional in their last pregnancy. The proportion of employed mothers 145(60.2%) who give birth of their index child in health facility was higher than that of unemployed mothers 312(36.8%). About 30(3.5%) of unemployed mothers give birth of their last child by caesarean section while it was 16(6.6%) among employed mothers. The percentage of employed mothers 28(11.6%) who have postnatal care within 2 months of their birth was higher than that of unemployed mothers 51(4.8%).

Table 3: Obstetric and health service related factors by employment status in Ethiopia, 2016

Variables	Category	Employed N=241(22%)	Unemployed N=848(78%)	Total N=1089(100%)	X ² value	P value
Wanted last Child	Wanted then	189(78.4%)	714(84.2%)	903(82.9%)	5.3	0.072
	Wanted later	36(14.9%)	101(11.9%)	137(12.6%)		
	Wanted no more	16(6.6%)	33(3.9%)	49(4.5%)		
ANC by health Professional	No	45(18.7%)	315(37.2%)	360(33.1%)	28.9	<0.001
	Yes	196(81.3%)	533(62.8%)	729(66.9%)		
Place of Delivery	Home	96(39.8)	536(63.2%)	632(58.0%)	42.1	<0.001
	Health facility	145(60.2%)	312(36.8%)	457(42.0%)		

Health provider counsel on BF	No	143(59.3%)	652(76.8%)	795(73.0%)	29.3	<0.001
	Yes	98(40.7%)	196(23.2%)	294(27.0%)		
Last birth caesarean Section	No	225(93.4%)	818(96.5%)	1043(95.8%)	4.5	0.035
	Yes	16(6.6%)	30(3.5%)	46(4.2%)		
Timing of 1st antenatal check	0-4 month	140(58.1%)	312(36.8%)	452(41.5%)	40.5	<0.001
	5-6 month	46(19.1%)	171(20.2%)	217(19.9%)		
	7-9 month	55(22.8%)	365(43.0%)	420(38.6%)		

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Variables	Category	Employed N=241(22%)	Unemployed N=848(78%)	Total N=1089(100%)	X ² value	P value
Number of ANC during pregnancy	No ANC	45(18.7%)	308(36.4%)	353(32.4%)	31.5	<0.001
	1-2	38(15.8%)	139(16.4)	177(16.3%)		
	3-4	87(36.1%)	240(28.3%)	327(30.0%)		
	≥5	71(29.5%)	161(18.9%)	232(21.3%)		
Respondent's health checked after discharge	No	222(92.1%)	806(95.0%)	1028(94.4%)	3.0	0.081
	Yes	19(7.9%)	42(5.0%)	61(5.6%)		
postnatal check	No	213(88.4)	797(95.2%)	1010(92.7%)	8.7	0.003
	Yes	28(11.6)	51(4.8%)	79(7.3%)		

within 2
months

Work related factors

From the total mother-infant pairs, 241(22%) mothers were employed and 848(78%) were unemployed.

Figure 3: Percentage of employment status of mothers

Factors associated with exclusive breast feeding practice.

Variables that were significant in the bivariate analysis at p value 0.25 were retained for subsequent multivariate analysis. After controlling for other variables, being unemployed mother, being child wanted, younger age of infant, non CS mode of delivery, larger birth weight, presence of media access, infant being male and mothers had ANC follow up during pregnancy were significantly associated with EBF practice in the multivariate logistic regression model for the overall study participants. Among all, those mothers who were unemployed were 1.7 times more likely to practice EBF when compared to those of employed mothers (AOR=1.67, 95%CI: 1.17-2.40). Mothers whose infants were larger to normal birth weight were 61% less likely to practice EBF compared to those of low birth weight [AOR= 0.39, 95%CI: 0.21-0.72]; Regarding to age of infants, mothers whose infant was 0-3 month old were 4.3 (AOR=4.27, 95%CI: 3.14-5.81) times more likely to practice exclusive breast feeding than mothers whose child was 4-6 month old. Mothers whose child was male in their sex were 29% less likely to practice EBF than

219 their counter parts (AOR= 0.71, 95%CI: 0.53-0.96). Mothers who wanted their last pregnancy
 220 later were 2.3 times more likely to practice EBF than mothers who never wanted their pregnancy
 221 (AOR= 2.29, 95%CI: 1.05-5.01). Mothers who give birth of their last child by non CS mode of
 222 delivery were 2.2 times more likely to practice EBF than their counter parts (AOR= 2.22, 95%CI:
 223 1.09-4.55). Mothers who have ANC follow up during their last pregnancy were 1.5 times more
 224 likely to practice EBF than mothers who have no ANC follow up (AOR= 1.52, 95%CI: 1.06-
 225 2.18). Those Mothers who have radio in their house were 1.5 times more likely to practice EBF
 226 when compared with their counter parts (AOR= 1.53, 95%CI: 1.07-2.21).

227 **Table 4: Multivariate logistic regression of factors associated with practice of exclusive**
 228 **breastfeeding among employed and unemployed mothers in Ethiopia, 2016**

Variables	Category	Exclusive breastfeeding practice		COR(95%CI)	AOR(95%CI)	P value
		Yes	No			
Occupational status of mother	Unemployed	639	209	1.67(1.23-2.26)**	1.67(1.17-2.40)	0.005*
	Employed	156	85	1	1	
Birth weight in Kilograms	LBW(<2.5)	199	56	1	1	0.011
	NBW(2.5-4)	535	198	0.76(0.54-1.07)	0.74(0.49-1.13)	0.166
	HBW(>4)	61	40	0.43(0.26-0.71)*	0.39(0.21-0.72)	0.003*
Perceived Size of child at birth	Very large	106	46	0.65(0.41-1.03)	1.20(0.68-2.11)	0.529
	Larger than average	95	40	0.67(0.41-1.08)	1.60(0.59-1.90)	0.847
	Average	330	119	0.78(0.53-1.13)	1.01(0.64-1.60)	0.960
	Smaller than average	82	38	0.61(0.37-0.99)*	0.66(0.38-1.16)	0.149
	Very small	182	51	1	1	0.416
Current age of child in	0-3	506	84	4.38(3.27-5.86)**	4.27(3.14-5.81)	<0.001**
	4-6	289	210	1	1	<0.001

months						
Type of place	Urban	166	81	1	1	
of residence	Rural	629	213	1.44(1.06, 1.96)*	1.45(0.80-2.62)	0.223
Wanted last	Wanted then	663	240	2.07(1.16-3.72)*	1.81(0.92-3.56)	0.085
Child	Wanted later	104	33	2.36(1.19-4.70)*	2.29(1.05-5.01)	0.038*
	Wanted no more	28	21	1	1	0.115

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230 **Table 4: continued.....**

Variables	Category	Exclusive breastfeeding practice		COR(95%CI)	AOR(95%CI)	P value
		Yes	No			
Last birth	No	772	271	2.85(2.48-3.27)*	2.22(1.09-4.55)	0.029*
caesarean	Yes	23	23	1	1	
Section						
When child	Immediately	579	203	1.83((1.14-2.93)*	1.42(0.83-2.41)	0.198
put to breast	after Hours	166	59	1.80(1.06-3.07)*	1.40(0.76-2.57)	0.285
	after Days	50	32	1	1	0.433
Sex of child	Male	382	164	0.73(0.56-0.96)*	0.71(0.53-0.96)	0.028*
	Female	413	130	1	1	
Had ANC	No	253	107	1	1	
follow up	Yes	542	187	1.23(0.93, 1.62)	1.52(1.06-2.18)	0.022*
Educational	No	371	113	1.69(1.07-2.67)*	1.57(0.87-2.84)	0.137
status of the	education					
mother	Primary	256	109	1.21(0.76-1.93)	0.99(0.57-1.73)	0.968
	Secondary	100	37	1.39(0.80-2.42)	1.23(0.66-2.31)	0.516
	Higher	68	35	1	1	0.093
Preceding	<12	86	39	1	1	0.062
birth interval	13-24	136	54	1.14(0.70, 1.87)	0.98(0.54-1.77)	0.945
in (months)	25-60	457	168	1.23(0.81, 1.87)	0.98(0.59-1.64)	0.941

Wealth index	61+	116	33	1.59(0.93, 2.74)	1.88(0.99-3.59)	0.054
	Poorest	304	107	1.23(0.87-1.74)	0.69(0.34-1.42)	0.314
	Poorer	120	37	1.41(0.90-2.22)	0.78(0.36-1.70)	0.528
	Middle	93	36	1.12(0.70-1.79)	0.64(0.29-1.40)	0.259
	Richer	96	35	1.19(0.75-1.90)	0.52(0.25-1.10)	0.087
	Richest	182	79	1	1	0.465

Table 4: continued.....

Variables	Category	Exclusive breastfeeding practice		COR(95%CI)	AOR(95%CI)	P value
		Yes	No			
Husband/partner's age	<20	16	9	1	1	0.117
	21-40	640	217	1.66(0.72, 3.81)	1.87(0.75-4.69)	0.181
	41-60	123	59	1.17(0.49,2.81)	1.22(0.46-3.23)	0.695
	>60	16	9	1.00(0.32, 3.17)	1.41(0.39-5.10)	0.598
Household has: TV	No	673	236	1	1	
	Yes	122	58	0.74(0.52, 1.04)	0.67(0.37-1.24)	0.206
Household has: radio	No	563	224	1	1	
	Yes	232	70	1.32(0.97,1.80)	1.53(1.07-2.21)	0.022*
Baby Had postnatal check	No	744	266	1	1	
	Yes	51	28	0.65(0.40, 1.05)	0.67(0.38-1.18)	0.160
Hosmer and Lemeshow Test				Chi-square =2.856	P – value = 0.943	
*- Significance level of <0.05				**- Significance level of <0.001		

DISCUSSION

This study revealed that the prevalence of exclusive breastfeeding practice among employed and unemployed mothers was 64.7% and 75.4% respectively. These difference was statistical significant (P-Value =0.001). This result was higher for both employed and unemployed mothers as compared to the study conducted in Gondar among children aged 7–12 months found 20.9%

of employed and 48% of unemployed mothers breastfed their children for six months exclusively(13). It was in line for unemployed mothers but higher for employed mothers as compared to the study conducted in Goba district the prevalence of exclusive breastfeeding was 33% and 73% among employed and unemployed mothers respectively (15). In a similar trade, unemployed mothers were more likely to exclusively breastfeed their infants as compared to those of employed mothers. This indicates that maternal employment is a hindrance for EBF. In agreement with this, studies from Ethiopia, (22-24), Bangladesh(25), Mexico(26), and Canada(27) reported that maternal employment has a negative effect on EBF. Many reasons can be stated for this association. In accordance with the Ethiopia Labor Proclamation, female workers are entitled to fully paid maternity leave of 120 days (30 days antenatal and 90 days postnatal) on recommendation of medical doctor. Hence employed mothers will have a maximum of three months to stay at home and breastfed their infants which don't fit with the recommended six months of EBF. This short maternity leave period successively influences them to introduce complementary feeding starting from the time they return to work(28). Another study(29) reported that, each week of maternity leave increased the duration of breastfeeding by almost one-half week. Besides, since there is no breastfeeding friendly environment like facilities for breastfeeding at workplaces, employed mothers couldn't take their infants to the workplace and breastfeed there(30, 31). Therefore, the summative effect of the stated reasons above, would compromise the rate of EBF among employed mothers.

This study revealed that child's age had significant association with EBF practice. Mothers with younger infant had high tendency to practice EBF. This finding was consistent with the studies conducted in other parts of Ethiopia (16-18, 24), Brazil (32), Nigeria (33) and Congo (34). The first possible reason for this association could be the postpartum rest in the first few months after delivery that obligates women to stay at home. This, as a result may encourage them to breastfeed their infant. The other explanation may be due to the perception that some mothers have, that breast milk alone is not enough as the infant gets older.

On the other hand, mothers who wanted to give birth of their child later were more likely to practice EBF than who never wanted in the present study. This is due to the fact that mothers who gave birth of unwanted child were psychological not prepared to do what is expected from as a mother to her child. Prenatal exclusive breastfeeding intention was a strong predictor of

exclusive breastfeeding practice. Intentions to EBF were further affected by having an unplanned pregnancy (35, 36).

Birth weight of infant was negatively associated with EBF practice. The possible explanation for this was that most of the time microsomia children are delivered through cesarean section. Again the cesarean delivery further affects exclusive breast feeding practice. This finding is inconsistent with finding in Australia (37).

Mothers who give birth of their last child by non CS mode of delivery were found to practice EBF more likely than those who give birth of their last child by CS delivery. This is due to the fact that cesarean delivery affects exclusive breast feeding. This finding was in line with finding in Ethiopia (38) Bangladesh (25), and Palestine (39).

In present study mothers whose index child was male were less likely to practice EBF than their counter parts. This finding contradicts the finding in Egypt(40), and New York(41). The possible reason for this association was the cultural difference in different parts of Ethiopia that prefer sex in feeding.

In line with previous studies (17, 25), mothers who had radio in their house were more likely to practice EBF than their counter parts. This is due to that mothers who have media access to get information about EBF had more knowledge about EBF practice.

Consistent with earlier studies (18, 25, 40, 42) ANC follow up was an independent determinant affecting EBF practice. Mothers who had ANC follow up were more likely to practice excusive breast feeding than their counter parts. This could be due to the ANC programs that include breastfeeding counseling which in turn improves breastfeeding knowledge of mothers and motivates.

CONCLUSION AND RECOMMENDATION

In conclusion, the prevalence of EBF practices among employed mothers was lower than that of unemployed mothers, indicating a significant difference between the two groups. Hence, maternal employment has a negative influence on EBF practices.

In addition, being unemployed mother, presence of ANC follow up, younger age of infant, presence of media access like radio, non cesarean mode of delivery, large birth weight of child, being wanted child and child sex being male were also significantly associated with EBF practice.

297 Having in consideration the impact of appropriate infant and young children feeding practice on
298 children's nutritional status and mortality rate, policy makers still need to give more emphasis on
299 promotion of exclusive breastfeeding through creating an enabling environment targeting the
300 extension of postnatal maternity leave up to the first six month.

301 Government and non government organization should launch breastfeeding-friendly work
302 environment for working mothers by establishing work-site day care centers for infants in order
303 to promote of EBF.

304 Health personnel who are working in the clinics should advise mothers to have a spontaneous
305 vaginal delivery and should not insist on performing C/S delivery unless and otherwise
306 medically justified.

307 Awareness should be created in community or among mothers that breast milk alone is enough
308 for any nutritional requirements of infant for the first 6 months after birth.

309 Increasing media coverage regarding the awareness programs of exclusive breastfeeding should
310 be considered to improve EBF practice.

311 Maternal health clinics and health extension program should be strengthened throughout the
312 country so that more number of pregnant women and mothers can receive appropriate maternal
313 health service both at the community and institutional levels, such as, ANC follow up ,Family
314 planning.

315 **ABBREVIATIONS AND ACRONYMS**

316	ANC	Antenatal care
317	CSA	Central Statistical Agency
318	DHS	Demographic and Health Surveys
319	EA	enumeration areas
320	EBF	Exclusive Breast Feeding
321	EDHS	Ethiopia Demographic and Health Surveys
322	EPHI	Ethiopian Public Health Institute
323	FMoH	Federal Ministry of Health
324	LMIC	lower and middle income country

10. REFERENCES

1. ORGANIZATION WH. Global strategy for infant and young child feeding: the Optimal Duration of Exclusive Breastfeeding. . WORLD HEALTH ORGANIZATION. Geneva 2001.
2. UNICEF. Breastfeeding_A_Mothers_Gift_for_Every_Child. UNICEF FOR EVERY CHILD. 2018.
3. World health organization u. ENABLING WOMEN TO BREASTFEED THROUGH BETTER POLICIES AND PROGRAMMES: GLOBAL BREASTFEEDING SCORECARD, 2018. global breast feeding collective. 2018.
4. YALCIN SS, BERDE, A. S. & YALCIN, S. Determinants of Exclusive Breast Feeding in sub-Saharan Africa: A Multilevel Approach Paediatr Perinat Epidemiol. 2016;30:439-49.
5. USAID. Addressing Barriers to Exclusive Breastfeeding: Evidence and Program Considerations for Low- and Middle-Income Countries: MCSP Nutrition Brief. maternal and child survival program available at www.mcsp.org. 2017.
6. CSA Central Statistical Authority A.A E. Ethiopia Demographic and Health Survey ICF International, Calverton, Maryland, USA. 2016.
7. Tewodros Alemayehu JH, Dereje Habte. Determinants of exclusive breastfeeding practices in Ethiopia. EthiopJHealth Dev. 2009.
8. Abay Sefene DB WA, Tesfaye Taye. Determinants of Exclusive Breastfeeding Practice among Mothers of Children Age Less Than 6 Month in Bahir Dar City Administration, Northwest Ethiopia; A Community Based Cross Sectional Survey. Science Journal of Clinical Medicine 2013; 2, (No. 6, 2013,):153-9.
9. Yalcin SS, Berde AS, Yalcin S. Determinants of Exclusive Breast Feeding in sub-Saharan Africa: A Multilevel Approach. Paediatric and perinatal epidemiology. 2016;30(5):439-49.
10. Aluisio J D BJ, Sankar Simon, H Murch, Neff Walker. Breastfeeding in the 21st century: Epidemiology, mechanisms, and lifelong effect. lancet 2016.
11. WHO U. Maternity Protection Resource Package Breastfeeding arrangements at work. International Labour Organization. 2012.
12. Xiaodong Cai1 TW, David W Brown. Global trends in exclusive breastfeeding. International Breastfeeding Journal 2012.
13. Chekol DA, Biks GA, Gelaw YA, Melsew YA. Exclusive breastfeeding and mothers' employment status in Gondar town, Northwest Ethiopia: a comparative cross-sectional study. International breastfeeding journal. 2017;12(1):27.
14. Abdulbasit Musa Seid MEY, Digsu Negese Koye,. Prevalence of Exclusive Breastfeeding Practices and associated factors among mothers in Bahir Dar city, Northwest Ethiopia: a community based cross-sectional study International Breastfeeding Journal
available at: <http://www.internationalbreastfeedingjournal.com/content/8/1/14>. 2013.
15. Tesfaye Setegn TB, Mulusew Gerbaba, Kebede Deribe, Amare Deribew and Sibhatu Biadgilign. Factors associated with exclusive breastfeeding practices among mothers in Goba district, south east Ethiopia: a cross-sectional study. . International Breastfeeding Journal available at: <http://www.internationalbreastfeedingjournal.com/content/7/1/17> 2012.
16. Hoche S, Meshesha B, Wakgari N. Sub-Optimal Breastfeeding and Its Associated Factors in Rural Communities of Hula District, Southern Ethiopia: A Cross-Sectional Study. Ethiopian journal of health sciences. 2018;28(1):49-62.
17. Tamiru D, Belachew T, Loha E, Mohammed S. Sub-optimal breastfeeding of infants during the first six months and associated factors in rural communities of Jimma Arjo Woreda, Southwest Ethiopia. BMC public health. 2012;12:363.
18. Tariku A, Alemu K, Gizaw Z, Muchie KF, Derso T, Abebe SM, et al. Mothers' education and ANC visit improved exclusive breastfeeding in Dabat Health and Demographic Surveillance System Site, northwest Ethiopia. PloS one. 2017;12(6):e0179056.

19. Yeneabat T, Belachew T, Haile M. Determinants of cessation of exclusive breastfeeding in Ankesha Guagusa Woreda, Awi Zone, Northwest Ethiopia: a cross-sectional study. *BMC Pregnancy Childbirth*. 2014;14:262.
20. UNICEF. Infant and Young Child Feeding 2011.
21. Krapp KM WJ. The Gale Encyclopedia of Children's Health. Google Scholar. 2005.
22. Tadesse. Exclusive breastfeeding and maternal employment among mothers of infants from three to five months old in the Fafan zone, Somali regional state of Ethiopia: a comparative cross-sectional study *BMC public health*. 2019.
23. Chekol DA BG, Gelaw YA, Melsew YA. . Exclusive breastfeeding and mothers' employment status in Gondar town, Northwest Ethiopia: a comparative cross-sectional study. . *International breastfeeding journal*. 2017;12(1):27.
24. Yeneabat t, belachew, t. & haile, m Determinants of cessation of exclusive breastfeeding in Ankesha Guagusa Woreda, Awi Zone, Northwest Ethiopia: a cross-sectional study. *BMC pregnancy and childbirth*. 2014;14 262.
25. Hossain M, Islam A, Kamarul T, Hossain G. Exclusive breastfeeding practice during first six months of an infant's life in Bangladesh: a country based cross-sectional study. *BMC pediatrics*. 2018;18(1):93.
26. Letilcia escobra TGDC. Breastfeeding and Maternal Employment: Results from Three National Nutritional Surveys in Mexico. *Maternal and child health journal*. 2014
27. Al-Sahab B LA, Feldman M, Tamim H. Prevalence and predictors of 6-month exclusive breastfeeding among Canadian women: a national survey *BMC Pediatr* 2010;10:20.
28. FDRO. E. FEDERAL NEGARIT GAZETTE OF THE FEDERAL DEMOCRATIC REPUBLIC OF ETHIOPIA: Federal Civil Servants Proclamation NO.1064/2017. . 2017.
29. Ghwass MMA AD. Prevalence and predictors of 6-month exclusive breastfeeding in a rural area in Egypt. . *Breastfeed Med* 2011;;6(4):191–6.
30. Asfaw MM AM, Kefene ZK. Factors associated with exclusive breastfeeding practices in Debre Berhan District, Central Ethiopia: a cross sectional community based study. . *Int Breastfeed J* 2015;;10(1):1.
31. Radhakrishnan S BS. Prevalence of exclusive breastfeeding practices among rural women in Tamil Nadu. *International Journal of Health & Allied Sciences* 2012;1(2):64.
32. Ferreira H, Oliveira MF, Bernardo EBR, Almeida PC, Aquino PS, Pinheiro AKB. Factors Associated with Adherence to the Exclusive Breastfeeding. *Ciencia & saude coletiva*. 2018;23(3):683-90.
33. Gayawan E, Adebayo SB, Chitekwe S. Exclusive breastfeeding practice in Nigeria: a bayesian stepwise regression analysis. *Maternal and child health journal*. 2014;18(9):2148-57.
34. Dhakal S, Lee TH, Nam EW. Exclusive Breastfeeding Practice and Its Association among Mothers of under 5 Children in Kwango District, DR Congo. *International journal of environmental research and public health*. 2017;14(5).
35. Balogun OO, Kobayashi S, Anigo KM, Ota E, Asakura K, Sasaki S. Factors Influencing Exclusive Breastfeeding in Early Infancy: A Prospective Study in North Central Nigeria. *Maternal and child health journal*. 2016;20(2):363-75.
36. de Jager E, Broadbent J, Fuller-Tyszkiewicz M, Skouteris H. The role of psychosocial factors in exclusive breastfeeding to six months postpartum. *Midwifery*. 2014;30(6):657-66.
37. Biro MA, Sutherland GA, Yelland JS, Hardy P, Brown SJ. In-hospital formula supplementation of breastfed babies: a population-based survey. *Birth (Berkeley, Calif)*. 2011;38(4):302-10.

38. LaykewoldElyas A, AmhaAdmasie, andEtagegnehuAssefa. Exclusive Breastfeeding Practice and Associated Factors among Mothers Attending Private Pediatric and Child Clinics, Addis Ababa, Ethiopia: A Cross-Sectional Study. *International Journal of Pediatrics* 2017.
39. Musmar SG, Qanadeelu S. Breastfeeding patterns among Palestinian infants in the first 6 months in Nablus refugee camps: a cross-sectional study. *Journal of human lactation : official journal of International Lactation Consultant Association*. 2012;28(2):196-202.
40. Al Ghwass MM, Ahmed D. Prevalence and predictors of 6-month exclusive breastfeeding in a rural area in Egypt. *Breastfeeding medicine : the official journal of the Academy of Breastfeeding Medicine*. 2011;6(4):191-6.
41. Soni S, Gupta A, Jacobs AJ. Exclusive breastfeeding rates in a multiethnic population at a community hospital. *The Journal of reproductive medicine*. 2011;56(5-6):195-8.
42. Ogbo FA, Page A, Idoko J, Agho KE. Population attributable risk of key modifiable risk factors associated with non-exclusive breastfeeding in Nigeria. *BMC public health*. 2018;18(1):247.