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Knowledge, Attitude, and Practice Towards Exclusive Breastfeeding Among Lactating Mothers in Dinsho Woreda, Bale Zone, Oromia Region, South-East Ethiopia

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Abstract
Background: Exclusive breastfeeding (EBF) involves feeding infant's breast milk only for the first six months of life. It has numerous benefits, such as reducing the risk of infections and malnutrition, but it is still low in many parts of the world, including Ethiopia. Factors such as low maternal knowledge and awareness, inadequate support from healthcare providers, and lack of social support contribute to common EBF practices.**Objective:** To assess the knowledge, attitude, and practice of exclusive breastfeeding among mothers attending public health institutions in Dinsho Woreda, Bale Zone, Oromia Region, Southeast Ethiopia. **Methods:** A community-based cross-sectional study was conducted in Dinsho Woreda from February 01 to April 1, 2022, involving 411 nursing women aged up to two years old. Data were gathered using an interview-based questionnaire and a systematic random sampling technique. Statistical Package for Social Sciences software was used to analyze the data. **Results:** The study participants were 90.7 percent knowledgeable and had 348 (87.2 %) of our study participants were positive attitude towards EBF, but their practice was low; 222 (55.6%) of our contributors practiced EBF. **Conclusion:** The majority of mothers had good knowledge of exclusive breastfeeding, colostrum content, its advantages, and positive attitudes towards it. ANC follow-up, attitude towards EBF, and delivery at health facilities were independent predictors of exclusive breastfeeding practices. **Recommendation:** Health extension workers, health institutions, and the media must provide health education and support for working mothers to encourage exclusive breastfeeding.
Keywords: exclusive breast feeding, knowledge, attitude and practice.
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1. Introduction

1.1. Background

The term "exclusive breastfeeding" refers to "an infant's consumption of human milk with no supplementation of any kind (no water, no juice, no nonhuman milk, and no foods except vitamins, minerals, and medications until six months. Breastfeeding exclusively for 6 months benefits both the infant and the mother. It provides numerous advantages to both infants and mothers. It has a preventive effect against gastrointestinal illnesses, which has been reported in both poor and developed countries. The risk of death from diarrhea and other illnesses increases the incidence of gastrointestinal disorders in infants who are either partially or completely breastfed (World Health 2010).

According to previous studies, non-breastfed infants are nearly six times more likely to die from infectious diseases than breastfed infants during the first two months of life; between 2 and 3 months, non-breastfed infants are four times more likely to die than breastfed infants (World Health 2010; Chen, Lin et al. 2022). Infant and young child feeding practices have a direct impact on the nutritional status of children under the age of two, and thus, on child survival. Every year, more than 9 million children under the age of five die worldwide (Infant 2010). One in every 17 Ethiopian children dies before reaching the age of one, and one in every 11 children dies before reaching the age of two (Al-Binali 2012).

More than two-thirds of these deaths occur in the first year of life and are often caused by poor dietary habits. Optimal (exclusive and early) breastfeeding can save more than 800,000 lives (13% of all deaths) in developing countries. However, supplemental nutrition interventions alone could save nearly one child under five (Infant 2010; Al-Binali 2012).

In a literature review in the field of women's education in Abha, Saudi Arabia, only 32 (8.3%) of the participants reported EBF for 6 months (Babakazo, Donnen et al. 2015). Research shows that 369 (87.5%) babies were exclusively breastfed during their maternity stay in Kinshasa, Congo. Only 12 (2.8%) infants were exclusively breastfed at 6 months of age (Mbada, Olowookere et al. 2013). In a Nigerian poll, the majority (88.0%) of respondents said they had heard of breastfeeding, the source of information was the hospital, and more than 50% of women had a positive attitude towards breastfeeding (Shifraw, Worku et al. 2015)).

The Ethiopian context of Breastfeeding in Ethiopia is long-lasting, but breastfeeding in the first six months after birth is not widespread. Currently, mothers exclusively breastfeed around half of their babies under six

months (52%). Among the subgroups, the proportion of exclusively breastfed infants fell sharply from 70% of infants aged 0–1 month to 55% of infants aged 2–3 months and then to 32% of infants aged 4–5 months. In addition to breast milk, 19% of babies aged less than six months receive plain water only, 14% additional milk, and 4% non-dairy fluids and juices (Al-Binali 2012).

A study in Addis Ababa, Ethiopia reported that the prevalence of EBF in infants younger than six months was 29.3% (Tamiru and Mohammed 2013). A study in Arbaminch, Ethiopia, found that 55.6% of them exclusively breastfed their babies for 6 months. Three hundred and forty-one (89%) mothers received colostrum, although a small number of mothers viewed expired colostrum in their breast milk and discarded it (Kelechi 2015).

A study conducted in Bedele, Ethiopia, found that the majority of mothers, 91.8%, understand the importance of breastfeeding, and 87.3% have a good attitude and agree that exclusive breastfeeding is reserved for infants under six months.43 6% of moms breastfeed solely within the first six months after childbirth (Modjo and Amanta 2015).

A study in southern Ethiopia showed that 56.7% of HIV (immunodeficiency virus)-HIV-infected mothers were EBF-positive, and almost half (48.2%) of the mothers exclusively breastfed their children (Abera 2012). A study conducted in Harar, Ethiopia, reported an EBF of 51.8% (Dachew and Bifftu 2014). A study conducted in Gondar showed that the EBF rate among women surveyed was 35.9%. Almost 1/2 of the respondents (49.4%) had exclusively breastfed for three months or less (Asfaw, Argaw et al. 2015).

In an observation performed in Debre Birhan, Ethiopia, 68.6%) of the mothers practiced EBF for up to six months, 83.4% of the mothers knew the recommended duration of the EBF, and about 97.5% of the mothers had a positive attitude towards the implementation of the EBF EBP (Zenebu, Belayneh et al. 2015). In a study conducted in Ambo, Ethiopia, the incidence of EBF was between 82.2% and 90.8% in those who were aware (Tadele, Habta et al. 2016).

2. Methods

2.1 Study area and period

Dinsho Woreda is a Woreda in the Bale Zone of the Oromia Region, located 400 km from Addis Ababa and 32 km from Robe. It has a total population of 51,490 people, of which 25,430 are men and 26,260 are women. There are three health centers, 11 health posts, ten kebeles, and one rural town, with health coverage of 56 percent. Data were collected from February 01 to April 1, 2022.

2.2 Study design

An institution-based cross-sectional study design was used to collect quantitative data through face-to-face interviews with mothers attending the three health facilities.

2.3 Population

2.3.1 Source population

The source population of this study was lactating mothers with children up to two years old who lived in Dinsho Woreda.

2.3.2 Study population

The study population consisted of mothers who came to the three health facilities within the data collection period for any reason and who had a child less than two years old.

2.4 Sample Size Determination

The sample size for this study was calculated using the following formula for a single population proportion:
Assumptions: A 95% confidence level, margin of error (0.05), and national prevalence of exclusive breastfeeding (EDHS 2016) (p = 0.58) were substituted into the following single population formula:
N = (Zα/2)2*(P (1-P)/D2
Where N is the required sample size,
Z = standard transformation, α is the type 1 error value out of the 95% confidence interval,
P = prevalence of EBF (58% from the previous EDHS 2016 study),
D = margin of error
(1.96)2(0.58) (1-0.58)/ (0.05)2 = 374
A 10% non–response rate was added to make a sample of 374 + 37 (non-response rate); the total sample size will be 411 lactating mothers who will be included in the study.

2.5 Sampling Procedures/technique

The total sample size was proportionally distributed to the three health facilities based on the eligible population. Every mother identified in the facility was included in the study if she could provide consent and fulfill the criteria. Study participants were selected using a simple random sampling method.

Table 1: Proportional allocation of participants from three health facilities (Dinsho Health center, Horo Soba Health Center, and Homa Health Center)

Health institutions	Six month case flow	Average monthly case flow	Percentage of participant	Proportion of Study participant
Dinsho health canter	5658	943	943*100/2366 40%	943*411/2366 164
Horo Soba health canter	3024	504	504*100/2366 21%	504*411/2366 87
Homa health canter	5514	919	919*100/2366 39%	919*411/2366 160
Total	**14196**	**2366**	**100%**	**411**

Source: From the three health centers six months report from July 2013- Dec 2014 E.c

2.6 Data collection method and instrument

A structured interviewer administered questionnaire was adapted by the principal to collect data on socio-demographic, economic, duration of breast feeding, being counseled on infant feeding, and knowledge, attitude, and practice of exclusive breast feeding. One-day training was given to data collectors and supervisors on methodology and instruments.

2.7 Data quality control

The questionnaire was pre-tested on a 5% sample size of lactating mothers in Robe Town and translated to Afan Oromo and English by different people.

2.8 Data processing and analysis

The data was coded, entered, cleaned, and analyzed using SPSS version 20. Summary statistics of socio demographic variables were presented using frequency tables and graphs.

2.9 Ethical Consideration

Permission was obtained from Dinsho woreda municipality and verbal consent was obtained from respondents. Participants were informed that participation was voluntary and personal identifiers were not written.

3. Result

Of 411 lactating mothers who were eligible for the study, 12 (2.9%) refused to participate. Of the remaining 399 lactating mothers, 399 were included in the study, yielding a response rate of 97.1

3.1 Socio-demographic Characteristics

The majority of study participants were aged 20-30, 197 (12-24 months) were male, 282 (70.7%) were Muslims, 357 (89.5%) were Oromo ethnicity, and 144 (36.1%) had 500-1000 ETB monthly income. Most (272) got their income from their husbands (see table 2 below).

Table 2: Socio-demographic characteristics of lactating mothers on EBF

Variables		frequency	Percent
Age of study participants	< 20 year	37	9.3
	20 - 30 year	260	65.2
	31- 40 year	94	23.6
	41 - 50 year	8	2
Age of the child	< 6 month	91	22.8
	6 – 11 month	111	27.8
	12-24 months	197	49.4
Sex of the child	Male	203	50.9
	Female	196	49.1
Mothers religion	Orthodox	94	23.6
	Muslim	282	70.7
	Protestants	21	5.3
	Others	2	0.5
Ethnicity	Amhara	30	7.5
	Oromo	357	89.5
	Tigre	8	2
	other, Gurage, Woliyta	4	1
Monthly income	< 500	106	26.6
	500-1000	144	36.1
	1001-2000	77	19.3
	>	72	18
Source of their income	From employment	56	14
	From husband only	272	68.2
	Other trade, relatives, farming	71	17.8
Educational status	unable to read and write	63	15.8
	read and write	65	16.3
	grade 1-8	132	33.1
	grade 9-12	98	24.6
	Other	41	10.3
Marital status	Married	359	90.0
	Single	5	1.3
	Divorced	18	4.5
	Separated	16	4.0
	Widowed	1	.3

3.2 Level of knowledge of lactating mothers towards EBF

The most important details in this text are that 246 (61.7%) of the study participants knew what EBF meant, 275 (68.9%) of them knew the contents of breast milk, 234 (58.6%) of them said it contained colostrum, and 332 (83.2%) of them fed the first yellowish milk (colostrum) to their baby. Overall, 362 (90.7%) of the study participants had good knowledge of EBF, which is high according to operational definition, and 37 (9.3%) had poor knowledge see table 3 below).

Table 3: showing the level of knowledge of mothers towards EBF

Variables		frequency	Percent
Do you know what is EBF means	Yes	246	61.7
	No	153	38.3
Do you know the content of EBF	Yes	275	68.9
	No	124	31.1
Content of breast milk colostrum	Yes	234	58.6
	No	41	10.3
Content of breast milk water only	Yes	48	12
	No	227	56.9
Purpose of breast feeding after delivery for uterine contraction	Yes	277	69.4
	No	122	30.6
Purpose of breast feeding after delivery for stimulation of breast milk	Yes	295	73.9
	No	104	26.1
Colostrum should feed to the baby	Yes	332	83.2
	No	67	16.8
Duration of EBF	only one month	4	1
	1-3 month	57	14.3
	6 month	284	71.2
	> 6 month to 2 years	54	13.5

3.3 The attitude of lactating mothers towards Exclusive breast feeding

The majority of 377 (94.5%) of study participants believed exclusive breastfeeding (EBF) was important immediately after delivery, with 348 (87.2%) believing it was enough up to six months, and 352 (88.2%) believing it prevents disease like diarrhea. 47 (11.8%) did not.

Three hundred seven (87%) of the study participants said avoidance of bottle feeding up to six months is important. 336 (84.2%) said colostrum should be fed to the baby, while 63 (15.8%) were discarded. 92 (92%) said EBF is better than artificial feeding, while 32 (8%) said artificial feeding is better. 310 (77.7%) were not comfortable when giving extra food other than breast, while 89 (22.3%) gave extra food other than breast. 348 (87.2%) had positive attitude on EBF, while 51 (12.8%) had negative attitude (see table 4 below).

Table 4: showing the level of attitude of mothers towards EBF

Variables		**frequency**	**Percent**
Breast feeding important after delivery	Yes	377	94.5
	No	22	5.5
EBF is enough up to 6 months	Yes	348	87.2
	No	51	12.8
Mother milk prevent diseases	Yes	352	88.2
	No	47	11.8
Bottle feeding avoid up to 6 months	Yes	347	87
	No	52	13
Colostrum should be discarded	Yes	63	15.8
	No	336	84.2
EBF is better than artificial feeding	Yes	367	92
	No	32	8
How you feel giving extra food other than breast	Comfortable	89	22.3
	Did not comfortable	310	77.7

3.4 The Practice of Exclusive breast feeding among lactating mothers

The majority of study participants (79.4 %) were breastfeeding their child breast milk, with 266 (66.7 %) initiating it immediately after delivery, 110 (26.7 %) after one hour, and 23 (5.8 %) after two to three days. Pre-lacteal feeding provision was given by 112 (28.1 %), with 18 (4.5 %) giving tea, 43 (10.8 %) cow milk, and 55 (13.8 %) butter. 241 (60.4 %) were given the first breast milk after birth, while 158 (39.6 %) did not give. 177 (44.4 %) were frequently changing breasts, 169 (42.4 %) were change the breast when empty, and 53 (13.3 %) were feed one breast at a time.

The study found that 49.1% of participants fed their children EBF for 6 months, while 123 (30.8%) fed > than

six months, 77 (19.3%) fed for 1 to 3 months, and 3 (0.8%) fed for less than one month. 21 (5.3%) explained their reason for not EBF due to mother working outside the home, mental illness, painful breast, infant illness, and insufficient maternal milk. Study participants were advised by health care providers about breast feeding, with 249 (62.4%) advising on the advantages and 121 (30.3%) on the technique. Sources of information included health facility, mass media, relatives, and health extension workers (see table 5 below).

Table 5: showing the level of practice of mothers towards EBF

Variables		frequency	Percent
Do you feeding breast milk	Yes	317	79.4
	No	82	20.6
Give Prelacteal feeding	Yes	112	28.1
	No	287	71.9
What you give	Tea or water	90	22.5
	Liquid	132	33.1
	Butter	177	44.4
Do you feed first breast milk	Yes	241	60.4
	No	158	39.6
Duration of EBF	< 1 month	3	0.8
	1-3 months	77	19.3
	6 months	196	49.1
	> 6 months	123	30.8
Reason not breast feed	Infant illness	49	12.3
	Painful breast	91	22.8
	Maternal milk is insufficient	58	14.5
	Maternal illness	71	17.8
	Mother work out side home	130	32.6
Have you advised by health care provider	Yes	324	81.2
	No	75	18.8
Place of advice on EBF	Health facilities	278	69.7
	Mass media	40	10
	Relatives	29	7.3
	Mother	52	13

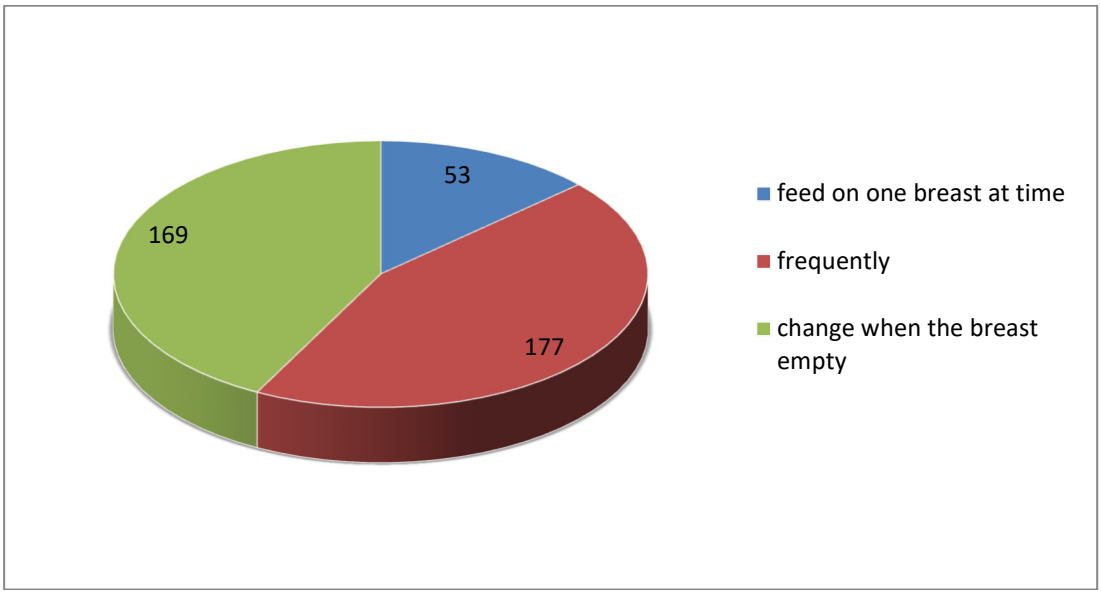

Figure 1: How you breast feed to your child for the above figures

One hundred sixty nine (42.4 %) of study participants feed one breast at time, whereas 177 (44.4 %) were feeding their breast frequently, 53 (13.3 %) were change when the breast empty (see figure 1).

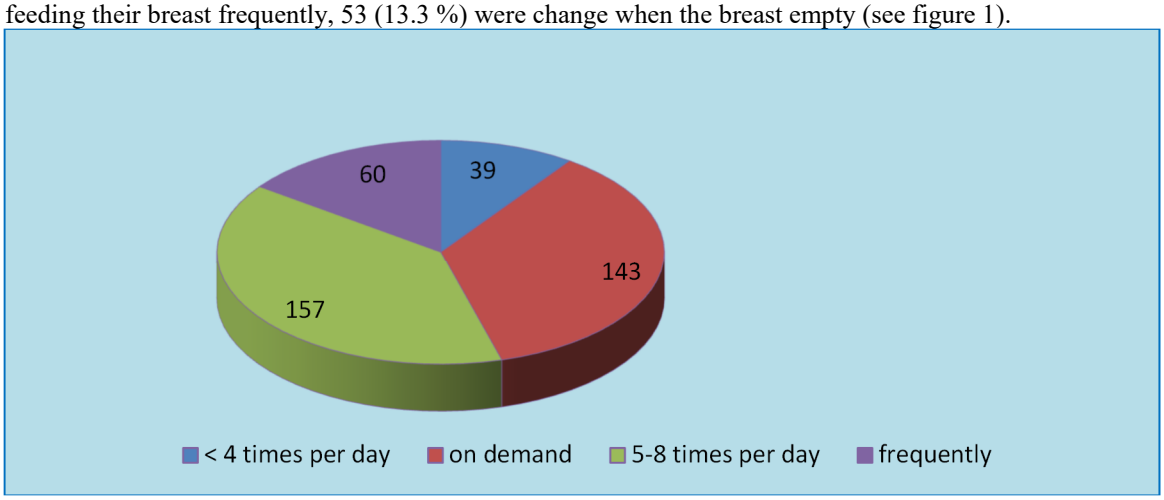

Figure 2: Frequency of breast feeding per day for the above figure

One hundred fifty seven (39.4 %) of study participants feed breast 5-8 times per day, whereas 143 (35.8 %) were feed on demand, 39 (9.8 %) were feed less than four times per day, 60 (15 %) were feed frequently (see figure 2).

4. Discussion

4.1 Knowledge with regard to EBF

The World Health Organization recommends exclusive breastfeeding in the first six months to reduce childhood morbidity and mortality, enhance mother-child attachment, and serve as an effective family planning method (Infant 2010).

This finding is higher than a study done in Jimma Arjo woreda, Ethiopia, where the majority of mothers (67%) had knowledge about exclusive breastfeeding (Assefa, Tesfaye et al. 2018).The difference might be due to the fact that most study participants have better ANC follow-up, and most of them access information on EBF at health facilities.

4.2 Attitude with regard to EBF

377 (94.5%) of study participants knew the importance of breast feeding after birth, believed exclusive breast feeding is enough up to six months, avoided bottle feeding up to six months, fed colostrum, EBF is better than artificial feeding, and were uncomfortable when giving extra food other than breast milk.

The attitude of 348 participants towards EBF was 87.2%, similar to one done in Bedelle, Ethiopia, where 87.3%) had a positive attitude and agreed that EBF is beneficial for infants younger than six months (Tsedeke, Gadisa et al. 2014).

But lower than the study done in Debre Birhan, Ethiopia, where 95.5% of mothers had a positive attitude towards EBF practice (Asfaw, Argaw et al. 2015).While the findings of this study showed higher numbers of mothers with favorable attitudes towards EBF in comparison with a study in southern Ethiopia, where 56.7% of mothers had positive attitudes towards EBF (Modjo and Amanta 2015).This difference might be due to differences in socio demographics and study areas.

4.3 Practice with regard to EBF

Study participants feed their children breast milk, pre-lacteal feeding, and water. Less than half feed their breasts 5-8 times per day and change the breast when it is empty. Half of the study participants fed their children EBF for 6 months due to reasons such as working outside the home, mental illness, painful breasts, infant illness, and insufficient milk. Almost all were advised by their health care providers about the practice of breast feeding. Sources of information included health facilities, mass media, relatives, and health extension workers.

The practice of EBF was found to be low, with 222 (55.6%) mothers practicing it, similar to other studies conducted in Arba Minch Zuria in 2013 (Tamiru and Mohammed 2013). This study found a higher prevalence of EBF than the national figure reported by the Ethiopian (Berhan and Berhan 2014).

Breastfeeding is an important part of birth spacing and child survival, providing nutrition and protection against infection. The lactation-amenorrhea method (LAM) is also an effective contraception method , Breastfeeding is an important part of birth spacing and child survival, providing nutrition and protection against infection (Teshome, Kogi-Makau et al. 2009).In addition, this prevalence is lower than other similar study findings done in Goba woreda of Bale Zone, Ethiopia, which was 71.3% (Setegn, Belachew et al. 2012), and in India, where

the prevalence of EBF was reported at 61.5% (Hossain, Islam et al. 2018).

5. Conclusion and Recommendation

Health care workers, relatives, husbands, and other community members play a leading role in exclusive breastfeeding practices.

Exclusive breast feeding for up to six months prevents diarrhea and malnutrition, provides protein, calcium, phosphorus, micronutrients, and caloric density. Early initiation helps mothers contract their uterus and stimulates breast milk, but early supplementation is recommended. Policy makers and woreda administrators should support working mothers by extending maternal leave.

Conflicts of Interest

The authors of this study declare that they have no conflict of interests.

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