

2022-08-12

# Exclusive Breast Feeding and Associated Factors Among Employed And Unemployed Mothers with Children 6-12 Months Old, in Bahir Dar City, North West Ethiopia.A Comparative Cross Sectional Study

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This thesis paper by HANA MENGIE entitled: *Exclusive Breast Feeding and Associated Factors among employed and unemployed mothers with children 6-12 months old in Bahirdar, Northwest, Ethiopia 2022*, submitted to Bahirdar University, College of Medicine and Health Sciences, School of Public Health, Department of Nutrition and Dietetics, in partial fulfillment of the requirements for master degree in Public Health Nutrition complies with the regulation of the University and meets the accepted standards with respects to originality and quality.

Place of submission: Nutrition and dietetics department, college of medicine and health science, Bahirdar University.

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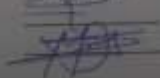
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## **Acknowledgments**

First and foremost, I would like to thank Bahirdar University College of Medicine and Health sciences, Department of Nutrition and Dietetics for giving me this great opportunity to develop this research. Finally, I would like to thank my advisor Dr. Yeshalem Mulugeta and Mr. Mulat Tirfie for their valuable comments and continuous guidance throughout this thesis writing.

My special thanks also go to Bahirdar city administration, respondents and data collectors for their contribution on the success of this study.

## Table Of Contents

ACKNOWLEDGMENTS .....	I
LISTS OF TABLES.....	IV
LIST OF FIGURES .....	V
ACRONYMS.....	VI
ABSTRACT.....	VII
1.INTRODUCTION .....	1
1.1 BACKGROUND .....	1
1.2 STATEMENTS OF THE PROBLEM .....	3
1.3 SIGNIFICANCE OF THE STUDY .....	5
2.LITERATURE REVIEW .....	6
2.1 OVERVIEW OF PREVALENCE OF EXCLUSIVE BREASTFEEDING.....	6
2.2 FACTORS ASSOCIATED WITH EBF .....	6
2.3 CONCEPTUAL FRAMEWORK .....	12
3. OBJECTIVE OF THE STUDY .....	13
3.1 GENERAL OBJECTIVE .....	13
3.2 SPECIFIC OBJECTIVES .....	13
4. METHOD .....	14
4.1 STUDY DESIGN AND PERIOD.....	14
4.2 STUDY AREA.....	14
4.3 SOURCE POPULATIONS.....	14
4.4 STUDY POPULATION.....	14
4.5 ELIGIBILITY CRITERIA .....	14
4.6 SAMPLE SIZE DETERMINATION.....	14
4.7 SAMPLING PROCEDURES .....	16
4.8 STUDY VARIABLES.....	18
4.9 OPERATIONAL DEFINITION.....	18
4.10 DATA COLLECTION TOOL AND TECHNIQUE .....	19
4.11 DATA QUALITY ASSURANCE.....	19
4.12 DATA ENTRY AND ANALYSIS.....	20
4.13 ETHICAL CLEARANCE .....	20
5. RESULTS .....	21
6.DISCUSSION .....	30
7. STRENGTHS AND LIMITATION OF THE STUDY .....	33
8.CONCLUSION.....	34
9. RECOMMENDATION .....	35

10. REFERENCES .....	36
ANNEXES .....	41
ANNEX – I: ENGLISH VERSION QUESTIONNAIRE.....	41
ANNEX II: መጠይቆች- (በአማርኛ) .....	47

## **LISTS OF TABLES**

Table 1: Sample Size Calculation For The Second Objective To Assess Factor Associated With Ebf Among Employed Mothers.....	15
Table 2: Sample Size Calculation For The Third Objective To Assess Factor Associated With Ebf Among Unemployed Mothers .....	16
Table 3: Socio-Demographic And Child Characteristics, Obstetric Characteristics Of Employed And Unemployed Mothers In Bahirdar City, Amhara, North West Ethiopia, 2022.....	21
Table 4: Knowledge And Attitude Of Employed And Unemployed Mothers Towards Exclusive Bf In Bahirdar City, Amhara, North West Ethiopia, 2022 .....	22
Table 5: Health Care And Ebf Related Characteristics Of Employed And Unemployed Mothers In Bahirdar City, Amhara, North West Ethiopia, 2022.....	23
Table 6: Factors Associated With Exclusive Breastfeeding For Both Employed And Unemployed Mothers In Bahirdar City, Amhara, North West Ethiopia, 2022 .....	25
Table 7: Factors Associated With Exclusive Breastfeeding Practice Among Unemployed Mothers In Bahirdar City, Amhara, North West Ethiopia, 2022.....	27
Table 8: Factors Associated With Exclusive Breastfeeding Practice Among Employed Mothers In Bahirdar City, Amhara, North West Ethiopia, 2022.....	28



## **LIST OF FIGURES**

Figure 1: Conceptual Frame Works On Factors Associated With Exclusive Breast Feeding .....	12
Figure 2: Schematic Presentation Of Sampling Procedure To Assess Ebf Practice And Associated Factors Bahirdar Sub City, 2022.....	17
Figure 3: Exclusive Breastfeeding Practice Among Employed And Unemployed Mothers In Bahirdar, Ethiopia 2022 .....	24

## ACRONYMS

ANC	_____	Ante Natal Care
AOR	_____	Adjusted Odds Ratio
BF	_____	Breast Feeding
COR	_____	Crude Odds Ratio
CI	_____	Confidence Interval
EBF	_____	Exclusive Breast Feeding
EDHS	_____	Ethiopian Demographic Health Survey
PNC	_____	Post Natal Care
UNICEF	_____	United Nations Children's Fund
WHO	_____	World Health Organization

## **ABSTRACT**

**Background:** Workplace barriers contribute to low rates of exclusive breastfeeding practices. Therefore, this study aimed to compare exclusive breastfeeding practice and associated factors among employed and unemployed mothers with children of age 6–12 months in Bahirdar, northwest Ethiopia.

**Method:** A community-based comparative cross-sectional study design was used from October 1 to November 15, 2021 in Bahirdar city among 260 employed and 263 unemployed mothers with children 6-12 months old. A multi-stage sampling technique was used. Data was collected using a structured and pre tested interview-based questionnaire checked, coded and entered into EPI-data 3.1 and analyzed using SPSS version 23 software, Bivariate and multivariable logistic regression analyses were carried out. Adjusted Odds ratio with 95% confidence interval was used to measure the strength of association. Statistical significance was declared at P -value <0.05.

**Results:** A total of 523 (263 unemployed and 260 employed) mothers were interviewed. Exclusive breastfeeding was higher among unemployed mothers 73% with 95% Confidence Interval (CI) (68.0%–78.0%) than employed mothers 48.8 %with 95% CI (43.0% – 55.0%). parity of three children and above [Adjusted Odds Ratio (AOR) =2.7, 95% CI: (1.53–4.99)], Place of delivery [AOR =3.09, 95% CI: (1.01–15.08)], good knowledge [AOR =4.1 95% CI:1.33–13.22)], and having onsite child care [AOR =3.5, 95% CI: (1.14–11.05)] were positively associated with exclusive breastfeeding among employed mothers. In the case of unemployed mothers having husband support [AOR =3.08, 95% CI: (1.49–6.33)], having postnatal care [AOR =5.5, 95% CI: (2.66–11.6)], timely initiation of breastfeeding [AOR =3.3 ,95% CI: (1.04–10.8)] and good knowledge of mothers on exclusive breastfeeding [AOR =2.85, 95% CI:(1.22 –6.65)] were positively associated with exclusive breastfeeding practice.

**Conclusion and Recommendation:** The prevalence of Exclusive breastfeeding was lower among employed than unemployed mothers. Therefore, the government should promote exclusive breastfeeding by constructing onsite child care centers.

**Keywords:** Exclusive breastfeeding, employment status, Ethiopia

# **1.INTRODUCTION**

## **1.1 Background**

Exclusive breastfeeding (EBF) means providing only breast milk for infants for up to six months without the addition of solid or liquid matter with the exception of oral rehydration solution, or drops/syrups of vitamins, minerals, or medicines[1].

The World Health Organization (WHO) recommends exclusive breastfeeding during the first 6 months of life for the optimal growth and development of infant and, followed by breastfeeding along with complementary foods for up to two years of age or beyond[2].

Breastmilk completely satisfies an infant's nutritional and fluid needs for the first six months[3]. Nutrients such as vitamins A and C, iron, zinc and vitamin D are more easily absorbed from breastmilk than from other milk. Breastmilk contains essential fatty acids needed for the infant's growing brain, eyes, and blood vessels and these are not available in other milks[4].

Breastfeeding provides the ideal food for healthy growth and development of infants; it is also an integral part of the reproductive process with important implications for maternal health[5]. As a national public health recommendation, infants should be exclusively breastfed for the first six months of life to achieve optimal growth, development and health. Thereafter, to meet their evolving nutritional requirements, infants should receive nutritionally adequate and safe complementary foods while breastfeeding continues up to two years of age and beyond [6]. Exclusive breastfeeding from birth is possible except for a few medical conditions, and unrestricted exclusive breastfeeding results in ample milk production [7].

Furthermore, breastfeeding is essential for maternal reproductive health, improving uterine contractions immediately after birth, protecting against breast and ovarian cancers, and providing highly effective postpartum contraceptive protection through lactation amenorrhea [8].

In 2016, Ethiopia developed several nutritional strategies to increase the nutritional status of the child. These are: Promoting EBF for the first 6 months, establishing a baby-

friendly health facility initiative in all public and private health facilities, enforcing the International Code of Marketing for Breast milk Substitutes, promoting the enactment of maternity leave, implementing breastfeeding rooms in major service providing institutions, and support employed breastfeed mothers to exclusively breastfeed their child[9].

## **1.2 Statements of the Problem**

Globally, the rate of exclusive breastfeeding (EBF) is 44% in 2021[10]. In Sub-Saharan Africa and East Africa it was 31% and 42%, respectively[11].

In Ethiopia prevalence of exclusive breastfeeding for infants under 6 months was 59%, and exclusive breastfeeding declines with age from 73% in infants aged 0-1 months to 40% in infants aged 4-5 months, according to the 2019 Ethiopian Demographic Health Survey (EDHS)[12].

Over two-thirds of deaths occurring worldwide during the first year of life in children are often associated with inappropriate feeding practices, especially due to poor exclusive breastfeeding practices[13].

Compared to non-exclusive breastfeeding infants, an infant who is only breastfeeding is 14 times less likely to die in the first six months, whereas exclusive breastfeeding significantly reduces deaths from child killer diseases; respiratory infections, and diarrhea [14]. The number of under-five deaths in Africa can essentially be reduced by exclusive breastfeeding, especially in Sub-Saharan Africa where 41% of deaths occur mainly due to lack of breastfeeding practices in combination with high disease levels [15].

In Ethiopia, suboptimal breastfeeding practices are the major contributor to an estimated 70,000 infant deaths per year which is 24% of the total infant death annually which can be significantly prevented by nutrition interventions such as exclusive breastfeeding[16].

Exclusive breastfeeding is the most cost-effective intervention for preventing early childhood deaths. Exclusive breastfeeding practices around the world can prevent 1.4 million deaths every year among children under five[17].

There are many studies that have studied the variables associated with exclusive breastfeeding practices. Among these maternal employment, parity, maternal knowledge about good breastfeeding practices, maternal education, infant age, antenatal care visits (ANC), postnatal care (PNC) utilization, maternal age, and birthplace are the most frequently associated factors [5, 8, 18].

Maternal employment affects child caring time because working mothers are less likely available for breastfeeding and making frequent meals than non-working mothers. And the improvement on EBF is low presumably due to the short maternity leave and absence of onsite child care at the workplace for working mothers[19].

Ethiopia passed the Labor Proclamation 1156/2019 which grants 4 months paid maternity leave to women in 2019 but the proclamation doesn't support women to breastfeed in the workplace and the public area after they return to work[20]. Several studies were done when the post-partum maternity leave was three months. Even though now a day's post-partum maternity leave is increased from three to four months as a national nutritional strategy, EBF practice after the policy change is not known in the study area. Therefore, this study aimed to compare exclusive breastfeeding practices and identify factors associated with employed and unemployed mothers with children aged 6 -12 months in Bahirdar city.

### **1.3 Significance of the Study**

This study will provide significant information to Health extension workers who are working at the community level, Nurses and midwives who work in maternity centers (antenatal care unit, post-natal care unit, and delivery room) and the community setting as well all other concerned bodies will utilize the result of this research.



## **2.LITERATURE REVIEW**

### **2.1 Overview of Prevalence of Exclusive Breastfeeding**

The overall prevalence of Exclusive breastfeeding practices in some countries was United States of America 16.8%[21], Pakistan 37.1%[22], Nigeria 36.6%[23], and Tanzania 49.9%[24], Congo 49.2%[25], and Zimbabwe 30.9%[26]. In Ethiopia, the prevalence of exclusive breastfeeding was Dire Dawa 81.1 % [8], Oromiya 48 % [27], and Mecha 38.5 % [18]. A hospital-based comparative cross-sectional study done on breastfeeding practices among working and non-working women in Mysuru showed that 46.7% of the non-working and 15.9% of the working women had exclusively breastfed for the first six months [28].

A Comparative cross-sectional study done in Goba district showed that the prevalence of exclusive breastfeeding for infants aged less than six months was 33% among employed and 73% among unemployed mothers [29, 30]. Another study was conducted from January to February 2016 in the Fafan zone, of the Somali Regional State, of Ethiopia which showed a 24.8 and 82.9% prevalence of EBF practices among employed and unemployed mothers of index infants of 3–5 months respectively [29].

A comparative cross-sectional study done in Gondar showed that the overall exclusive breastfeeding practice was 34.8%. A total of 20.9% employed mothers and 48.0% unemployed mothers practiced exclusive breastfeeding [31]. Another similar study conducted in the Awi zone revealed that the study revealed that prevalence of exclusive breastfeeding practice was Forty-four percent and 65% among employed and unemployed mothers respectively [32]. A study conducted at Bair, Dar city revealed that the rate of exclusive breastfeeding appropriate to the infant's age was found to be 50.3% [33].

### **2.2 Factors associated with EBF**

There are various factors significantly associated with practices of exclusive breastfeeding practice to infants within the first six months. The factors can be described as maternal related factors, child-related factors, obstetric and healthcare-related factors, work-related factors, and family factors

## **2.2.1 Maternal related factors**

### **Maternal education**

Highly-educated women were more likely to practice bottle feeding instead of exclusive breastfeeding in Pakistan [13]. But, a Nigerian study found that educated mothers were more likely to practice exclusive breastfeeding compared to mothers with no schooling [34]. Similarly according to the Ethiopian demographic health survey, higher maternal education status was associated with lower exclusive breastfeeding rates [35].

A comparative cross-sectional study in Somalia showed that mothers who completed secondary and higher education were about four times more likely to practice EBF compared to those who were illiterate [29]. Another study done in Bahirdar indicates that the practices of EBF among mothers who were unable to read and write or in primary school were 3 times higher than those who completed secondary school or higher [19].

### **Maternal Age**

Maternal age was closely associated with exclusive breastfeeding practice in studies conducted in Dutch [36] and Utah state older mothers practiced EBF better than younger [37]. However, in another study in the Injibara Awi zone, Ethiopia employed mothers between 18-23 years were 9 times more likely to breastfeed exclusively than those who were 30 and above years[32].

One study found that exclusive breastfeeding rates were higher among mothers aged 35-39 compared to those less than 20 years old and also Higher rates were also found among 25-34 and 36-45-year-olds compared to younger mothers [38]. In a study conducted in Ethiopia, infants whose mothers were aged 36-45 were 2.8 times more likely to be exclusively breastfed compared to those whose mothers were younger [25]

### **Marital status**

In Ethiopia, a mother with a husband or a partner was more likely to exclusively breastfeed their infant than a single mother and married women or mothers who had partners were two times less likely to practice exclusive breastfeeding compared to single mothers [33].

### **Knowledge of mothers on EBF**

Knowledge of breastfeeding can influence a mother's decision to breastfeed. A quantitative study found that mothers who lacked knowledge on breastfeeding were less likely to practice exclusive breastfeeding [19]. A cross-sectional study carried out in Nnewi South-East Nigeria, also indicates that awareness (95.3%) and knowledge (82.0%) of EBF was high among surveyed mothers but the practice of EBF (33.5%) was very low [39]. Similarly, in studies conducted in Nigeria and Ethiopia, higher exclusive breastfeeding rates were found among mothers with a good knowledge of breastfeeding compared with those who had poor knowledge [16, 17].

### **Access to Media**

Mothers who had access to media like TV were less likely to practice EBF than mothers who didn't have any access at all and this is consistent with the EDHS, 2011[40]. The magnitude of EBF was higher 84 (73.0) among unemployed mothers who have an access to TV than employed mothers 56 (38.6%) who have similar access [30].

### **Maternal attitudes**

A comparative cross-sectional study conducted in Gondar showed that Mothers who had poor attitude were less likely to practice exclusive breastfeeding than mothers who had good attitude [31]

## **2.2.2 Child-related factors**

### **Age of infant**

The research done in Australia revealed that the prevalence of introduction of solid foods before 17 weeks of infants was 44% and before 26 weeks of age infants was 93% and Exclusive breastfeeding rates have shown a downward trend as the child grows older [30]. A study in Uganda found that EBF was low during the first six months and decreased by age. The trend of EBF decreased from 96% at one month to 62% at 5 months[41]. A similar pattern has been observed in Zimbabwe where the practice of exclusive breastfeeding decreases as the child gets older[42].

A study conducted in the Goba district showed that the age of the infant was a predictor of exclusive breastfeeding practice. Infants in the age group less than 2 months were about 6 times more likely to be exclusively breastfed than infants in the age group 4–5

months. Although infants in the age group 2–3 months were 2 times more likely to exclusively breastfeed when compared to those infants in the age group 4–5 months. Indicating, as the age of the children approached 6 months, the rate of exclusive breastfeeding decreases significantly [30].

### **2.2.3 Obstetric and Health Service-Related Factors**

#### **ANC**

Antenatal care had an association with a higher chance of EBF in studies conducted in Nigeria[43]. Mothers who got three and above ANC visits were 1.7 times more likely to breastfeed their infants exclusively than those who did not get ANC visit Mecha district, North West, Ethiopia[44]. A study conducted in Debremarkos Mothers who received counseling about breastfeeding during ANC were 2.44 times more likely to exclusively breastfed their infants compared to those who didn't receive counseling [17].

#### **Parity**

A study conducted in America showed a significant association between parity and exclusive breastfeeding[26]. Similarly, higher rates of exclusive breastfeeding have been observed in mothers who have had at least one child before as compared to first-time mothers. A study conducted in Anambra State, Nigeria, found higher rates of exclusive breastfeeding rates in mothers with two or more children (57%) than first-time mothers (27.6%) [23].

#### **Place of delivery**

Another study conducted in Zimbabwe Delivery in health facilities was associated with exclusive breastfeeding rates compared to home deliveries. Mothers who delivered in public hospitals and private hospitals were about two times more likely to breastfeed exclusively compared to mothers who delivered at home[26]. Research conducted in Ghana among 0-6 month infants showed that only 51.6% of infants got EBF which suggested institutional delivery as one of the factors to practice EBF of the mother[29]. One study conducted in Bahirdar city reported that the Place of delivery was one of the predictors of EBF practice. The study revealed that mothers who delivered their last child at a health facility were 3.02 times more likely to practice EBF compared to those who delivered at home[33].

## **PNC**

The study conducted at Bahirdar city revealed that post-natal counseling/advice on receiving infant feeding was significantly associated with an independent predictor of EBF practice. Those mothers who received EBF counseling/advice were 5.2 times more likely to practice EBF than those who did not[33].

### **2.2.4 Work-related factors**

In America, Reports have suggested that the interaction between breastfeeding and employment results in a shorter duration of breastfeeding, not a decline in the breastfeeding rate. For example, during the hospital stay immediately following the birth, 55% of both employed and unemployed mothers breastfed their infants. However, only 10% of women employed full-time breastfed their child at six months of age, compared to 24% of the women who were not employed [45].

A study conducted in Nigeria revealed that among the 39 women who practiced EBF for all their children, 15 (38.5%) reported no work-related interruptions during the period of breastfeeding; 24 were self-employed and had to give up work for a while; 21 (53.8%) maintained their weight while practicing EBF; 37 (94.9%) believed that their supply of breast milk was sufficient, while 2 had doubts at some point but were reassured after consulting a health worker [16].

A study conducted in Ghana observed that breastfeeding women who returned to work weaned their infants earlier compared to breastfeeding women who did not work. The negative association between employment and duration of breastfeeding was strongest in white women, and duration of maternity leave was significantly associated with duration of breastfeeding[46].Type of work and hours of work have also been shown to influence breastfeeding. Moreover, among black women, those who intended to return to part-time employment were twice as likely to initiate breastfeeding in the hospital compared to those women returning to full-time employment [47].

A study conducted in Singapore revealed that Working mothers were 1.6 times more likely than nonworking mothers to breastfeed for 2 months or less. The important reasons for working mothers stopping breastfeeding between 2 and 6 months were due to work-related factors (48.4%), insufficient breast milk (27.0%) and baby preferring formula

milk (12.5%). Important work-related reasons included the need to return to work, facilities at the workplace being not conducive for breastfeeding, and demands of work interfering with breastfeeding [48]. A study done in Ghana showed that employed mothers who had an access to breastfeed their child at the workplace were found to practice EBF more likely than those who didn't have access [47]. Another study done in the Addis Ababa Kirkos sub-city shows, that the employment status of the mother has a significant relationship with exclusive breastfeeding practice. About 34.5 percent of mothers who are practicing exclusive breastfeeding were employed and 46.0% were unemployed[49].

### **2.2.5 Family related factors**

A study conducted in Indonesian revealed that mothers who were supported by their husband were more likely to breastfeed exclusively than those who were not supported (document1) According to a community-based comparative cross-sectional study conducted in Injibara town, Awi Zone unemployed mothers who were supported by their husband were 2.7 times higher to practice EBF than those who were not supported [32]. Another study conducted in Bangladesh showed that husband education has a significant relationship with exclusive breastfeeding practice[50].

## 2.3 Conceptual Framework

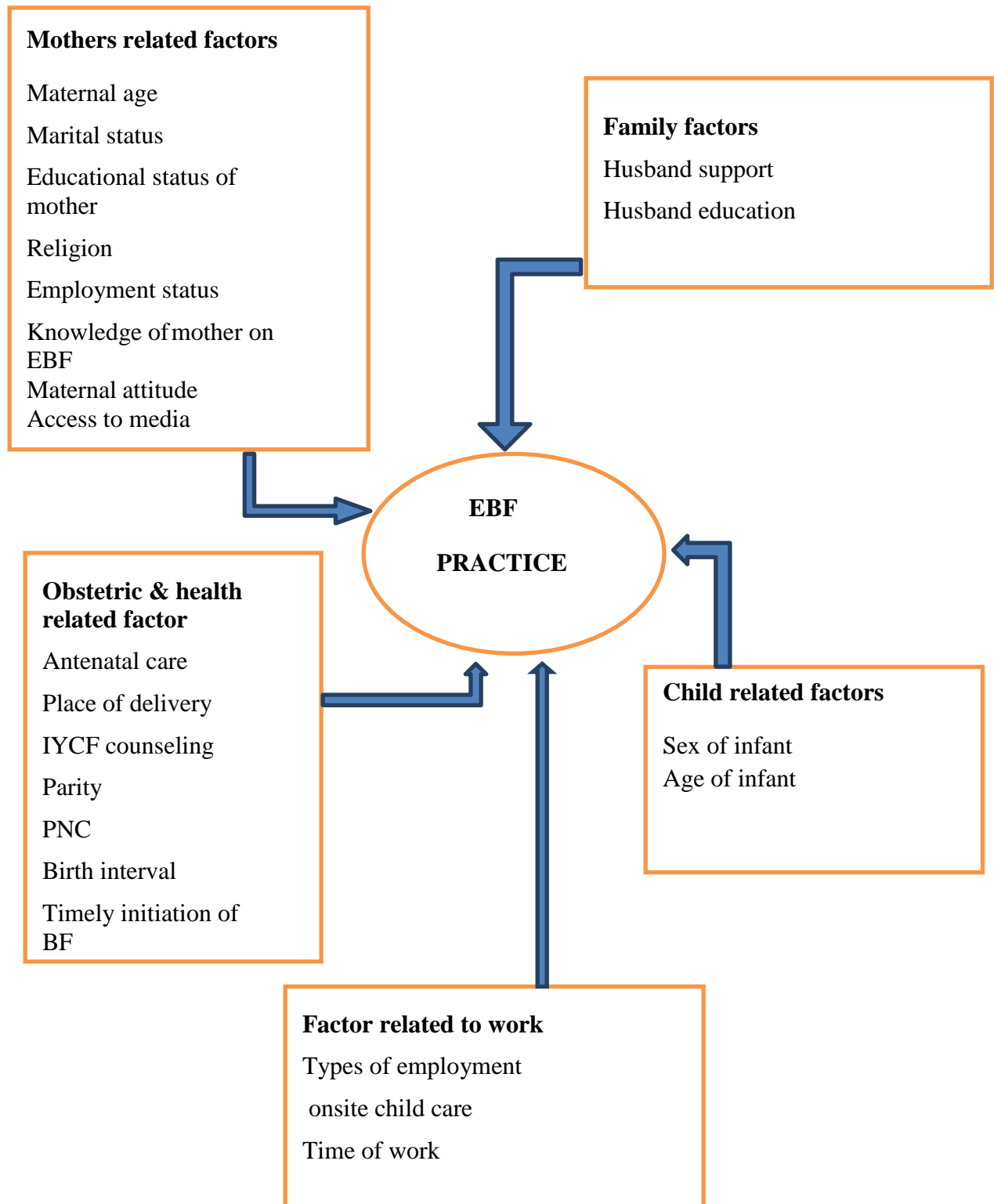


Figure 1: Conceptual frame works on factors associated with exclusive breast feeding

### **3. OBJECTIVE OF THE STUDY**

#### **3.1 General Objective**

- To compare exclusive breastfeeding practice between employed and unemployed mothers with children aged 6-12 months and its associated factors in Bahirdar, Northwest, Ethiopia 2022.

#### **3.2 Specific objectives**

- To compare exclusive breastfeeding practice between employed and unemployed mothers with children aged 6-12 months
- To identify factors associated with exclusive breastfeeding practices among employed mothers with children aged 6-12 months
- To identify factors associated with exclusive breastfeeding practices among unemployed mothers aged 6-12 months



## **4. METHOD**

### **4.1 Study Design and period**

A community-based comparative cross-sectional study was conducted from October 1 to November 15, 2021.

### **4.2 Study Area**

The study was conducted in Bahirdar city, the central city of the Amhara National Regional State in the Federal Democratic Republic of Ethiopia. Bahirdar is located at 110 36 N latitude and 37023 E longitudes on the southern side of Lake Tana and with an average elevation of 1,840 meters above sea level. The city Bahirdar is 565 km northwest Ethiopia far from Addis Ababa. In this city, there are 6 sub-cities: TANA, FASILO, SHUM ABO, TEWODEROSE, BELAY ZELEKE, and DAGMAWI MINILLIK. According to the data from the zone health bureau, the city has a total population of 332,856. The number of under-five children was estimated to be 52,689 from this from a total of 10,097 infants less than one year[51].

### **4.3 Source Populations**

All employed and unemployed mothers who had infants 6–12 months old in Bahirdar city

### **4.4 Study Population**

All employed and unemployed mothers who had infants 6–12 months old in the selected sub cites during the study period.

### **4.5 Eligibility criteria**

#### **4.4.1 Inclusion Criteria**

Mothers with children of age 6-12 months, who lived in the study area at least for six months

#### **4.4.2 Exclusion Criteria**

Mothers with children of age 6–12 months who were critically ill

### **4.6 Sample size Determination**

The specific objectives were three, the sample size was calculated for each to take a large sample size. The sample size was determined using double population proportion

formulas for the first objective.

The sample size of the study was calculated using double population the formula by assuming;  $p_1$  = Prevalence of EBF among unemployed mothers= 48,  $p_2$ = Prevalence of EBF among employed mothers=20.9[31], ratio= 1:1,  $Z_{\alpha/2}$ =the value of the standard normal distribution curve corresponding to the level of significance alpha 0.05 = 1.96, using the power of the study 80% and distribution curve corresponding to 80% power, the sample size was calculated as:

$$n = f (z\alpha + z\beta)^2 \cdot (p_1q_1 + p_2q_2) / (p_1 - p_2)^2$$

$$n = (1.96 + 0.84)^2 \cdot (0.48 \times 0.52 + 0.208 \times 0.792) / (0.48 - 0.208)^2$$

$$= 7.84 \times (0.2496 + 0.164736) / 0.073984$$

= 3.24839424 / 0.073984 = 44 for each group and taking non-response rate 10% and design effect 2 the final samples sizes were 198 participants.

The sample size for objective two was determined by using associated factors. parity, age of infant, and place of delivery were significantly associated with EBF among employed mothers[29].

Table 1: Sample size calculation for the second objective to assess factor associated with EBF among employed mothers

Variables	CI	Power	AOR	% of outcome among unexposed	% of outcome among exposed	Ratio	Total sample
Parity	95%	80	3.46	46	74.7	1	220
Age of the infant	95%	80	2.2	27	44.9	1	542
Place of delivery	95%	80	0.36	31	13.9	1	458

The sample size for objective three was determined by using associated factors. Birth interval, social support, and knowledge of EBF were significantly associated with unemployed mother [32].

Table 2: Sample size calculation for the third objective to assess factor associated with EBF among unemployed mothers

Finally, the calculated sample size for independent factors was greater than the

Variables	CI	Power	AOR	% of outcome among unexposed	% of outcome among exposed	Ratio	Total sample
Birth interval	95%	80	3.43	19	44.6	1	260
Knowledge of EBF	95%	80	0.28	48	20.5	1	234
Social support	95%	80	0.33	33	14	1	388

prevalence of EBF. By taking the greater sample size 542 was used.

#### 4.7 Sampling Procedures

A multistage sampling technique was used. First, Fasilu and Dagimawi minilik sub-city were selected using the lottery method from a total of six sub-cities. From each sub-city, sample size was distributed proportionally by the number of mothers with their child aged 6-12 months. Then, mothers were selected using simple random sampling from the selected Keble using mother's registration found in health extension workers as a sampling frame.

$$PROPORTIONAL ALLOCATION FORMULLA = n_i = n * N_i/N$$

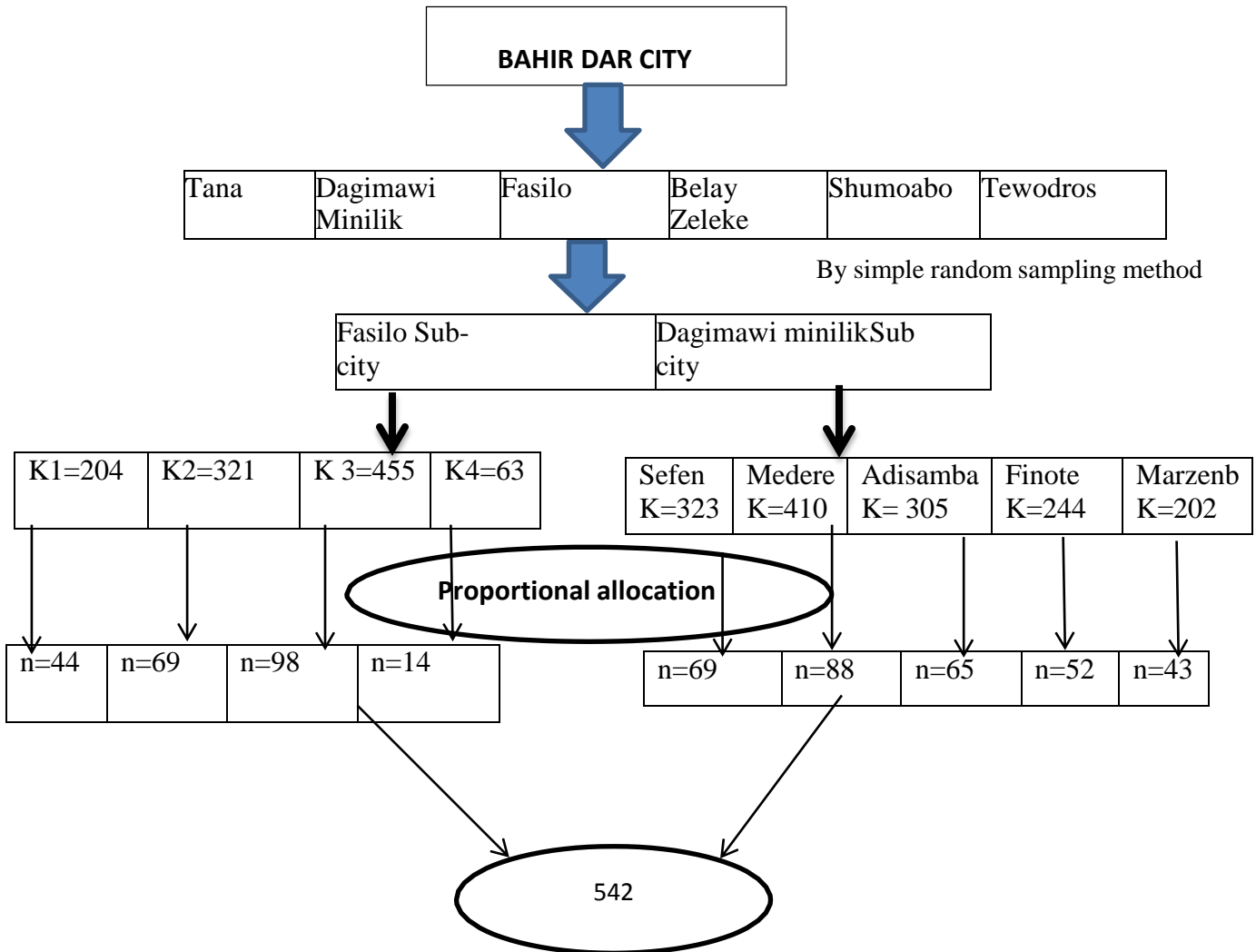


Figure 2: Schematic presentation of sampling procedure to assess EBF practice and associated factors Bahirdar sub city, 2022

## 4.8 Study Variables

### Dependent Variables:

Exclusive breastfeeding practice (Yes/No)

### Independent Variables

- Mothers related factors
  - Educational status of mothers
  - Maternal age
  - Marital status
  - Religion
  - Maternal attitude towards EBF
  - Knowledge mothers on EBF
  - Access to media
  - Employment status
- Child-related factors
  - Sex of the infant,
  - age of infant
- Health service use related factors
  - Place of delivery
  - Antenatal care
  - Parity
  - PNC
  - Birth interval
  - Time of initiation of BF
- Work-related factors
  - onsite child care
  - Time of work
  - Type of employment
- Family related factors
  - Husband education
  - Husband support

## 4.9 Operational Definition

**Exclusive breastfeeding:** infant should receive only breast milk from its mother or a wet nurse, and no other liquids or solids, except medicines or vitamins, mineral supplements up to six months[52].

**Employed mothers:** Mothers who work outside the home for income for at least 8 hours per day in addition to the work they perform at home in raising their child[53].

**Unemployed mothers:** a mother, who works at her home as a housewife.

**Maternal knowledge on exclusive breastfeeding** seven questions were asked to measure breastfeeding knowledge. If a mother could answer four or more questions correctly, she was assessed as having good knowledge[17].

**Maternal attitude towards exclusive breastfeeding:** It was assessed by employing seven questions, the sum of scores was computed, and score below average were considered as having unfavorable attitude and those scored equal to or above the average were considered as having favorable attitude [54].

#### **4.10 Data Collection Tool and Technique**

Data were collected by face-to-face interviews using pretested structured questionnaires, adapted from different kinds of literatures [18, 53, 55].

The questionnaire includes questions on socio-demographic characteristics, maternal health service and infant related factors, breastfeeding and related items, maternal breastfeeding-related knowledge, maternal attitude towards EBF and factors related to work for only employed mothers. It was collected by four diploma nurse and supervised by public health professional.

#### **4.11 Data Quality Assurance**

The questionnaire prepared in English was translated into the local language Amharic for fieldwork purposes and back to English. Data qualities were ensured during tool development, data collection, entry, cleaning, and analysis. Training on data collection was given to data collectors and supervisors before data collection. Supervision was made by the principal investigator, by observing how data collectors would be conducting the interview. A questionnaire has been carefully designed and pre-tested with people's equivalent to 5% of the calculated sample size other than the study's main population. At the end of each day, interviewers submitted all completed questionnaires

and each completed questionnaire was checked by the principal investigator for completeness and consistencies.

#### **4.12 Data Entry and Analysis**

Data were coded and entered into EPI-data version 3.1 and exported to SPSS version 23 for statistical analysis. Descriptive and summary statistic was carried out. Then, Bivariate logistic regression was used to check variables having an association with the dependent variable, and then those variables having a p-value of less than 0.2 were fitted to multivariable logistic regression.

Three models were fitted; first for the whole sample (employed and unemployed mothers combined), second for employed mothers only and the third for unemployed mothers. Adjusted odds ratios (AOR) with 95% confidence interval (CI) were used to measure the strength and significance of the association. Model fitness was tested by using the Hosmer-Lemeshow goodness-of-fit tests of model coefficients tests with enter procedure. By using the Variance Inflation Factor (VIF) test the independent variable were tested for multicollinearity before entering them into the multivariable model.

#### **4.13 Ethical Clearance**

Ethical clearance was obtained from the ethical review committee of the college of medicine and health sciences, Bahirdar University. Letter of support was written to Bahirdar city administration and concerned bodies. The Keble administrators were also informed about the study. verbal consent from each study participant was obtained after explaining the main purposes of the study. The information collected from respondents was kept confidential.

## 5. RESULTS

### 5.1 Socio-demographic Characteristics of the Respondent

A total of 523 mothers having children of age 6–12 months were interviewed, making a response rate of 96.5%. The mean age (SD) of respondents for unemployed mothers were 29.34 ( $\pm$  4.7) years and 32.38(4.3) for employed mothers. The mean age (SD) of children were 9.4 months ( $\pm$  1.38 months) unemployed mothers and 9.3( $\pm$ 1.39 months) for employed mothers. Nearly half of respondents were 260 (49.7%) employed and 265 (50.3%) were unemployed. The majority 143 (55.5%) of employed and 115 (43.7%) of unemployed mothers were 30 years and above. The majority 241 (92.7 %) employed and 220 (83.7%) unemployed were married. The majority 220 (84.6%) of employed and 69 (26.2%) of the participants attended diploma and above education. Regarding of the sex child, more than half of 157(59.7%) and 126(48.5%) of females were from unemployed and employed mothers respectively. (Table3).

Table 3: Socio-demographic and child characteristics, obstetric characteristics of employed and unemployed mothers in Bahirdar city, Amhara, North West Ethiopia, 2022

Variables	Maternal employment status	
	Un Employed =263 No (%)	Employed =260 No (%)
<b>Maternal age</b>		
18-23	38(14.4.)	22(8.5)
24-29	110(41.8)	95(36.5)
$\geq$ 30	115(43.7)	143(55.5)
<b>Marital status</b>		
unmarried *	43(16.3)	19(7.3)
Married	220(83.7)	241(92.7)
<b>Ethnicity</b>		
Amhara	248(94.3)	239(91.9)
Agew	6(2.3)	15(5.8)
Others**	9(3.4)	6(2.3)
<b>Maternal religion</b>		
Orthodox	157(59.7)	170(65.4)
Muslim	61(23.2)	40(15.4)
Protestant	45(17.1)	50(19.2)
<b>Maternal Education</b>		
no formal education	51(19.4)	5(1.9)
primary education	54(20.5)	12(4.6)
Secondary education	89(33.8)	23(8.9)
diploma and above	69(26.2)	220(84.6)



<b>Partner education</b>		
no formal education	15(6.6)	10(4.1)
primary education	5(2.2)	24(10.0)
Secondary education	42(18.3)	25(10.4)
diploma and above	167(73.0)	182(75.5)
<b>child age</b>		
6-8 month	62(23.7)	57(21.9)
9-10 month	137(52.3)	123(47.3)
11-12month	63(24.0)	80(30.8)
<b>Sex of child</b>		
Male	106(40.3)	134(51.5)
Female	157(59.7)	126(48.5)
<b>Parity</b>		
1-2	138(52.5)	84(32.3)
>=3	125(47.3)	176(67.7)
<b>Birth interv</b>		
11-24 month	120(52.2)	70(27.0)
25-36 month	66(28.7)	131(50.6)
>=37	44(19.1)	58(22.4)

\*=single, divorced and widowed \*\* =Tigre, Oromo

When employed mothers were asked about the type of work they did, majority 193 (73.7%) of mother were Formal employee and 37 (14.1%) of mother were other type of works, followed by daily laborer 27 (10.3%)

## 5.2 Knowledge and attitude of mothers towards exclusive breastfeeding

Majority 208(80.0 %) of employed and above three forth 195 (79.8 %) of unemployed mothers had good knowledge on exclusive breastfeeding. Moreover, 75.4% (196) employed and 82.9% (218) unemployed mothers had a favorable attitude towards exclusive breastfeeding practice (Table 4).

Table 4: Knowledge and attitude of employed and unemployed mothers towards exclusive BF in Bahirdar city, Amhara, North West Ethiopia, 2022

Variables	Maternal employment status	
	Un Employed =263 No %	Employed =260 No %
<b>Knowledge on EBF</b>		
Poor knowledge	53 (20.2)	52(20.0)
Good knowledge	210(79.8)	208(80.0)
<b>Attitude towards EBF</b>		
Unfavorable altitude	45(17.1)	64(24.6)
Favorable attitude	218(82.9)	196(75.4)

### 5.3 Health care and EBF related characteristics of mothers

Majority of 245(94.2 %) of employed and 240 (91.5 %) unemployed mothers gave birth at health facilities. Almost all employed mothers 252(96.9 %) and 244 (92.8%) unemployed mothers were attended antenatal care. Nearly three forth 190(73.1%) employed and 186(70.0%) of unemployed mothers attended post-natal care. The majority 252 (96.9 %) of employed and 229 (87.1 %) of unemployed mothers had counseling on infant and young child feeding. The majority 243(92.4%) of unemployed and 232(89.2%) of employed mothers-initiated BF with in the first hour after delivery. Majority 240 (92.3%) of employed mothers didn't have access to feed their child at their work place. More than three-quarters of mothers 186 (77.2 %) employed and 147 (64.2 %) of unemployed mothers were supported by their husbands on exclusive breastfeeding. (Table 5)

Table 5: Health care and EBF related characteristics of employed and unemployed mothers in Bahirdar city, Amhara, North West Ethiopia, 2022

VARIABLES	EMPLOYMENT STATUS	
	Unemployed =263 No (%)	Employed = 260 No (%)
<b>Place of delivery</b>		
<b>Health facility</b>	240(91.5)	245(94.2)
<b>Home</b>	23(8.7)	15(5.8)
<b>IYCF counseling</b>		
<b>Yes</b>	229(87.1)	252(96.9)
<b>No</b>	34(12.9)	8(3.1)
<b>ANC</b>		
<b>Yes</b>	244(92.8)	249(95.8)
<b>No</b>	19(7.2)	11(4.2)
<b>PNC</b>		
<b>Yes</b>	186(70.7)	190(73.1)
<b>No</b>	77(29.3)	70(26.9)
<b>Timely initiation of BF (within 1 hr.)</b>		
<b>Yes</b>	243(92.4)	232(89.2)
<b>No</b>	20(7.6)	28(10.8)
<b>Mass media encourage EBF</b>		
<b>Yes</b>	228(86.7)	250(96.2)
<b>No</b>	35(13.3)	10(3.8)
<b>Husband support of EBF</b>		
<b>Yes</b>	147(64.2)	186(77.2)
<b>No</b>	82(35.8)	55(22.8)

<b>Onsite child care</b>	-	20(7.7)
<b>Yes</b>	-	240(92.3)
<b>No</b>		

#### 5.4 Exclusive breastfeeding practice

The overall exclusive breastfeeding practice was 61% (95% CI: 56.6 – 65). A total of 48.8% (95% CI: 43–55) employed mothers and 73% (95% CI: 68–78) unemployed mothers were practiced EBF.

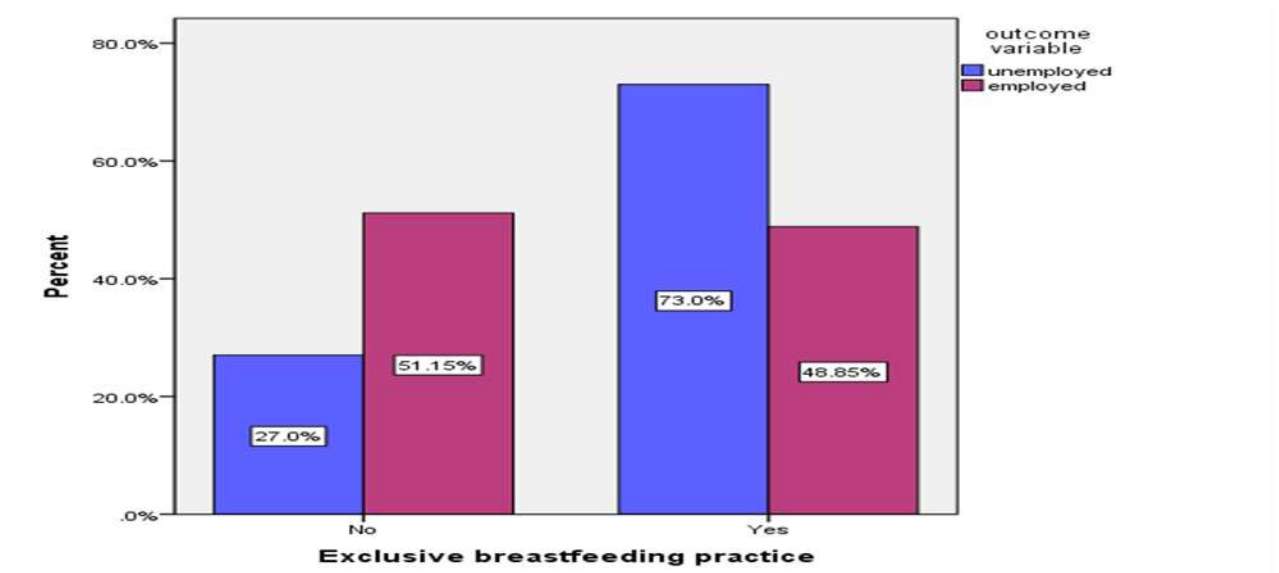


Figure 3: Exclusive breastfeeding practice among employed and unemployed mothers in Bahirdar, Ethiopia 2022

### 5.5. Factors associated with Exclusive Breastfeeding among employed and unemployed mothers

Knowledge of mothers on EBF, maternal education, and employment status were significant associated with the dependent variable in multivariable regression analysis. Mothers who had good knowledge towards EBF were 3.7 times more likely to practice exclusive breastfeeding [AOR= 3.765, 95% CI: (1,939-7.313)] compared to their counterpart. Unemployed mothers were 5.6 times [AOR= 5.617, 95%CI: (3.179–9.927)] more likely to practice EBF compared to employed mothers. Mothers who completed secondary education were about 4.2 times [AOR = 4.296, 95% CI: (1.961– 9.411)] and who completed diploma and above were 5.8 times [AOR = 5.805, 95%CI: (2.581– 13.060)] more likely to practice EBF compared to those who were no formal education.

Table 6: Factors associated with exclusive breastfeeding for both employed and unemployed mothers in Bahirdar city, Amhara, North West Ethiopia, 2022

Variables	Exclusive breastfeeding status among unemployed & employed mothers			
	Yes	No	COR (95%CI)	AOR (95%CI)
<b>Maternal age</b>				
<b>18-23</b>	36	24	1.115(0.629,1.976)	0.800(0.413,1.551)
<b>24-29</b>	135	70	1.433(0.980,2.096)	1.352(0.866,2.111)
<b>&gt;=30</b>	148	110	1	1
<b>Maternal Education</b>				
<b>No formal education</b>	24	28	<b>1</b>	<b>1</b>
<b>Primary</b>	42	17	<b>2.882(1.198,5.185)</b>	2.321(0.953,5648)
<b>Secondary</b>	81	31	<b>3.048(1.779,6.821)</b>	<b>4.296(1.961,9.411) *</b>
<b>Diploma and Higher</b>	172	128	<b>1.5677(1.083,3.447)</b>	<b>5.805(2.581,13.060) **</b>
<b>Knowledge on EBF</b>				
<b>Poor knowledge</b>	43	62	<b>1</b>	<b>1</b>
<b>Good knowledge</b>	276	142	<b>2.802(1.808,4.345)</b>	<b>3.765(1.939,7.313) **</b>
<b>Attitude towards EBF</b>				1
<b>Unfavorable attitude</b>	53	56	<b>1</b>	
<b>Favorable altitude</b>	266	148	<b>1.899(1.240,2.908)</b>	0.687(0.348,1.358)
<b>Place of delivery</b>				1.847(0.853,3.997)
<b>Health facility</b>	300	185	1.622(0.837,3.143)	1
<b>Home</b>	19	19	1	

<b>Timely initiation of BF (within 1 hr.)</b>				1.494(0.824,2.711)	1.499(0.765,2.936)
<b>Yes</b>	25	23			1
<b>No</b>	294	181	1		
<b>Post Natal Care</b>				1.461(0.993,2.151)	1.347(0.846,2.144)
<b>Yes</b>	239	137	1		1
<b>No</b>	80	67			
<b>Husband support</b>				1.329(0.890,1.987)	1.399(0.884,2.214)
<b>Yes</b>	74	63			1
<b>No</b>	203	130	1		
<b>Employment status</b>					
<b>Unemployed</b>	192	71	<b>2.832(1.966,4.080)</b>		<b>5.617(3.179,9.927) **</b>
<b>Employed</b>	127	133	<b>1</b>		<b>1</b>
<b>Mass media encourage EBF</b>				0.610(0.312,1.193)	0.630(0.291,1.362)
<b>Yes</b>	287	191			1
<b>No</b>	32	13	1		

\*=  $p < 0.05$ , \*\* =  $p < 0.01$

## 5.6. Factors associated with Exclusive Breast Feeding for Unemployed Mothers

Unemployed mothers who were supported by their husbands were 3.4 times [AOR=3.437, 95%CI: (1.667–7.235)] more likely to breast feed exclusively than those who were not supported by their husbands. Unemployed mothers who had good knowledge on exclusive breastfeeding were 2.6 times [AOR=2.625, 95%CI: (1.109–6.216)] more likely to practice exclusive breastfeeding compared to those who had poor knowledge.

In addition, unemployed mothers who had postnatal care were 5.5 times [AOR=5.582, 95%CI: (2.666–11.688)] more practiced EBF than those who had no postnatal care. Those mothers who did practiced timely initiation of BF were 3.3 times more likely to breast feed exclusively than who did not practiced [AOR =4.737, 95%CI:(1.439–15.591)]

Table 7: Factors associated with exclusive breastfeeding practice among unemployed mothers in Bahirdar city, Amhara, North West Ethiopia, 2022

Variables	Exclusive breastfeeding status among unemployed mothers			
	Yes	No	COR (95% CI)	AOR (95% CI)
<b>Maternal age</b>				
<b>18-23</b>	22	16	0.485(0.225,1.045)	0.374(0.134,1.046)
<b>24-29</b>	85	25	2.061(0.957,4.436)	1.076(0.490,2.360)
<b>&gt;=30</b>	85	30	1	1
<b>Knowledge on EBF</b>				
<b>Poor knowledge</b>	29	24	<b>1</b>	<b>1</b>
<b>Good knowledge</b>	163	47	<b>2.870(1.527,5.393)</b>	<b>2.625(1.109,6.216) *</b>
<b>Child Sex</b>				
<b>male</b>	83	23	1.589(0.896,2.819)	1.977(0.947,4.129)
<b>Female</b>	109	48	1	1
<b>Post Natal Care</b>				
<b>Yes</b>	150	36	<b>3.472(1.949,6.186)</b>	<b>5.582(2.666,11.688) **</b>
<b>No</b>	42	35	<b>1</b>	<b>1</b>
<b>ANC</b>				
<b>Yes</b>	182	62	<b>2.642(1.026,6.801)</b>	2.498(0.618,10.137)
<b>No</b>	10	9	<b>1</b>	1
<b>Party</b>				
<b>1-2</b>	96	42	1	1
<b>&gt;=3 children</b>	96	29	1.448(0.834,2.514)	1.561(0.754,3.235)
<b>Timely initiation of BF (within 1 hr.)</b>				
<b>Yes</b>	184	59	<b>4.678(1.825,11.993)</b>	<b>4.737(1.439,15.591) *</b>
<b>No</b>	8	12	<b>1</b>	<b>1</b>
<b>Had IYCF counseling</b>				
<b>Yes</b>	171	58	1.825(0.859,3.876)	1.438(0.525,3.938)
<b>No</b>	21	13	1	1
<b>Husband support</b>				
<b>Yes</b>	119	28	<b>3.855(2.120,7.008)</b>	<b>3.437(1.667,7.235) *</b>
<b>No</b>	43	39	<b>1</b>	<b>1</b>

\*= p < 0.05, \*\* = p < 0.01

### 5.7. Factors associated with Exclusive Breast Feeding for employed Mothers

Knowledge on EBF, place of delivery and onsite child care showed significant associations with EBF among employed mothers.

Employed mothers who had good Knowledge on EBF were four times [AOR= 4.194, 95% CI:(1.330, 13.22)] higher to practice EBF when compared to Poor knowledge on EBF. Employed mothers having onsite child Care were 3.6 times [AOR=3.648, 95% CI:(1.184, 11.246)] higher to practice EBF when compared to not having onsite child Care.

Employed mothers who gave birth at health facility were 5.8 times [AOR=5.880, 95% CI: 1.219, 28.365) more likely to practice EBF than those mothers who gave birth at home.

Table 8: Factors associated with exclusive breastfeeding practice among employed mothers in Bahirdar city, Amhara, North West Ethiopia, 2022

Variables	Exclusive breastfeeding status among employed mothers			
	Yes	No	COR (95%CI)	AOR (95%CI)
<b>Maternal age</b>				
<b>18-23</b>	14	8	2.222(0.877,5.628)	1.960(0.729,5.267)
<b>24-29</b>	50	45	1.411(0.838,2.375)	1.413(0.809,2.467)
<b>&gt;=30</b>	63	80	1	1
<b>Knowledge on EBF</b>				
<b>Poor knowledge</b>	14	38	<b>1</b>	<b>1</b>
<b>Good knowledge</b>	113	95	<b>3.229(1.651,6.314)</b>	<b>4.194(1.330,13.22) *</b>
<b>Attitude towards EBF</b>				
<b>Unfavorable attitude</b>	23	41	<b>1</b>	<b>1</b>
<b>Favorable altitude</b>	104	92	<b>2.015(1.125,3.608)</b>	0.939(0.331,2.662)
<b>Place of delivery</b>				
<b>Health facility</b>	125	121	<b>6.198(1.359,28.274)</b>	<b>5.880(1.219,28.365) *</b>
<b>Home</b>	2	12	<b>1</b>	<b>1</b>
<b>Onsite child Care</b>				
<b>Yes</b>	112	128	<b>3.429(1.208,9.733)</b>	<b>3.648(1.184,11.246) *</b>
<b>No</b>	15	5	<b>1</b>	<b>1</b>
<b>Party</b>				
<b>1-2</b>	38	50	1	1

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<b>&gt;=3 children</b>	89	83	1.411(0.841,2.366)	1.690(0.965,2.958)
<b>Timely initiation of BF (within 1 hr.)</b>				
<b>Yes</b>	110	122	0.583(0.262,1.300)	0.778(0.330,1.837)
<b>No</b>	17	11	1	1
<b>Mass media encourage EBF</b>				
<b>Yes</b>	14	31	0.452(0.112,1.815)	0.731(0.193,2.767)
<b>No</b>	5	5	1	1

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\*= p < 0.05, \*\* = p < 0.01



## 6. DISCUSSION

The study tried to compare exclusive breastfeeding practices and factors associated with it among employed and unemployed mothers with 7-12 months' children.

In this study the prevalence of EBF was 48.8% among employed and 73% among unemployed mothers which is comparable with the study done in Goba among employed and unemployed mothers 33% and 73% respectively and in Somalia region among employed among unemployed mothers 24.8% and 82.9% respectively [29, 31].

Employment status was significantly associated with exclusive breastfeeding practice of the mother which was supported in a study conducted in Addis Ababa Ethiopia.[56] In this study, unemployed mothers were 5.6 times more likely to practice EBF than employed ones. This finding consistent with a study conducted in Gondar[31], Awi zone and Debremarkos, Ethiopia[17, 32], Ghana[46], Cameroon [57], Malaysia[58], and Netherlands [59].The reason might be unemployed mothers tend to breastfeed their infant exclusively due to the fact: a long time to stay with their children [60], have enough time, they don't spend their time to go on the workplace, have private space for breastfeeding and flexible work schedule. This is idea supported by studies done in America, Guatemala , women who did not work outside the home were more likely to exclusively breastfeed as were women who worked outside the home[61, 62]. In accordance with the Constitution of Ethiopia and Labor Proclamation, the new Proclamation says female employees are entitled to fully paid maternity leave of 120 days (30 days pre-natal and 90 days postnatal) on recommendation of health professionals. 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[63].

On the other hand, mothers whose educational status was primary education and diploma and above were more likely to practice EBF compared to no formal education in the present study. This is in line with the research findings from Somalia, Ethiopia [29], Pakistan [64], and Nigeria [16]. The possible explanation for this association could be the fact that educated mothers may have a better knowledge regarding child feeding practices as they are prone to get information from different channels. Mothers who had good knowledge about the recommended duration of EBF were four times more likely to breastfeed exclusively than those who had poor knowledge, which is similar to results found different regions of Ethiopia [65], in Nnewi South-East Nigeria

[35].Regarding the associated factors of exclusive breastfeeding among employed mothers, those who had good knowledge on exclusive breastfeeding were more likely to breastfeed exclusively than those who had poor knowledge. This result is supported by southern Ethiopia and Awi zone, Ethiopia findings[29, 32].This might be due to employed mothers having poor knowledge did not understand the disadvantages of EBF.

In this study, postnatal care was positively associated with exclusive breastfeeding practice of unemployed mothers. The result is consistent with studies done in; Bahirdar [33] . This suggests that postnatal care has a significant impact on exclusive breastfeeding and mothers who attend postnatal care follow up could have a good opportunity to get nutritional counseling and education about infant feeding including exclusive breastfeeding. Previous studies demonstrated that health care professional support, breastfeeding education programs, breastfeeding promotion programs, and good access to health care in the postnatal period were reported as facilitator of exclusive breastfeeding[5]. This could be counseling enhances mothers' understanding and appreciation of the demands and benefits of EBF.

In this study, unemployed mothers who were supported by their husband were found to practice exclusive breast feeding three times more likely compared with their counterparts. The finding is similar to the prior studies conducted in Awi, Ethiopia[32] and Zimbabwe [66]. This infers those husbands play an important role in the decision making about family and household affairs and which affects many aspects of family life including infant feeding practices. Previous study have revealed that husbands' support could improve the success of exclusive breastfeeding [31]. This might be because in Ethiopia a husband plays a major role in the decision making about family and household issues and which affects many aspects of family life including infant feeding practices. Support received during the practice of exclusive breastfeeding included help with house chores, verbal encouragement and assistance in the care of the older child may enhance EBF.

This study reveals that, significant association between early initiations of breastfeeding and exclusive breast-feeding. unemployed mothers who did practiced timely initiation of BF were five times more likely to breast feed exclusively than who did not practiced.it is supported with the study finding in Somali region, Ethiopia[29].The importance of early contact has also been linked to strengthening the emotional bond between mother and child, which may also be responsible for increased breastfeeding duration.

The result from this study indicated that, place of delivery was one of the predictors of EBF practice. Employed mothers who delivered at healthcare facilities were six times more likely to practice exclusive breastfeeding compared with mothers who delivered at home. It is supported with study findings from Zimbabwe[66], Ghana [46]and Bahirdar [33].This might be due to the postpartum breastfeeding counseling and support provided at the health facility as part of discharge practices.

Employed mothers who had an access to breastfeed their child at work place were found to practice EBF four times more likely than those who didn't have the access which is similar from a study done in Ghana [46]. This might be due to the fact that employed mothers get their child nearly at the work place and it can easily practice exclusive breastfeed.

## **7. STRENGTHS AND LIMITATION OF THE STUDY**

### **Strengths of the study**

- The study used large sample size which increases the precision of the findings.
- There was high response rate.

### **Limitations of the study**

- This study did not show the employment characteristics, such as economic status and salary of mothers.
- Recall bias since mothers were interviewed to recall their past experiences.

## **8.CONCLUSION**

This study has indicated employed mothers are less likely to practice exclusive breastfeeding than unemployed mothers. This showed that maternal employment is associated with low EBF practice. Among employed mothers' knowledge of mothers, place of delivery and onsite child care are positively associated with EBF practice among employed mothers. Finally, husband support, knowledge of mothers, postnatal care and timely initiation of breastfeeding are significantly associated with EBF practice among unemployed mothers.

## **9. RECOMMENDATION**

- To all Bahirdar government and non-government organization
  - Constructing on-site or near site child care centers
  - working on the promotion of exclusive breastfeeding should involve husbands and family members so that mothers are helped to adhere to exclusive breastfeeding
- To all Bahirdar Health facilities
  - Health professionals should consider health education as an important aspect in promotion of exclusive breastfeeding promotion and support of appropriate feeding practices
  - To create and raise the awareness EBF by designing proper health education targeting on mothers who have no formal education.
  - Promoting and strengthening institutional delivery
  - Promoting and strengthening PNC service

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## **ANNEXES**

### **ANNEX - I: ENGLISH VERSION QUESTIONNAIRE**

Information sheet and Consent Form

My name is \_\_\_\_\_ I am the member of the team for the study conducted by Hana Mengie in this area under Bahirdar University, College of Health Science, School of Public health, Department of Nutrition and Dietetics.

The purpose of this study is to compare the prevalence and associated factors of exclusive breastfeeding practice to infants within the first six months among employed and unemployed mothers in Bahirdar city. The study involves mothers with children from 6 to 12 months and you are one of the women who are selected to participate in this study, therefore kindly requested to participate. Your name will not be written and everything you tell me will be kept strictly confidential. Your participation in this research is entirely voluntary, and you are not obliged to answer any questions you do not want to answer. We would like to inform you that the responses that you provide the questions are very essential in improving the practice of mother on exclusive breast feeding.

Up to now you have been given all information that I feel you should know regarding the research project that you are being asked to participate in. I think you have understood the issues in detail. As I told you the survey has no risk, confidential and takes only 20 minutes of interview.

Thank you for your cooperation and listening!!!

	Question for the respondent	Response and code	Skip
Part 1: Background of the mother and their child			
101.	How old are you?	Age in years_____	
102.	What is your educational status?	1.Unable to read & write 2. Able to read and write 3. Primary education (1-8) 4. Secondary education (9-12) 5. Diploma and certificate  6. Higher education (degree and above)	
103.	What is your Religion?	1.orthodox 2. Muslim 3. protestant  4.Other specify	
104.	What is your ethnicity?	1.Amhara 2. Agew 3. Tigray 4. Oromo 5. others	
105.	Are you employed?	1.yes 2.no	

Are you willing to participate?

Yes \_\_\_\_\_ No \_\_\_\_\_

Name of Data collector \_\_\_\_\_ Signature \_\_\_\_\_

106.	What is your current marital status?	1.Single 2. Married 3. Divorce 4. Widowed	
107.	What is your husband's educational status?	1.Unable to read & write 2. Able to read and write 3. Primary education (1-8) 4. Secondary education (9-12) 5. Diploma and certificate 6. Higher education (degree and above)	
108.	Does your husband support to practice EBF?	1.Yes 2.No	
Part 2: Obstetric and history healthcare related questions			
201	What is the sex of the child?	1.Male 2.Female	
202.	What is the age of your child?	..... month	
203.	How many times have you given birth so far?	-----	
204.	How many children have you born alive	No of children born alive -----	
205	What is the age range between your youngest child and his/her bigger brothers/sisters?	..... month	
206.	When you were pregnant, did you go to a health facility for antenatal care?	1.yes 2.no	
207.	Where did you give a birth your youngest baby?	1.At health facility 2. At home	
208.	Following your last delivery, have you ever attended postnatal clinic in any health facility?	1. Yes 2. No	
209.	Have you received any advice on feeding infants?	1. Yes 2. No	



Part 3: Exclusive breastfeeding related questions		
301.	Which sources do you have access to hear/read about Exclusive Breastfeeding practice?	1. Not at all 2. Newspaper/Magazines/Fliers 3.Radio 4. TV
302.	When do you start breastfeeding after delivery?	1.Immediately/with in1 hour 2. 1 hour up to 1 day 3. After 1 day up to 3 day 4. After 3 day
304.	Did you feed the first milk/colostrum to your infant?	1.Yes 2. No
305.	Are you still breastfeeding the child?	1.Yes 2.No
306.	Did you give breast for your baby exclusively for what months?	-----
307.	What conditions did affect you not to practice Exclusive breastfeed? “More than one answer is possible”	1.Working condition 2. Fear of producing not enough milk 3.Due to maternity leave 4.Lack of onsite child care 5.your marital status 6.Other specify _____
308.	How many times did you breastfed in 24 hours?	----- times
Part 4 - knowledge of mother about exclusive breastfeeding		
401.	Breastfeeding is important for infant health?	1. Yes 2. No
402.	Breastfeeding is important for maternal health?	1. Yes 2. No
403.	An infant should be put to breast immediately after birth?	1. Yes 2. No
404.	The first milk/colostrum should be given to an infant?	1. Yes 2. No
405.	Pre-lacteal feeding is needed for an infant before starting breast milk?	1. Yes 2. No
406.	Breast milk alone without water and other liquids is enough for an infant during the first 6 months of life?	1. Yes 2. No
407.	Starting from 6 month an infant should start complementary feeding and continued breastfeeding up to 2 years and beyond?	1. Yes 2. No



Part 5: Attitude of mothers about exclusive breastfeeding		
501.	For the first 6 months, only breast milk is enough for a baby	1 Strongly Agree 2. Agree 3. Neutral 4. I do not agree 5. I do not agree very much
502.	Breastfeeding should begin immediately after giving birth	1 Strongly Agree 2. Agree 3. Neutral 4. I do not agree 5. I do not agree very much
503.	It is unhealthy for a 6-month-old baby to eat more lilac than breast milk	1 Strongly Agree 2. Agree 3. Neutral 4. I do not agree 5. I do not agree very much
504.	To cleanse the bowel, it is necessary to feed infants before they start breastfeeding	1 Strongly Agree 2. Agree 3. Neutral 4. I do not agree 5. I do not agree very much
505.	Breastfeeding alone for 6 months is beneficial for the mother	1 Strongly Agree 2. Agree 3. Neutral 4. I do not agree 5. I do not agree very much
506.	Breastfeeding alone is good for the baby for 6 months	1 Strongly Agree 2. Agree 3. Neutral 4. I do not agree 5. I do not agree very much
507.	The first milk must be discarded	1 Strongly Agree 2. Agree 3. Neutral 4. I do not agree 5. I do not agree very much
Part 6: For employed mothers only		
601.	What type of work did you do?	1.Petty trader 2.gov't employee 3.Daily laborer 4. Other (specify).....
602.	How long did you stay at work?	_____ hours
603.	Is there onsite child care at your work place?	1.Yes 2.No

**ANNEX II: መጠይቆች- (በአሜሪካ)**

ባህር ዳር ዩኒቨርሲቲ

የህብረተሰብ ጠፍ ትምህርት ቤት

መጠይቅ

የጥናቱ አላማ መግለጫ

ጠፍ ይስጥልኝ ስሜ----- ይባላል: : እኔ ከሀና መንጌ ጋር እየሰራሁ ሲሆን ይህ ጥናት በባህር ዳር ዩኒቨርሲቲ በድህረ ምረቃ ፕሮግራም የሁለተኛ ዲግሪዎን በህብረተሰብ ጠፍ ሳይንስ መክክ ለመረቅ ከሚያስፈልጎት መስፈርቶች አንዱና ዋነኛው ነው : የጥናቱ ዋና አላማ ደረጃቸው ከ 6 ወር - 12 ወር ላሉ ህፃናት የእናት ጠቅ ወተት ማጥባትን በተመለከተ ከእናቶች የሰራህኔ ታና ከሌሎች ማህበራዊ ህኔታዎች ጋር ተያያዝ ያሉ ምክንያቶችን ለይቶ ለመወቅ እንዲሁም ግሮች በተመለከተ መፍትሄ ለማግኘት የሚከላከሉ ጥናት ነው : በዚህ መረጃ አሰባስብ ላይ የሚሰጡ እናቶች ተቀጣሪ ሰራተኛ እናቶችና በቤታቸው ውስጥ የሚሰሩ እናቶች ሲሆኑ እርሶም የመረጃ አሰባስብ ዘዴን በመጠቀም መስፈርቱን አሟልተው ከተመረጡ እናቶች አንዱ ነዎት : በዚህ ጥናት የሚሰጠው መረጃ ለጥናቱ አላማ ብቻ የሚወጥ ይሆናል : ከእርሶ የሚሰጠው መረጃ ማስጠንቀቂያ ተቀባይ ሆኖ ለጥናቱ ስራችን ነው : የእርሶ ስም በዚህ መጠይቅ ውስጥ አይጠየቅም : በተጨማሪም የሚጠየቁትን ጥያቄ መሉ በመሉ መተው ወይም በክፍል መመለስ ወይም በፈለጉ ጊዜ ማቋረጥ መብትዎ ነው : መጠይቁ 30 ደቂቃ ይወስዳል : : በፍቃድኝነት ስለሚደረጉት አስተዋኦ በቅድሚያ እና መሳግናለን

የጥናቱ አላማ ተረድቶ ለሁለት ሰዓታት ማንኛውም የምስጢር መረጃ ለዚህ ጥናት ብቻ እንደሚወጥ እንዲሁም ማንነቱ የሚይዝ ለጽ መሆኑን ስለተረዳው በዚህ ጥናት ላይ ለመሳተፍ: -

ፍቃድኝ ነኝ (የ ሃምሌክት ያድርጉ) ----- ፍቃድኝ አይደለሁም (የ ሃምሌክት ያድርጉ) -----

የጠየቁ ስም----- የጠየቁ ፊርማ-----

የቃለ መጠይቁ ቀን \_\_\_\_\_

ቃለ መጠይቁ የሚጀምርበት ጊዜ \_\_\_\_\_ የሚጠናቀቅበት ጊዜ \_\_\_\_\_

ቀበሌ \_\_\_\_\_

ክፍል 1: ማህበራዊ-ስነ-ህዝብ ባህሪዎች ተዛማጅ ጥያቄዎች

ተ.ቁ	ጥያቄ	መልስ
101.	እድሜዎ ስንት ነው?	-----አመት
102.	የት/ት ደረጃዎ /ክፍሎዎ ስንት ነው?	1.ያልተማረች 2. መጻፍና ማንበብ የምትችል 3. የመጀመሪያ ደረጃ ትምህርት ያላት (1-8) 4. የሁለተኛ ደረጃ ትምህርት ያላት (9-12) 5. የመጀመሪያ ትምህርት ያላት (ስርዲ ፍኬት /ዲፕሎማ) 6. የከፍተኛ ትምህርት ደረጃ ያላቸው ድግሪና ከዚያ በላይ
103.	ሐይማኖቶዎ ምንድን ነው?	1.አርቶዶክስ 2.መስሊም 3. ፕሮቴስታንት 4. ሌላ ካለ ይግለጹ .....
104.	የትኞቹ ጎሳዎች ናቸው?	1. አማራ 2. አገው 3. ትግሬ 4. አሮሞ 5. ሌላ ካለ ይግለጹ --- ----
105.	ተቀጣሪ ስራተኛ ነዎት?	1.አዎ 2.አይደለሁም
106.	የትዳርዎ ሁኔታ ምንድን ነው?	1.ያላገባች 2. ያገባች 3. የተፋታች 4. ባለቤቷ የሞተባት
107.	የባለቤትዎ የትምህርት ደረጃ ክፍል ስንት ነው?	1.ያልተማረ 2. መጻፍና ማንበብ የማትችል 3. የመጀመሪያ ደረጃ ትምህርት ያላው (1-8) 4. የሁለተኛ ደረጃ ትምህርት ያላው (9-12) 5. የመጀመሪያ ትምህርት ያላው (ስርዲ ፍኬት /ዲፕሎማ) 6. የከፍተኛ ትምህርት ደረጃ ያላቸው ድግሪና ከዚያ በላይ
108.	ስለ ጠት ብቻ ማጥባት ባለቤትሽ ድጋፍ ያደርጋል?	1.አዎ 2.የለም
201.	የህፃኑ/ደብዳቤ ስም ምንድን ነው?	ሀ/ወንድ ለ/ ሴት
202.	የህፃኑ/ደብዳቤ እድሜ ስንት ነው?	..... ወር
203.	እስካሁን ስንት ጊዜ ወልደዋል?	-----
204.	ምን ያህል ልጆችን በህይወት ወልደዋል?	በህይወት የተወለዱ ልጆች ብዛት -----
205.	በትንሽ ልጆችሁ እና በታላላቅ ወንድሞቹ/እህቶቹ	

	መካከል ያለው የዕድሜ ክልል ስንት ነው?	..... ወር
205.	በእርግዝናዎ ወቅት ለቅድመ ወሊድ ክትትል የጠፍተዎት የሆኑት ተቋም ሂደቶች?	1. አዎ 2. አልሂደኩም
206.	የመጨረሻ ልጅዎን የወለዱት የትኑት ነው?	1. ጠፍተዎት 2. መኖሪያ ቤት ወስጥ 3. ሌላ /ይገለጹ/
207.	የአሁኑን /ኗን ህፃንን ከወለዱ በኋላ የድህረ ወሊድ የጠፍተዎት ክትትል በጠፍተዎት ወስጥ ተከታትለው ያወቃሉ?	1. አዎ 2. አላወቅም
208.	ስለ ጭላ እና ህጣን ልብ ላይ ምክር አግኝተዎት?	1. አዎ 2. አላወቅም

<b>ክፍል 3: የእናት ጠት ወተት ብቻ በመጀመሪያዎቹ ስድስት ወራት ለህፃኑ ከመስጠት ጋር የተያያዙ መሰረታዊ ጥያቄዎች</b>		
301.	በየትኛው የመገናኛ ብዙሀን ዘርፍ ለመጀመሪያዎቹ 6 ወራት የእናት ጠት ማጥባትን በተመለከተ መረጃ ሊያገኙ ይችላሉ?	1.አላገኘሁም 2.ከ ጋዜጣ/በራሪ ጽሁፎች 3.ራዲዮ 4.ቲቪ
302.	እንደወለዱ ጠት ማጥባት የጀመሩት በስንት ጊዜ ወስጥ ነበር?	1.ወዲያ ወኑ/አንድ ሰዓት ባልሞላ ጊዜ ወስጥ 2. ከአንድ ሰዓት እስከ አንድ ቀን 3. ከአንድ ቀን በኋላ እስከ ሶስት ቀን 4. ከሶስት ቀን በኋላ
303.	የመጀመሪያ ወን የጠት ወተት (እንገር) ለህፃኑ/ኗ አጥብተሽ ነበር?	1. አዎ አጥብቻለሁ 2. የለም፣ አላጠባሁም
304.	በአሁኑ ሰዓት ጠት በማጥባት ላይ ነዎት?	1.አዎ 2.አይደለም
305.	ለልጅዎ የጠት ወተት ብቻ ለምን ያህል ጊዜ ሰጡ?	-----
306.	ለመጀመሪያዎቹ ስድስት ወራት ለልጅዎ ጠትዎን ብቻ እንዳይመጡ የሚደርጉዎት ምክንያት ካለ ቢገልጹልን? (ከአንድ በላይ መልስ መስጠት ይችላሉ)	1.የስራ ሁኔታ 2. ጠቅ በቂ ወተት አያመጣ ጭምር 3. የድረህረ ወሊድ እረፍት ማስ 4. በስራ ቦታ ልጄን ለማጥባት የሚያስችል ሁኔታ ያለ መመኛቸት 5. የጋብቻ ሁኔታ 6. ሌላ /ይገለጹ/-----
307.	ሌሎችንና ቀኑን ጨምሮ ለምን ያህል ጊዜ ልጅዎን ጠት አጥብተዋል?	-----ጊዜ

**ክፍል 4: ሥላ ጠት ማጥባት ዕውቀት**

401.	ጠት ማጥባት ለህፃናት ጠጅነት ይጠቅማል?	1. አዎ 2. አላውቅም
402.	ጠት ማጥባት ለእናት ጠጅነት ይጠቅማል?	1. አዎ 2. አላውቅም
403.	ህፃን እንደተወለደ ወዲያ ወኑ በአንድ ሰዓት ጊዜ ወስጥ ጠት መጥባት ይኖርበታል?	1. አዎ 2. አላውቅም
404.	የመጀመሪያ ወን የጠት ወተት/ እንገር/ ለህፃኑ/ኗ መስጠት ይኖርበታል?	1. አዎ 2. አላውቅም
405.	ህፃን ከተወለደ በኋላ ጠት መጥባት ከመጀመሩ በፊት ሌላ ምግብ ቢሰጠውጥሩ ይሆናል?	1. አዎ 2. አላውቅም
406.	ለህፃን ልጅ የእናት ጠት ወተት ብቻዎን ምንም ዓይነት ወሃ፣ ሌላ ፈሳሽ ነገር ወይም ምግብ ሳይጨምር በት ለመጀመሪያዎቹ 6 ወራት ያህል በቂ ነው?	1. አዎ 2. አላውቅም

407.	ህፃን ልጅ 6ወር እንደሞላ ወከለናት ጠቅ ወተት በተጨማሪ ሌላ ተጨማሪ ምግብ መጀመር ይኖርበታል? እንዲሁም 2 ዓመትና ከዚያ በላይ እስኪሆን ወድረስ የእናቱን ጠቅ መጥባት ይኖርበታል?	1. አዎ 2. አላወቅም
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**ክፍል 5: የእናቶች አመለካከት ጥያቄዎች**

501..	በመጀመሪያዎቹ 6 ወራቶች ወስጥ ለህፃን ልጅ የጠቅ ወተት ብቻ በቂ ነው	1. በጥብቅ እስማላሁ 2. እስማላሁ 3. ገለልተኛ 4. አልስማምም 5. በጣም አልስማምም
502.	አንድ አራስ ልጅ ከወለዱ በኋላ ወዲያው ጠቅ መጥባት መጀመር አለበት	1. በጥብቅ እስማላሁ 2. እስማላሁ 3. ገለልተኛ 4. አልስማምም 5. በጣም አልስማምም
503.	ለ 6ወር ህፃን ከጠቅ ወተት ተጨማሪ ሌላ ምግብ መጣብ ጠፍቶ ለወም	1. በጥብቅ እስማላሁ 2. እስማላሁ 3. ገለልተኛ 4. አልስማምም 5. በጣም አልስማምም
504.	አንጅትን ለማፅዳት የጠቅ ወተት ከመጀመሪያው በፊት ለጨቅላ ህፃን ቅድመ-ምግብ መጣብ ያስፈልጋል	1. በጥብቅ እስማላሁ 2. እስማላሁ 3. ገለልተኛ 4. አልስማምም 5. በጣም አልስማምም
505.	የጠቅ ወተት ብቻ ለ 6 ወራት ማጥባት ለእናቱ ጠቃሚናቸው	1. በጥብቅ እስማላሁ 2. እስማላሁ 3. ገለልተኛ 4. አልስማምም 5. በጣም አልስማምም
506.	የጠቅ ወተት ብቻ ማጥባት ለ 6 ወር ለሕፃኑ ጠቃሚ ነው	1. በጥብቅ እስማላሁ 2. እስማላሁ 3. ገለልተኛ 4. አልስማምም 5. በጣም አልስማምም
507.	የመጀመሪያው ወተት (እንገር) መጣል አለበት	1. በጥብቅ እስማላሁ 2. እስማላሁ 3. ገለልተኛ 4. አልስማምም 5. በጣም አልስማምም

**ክፍል 6: ለተቀጣሪ ሰራተኛ እናቶች ብቻ የሚጠየቅ**

601.	የስራዎ አይነት?	1. ነጋዴ 2. መደበኛ ተቀጣሪ ሰራተኛ 3. የቀን ሰራተኛ 4. ሌላ /ይገለጹ/-----
602.	በቀን ለምን ያህል ሰዓት ስራ በታያሳልፋሉ?	_____ ሰዓት
603.	በስራዎ በታልጀዎን ለማጥባት የሚገቡ ስራዎች ሁኔታ አለ?	1. አዎ 2. የለም

**Declaration**

I declare that this work and all the resources of the materials used in this work are being duly acknowledged. I with respect declare that this work is not submitted to any other institution anywhere for the award of any academic degree, diploma or certificate.

**Principal Investigator:**

Signature

Date

Hana Mengie



25/12/2019

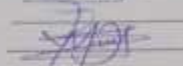
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25/12/2019

25/12/2019



