ADDIS ABABA UNIVERSITY

COLLEGE OF HEALTH SCIENCES

SCHOOL OF PUBLIC HEALTH

EXCLUSIVE BREASTFEEDING PRACTICE AND WORK-RELATED FACTORS AMONG HEALTH CARE WORKERS IN ADDIS ABABA, ETHIOPIA

BY: RITA PETROS

JUNE, 2021

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By: Rita Petros (BSc)

A THESIS SUBMITTED TO THE SCHOOL OF GRADUATE STUDIES OF ADDIS ABABA UNIVERSITY IN PARTIAL FULFILLMENT OF THE REQUIREMENT FOR THE DEGREE OF MASTERS OF PUBLIC HEALTH IN PUBLIC HEALTH NUTRITION.

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BY: RITA PETROS (BSC)

ADVISORS: Dr. SOLOMON SHIFERAW (MD, MPH, PHD)

ESETE HABTEMARIAM (MPH)

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Examiners' Approval Sheet

We, the undersigned, members of the Board of Examiners of the final open defense by Rita Petros, have read and evaluated her thesis entitled "Exclusive breastfeeding practice and work-related factors among health care workers in Addis Ababa, Ethiopia: A cross-sectional study". This is to verify that the thesis has been accepted in partial fulfillment of the requirements for the masters of public health degree in "Nutrition".

Advisors

_____	_____	_____	_____
Full name	Rank	Signature	Date
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Full name	Rank	Signature	Date

External Examiner

_____	_____	_____	_____
Full name	Rank	Signature	Date

Internal Examiner

_____	_____	_____	_____
Full name	Rank	Signature	Date

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Abbreviations and Acronyms

ANC	Ante Natal Care
AOR	Adjusted Odds Ratio
CI	Confidence Interval
COR	Crude Odds Ratio
CSA	Central Statistics Agency
EBF	Exclusive Breastfeeding
EDHS	Ethiopian Demographic and Health Survey
EMDHS	Ethiopian Mini Demographic and Health Survey
EPBS-Q	Employee Perceptions of Breastfeeding Support Questionnaire
HCW	Health Care Workers
HR	Human Resource
UNICEF	United Nations Children's Fund
WHO	World Health Organization

ABSTRACT

Background. Breastfeeding is one of the most powerful practices for promoting child survival and well-being. Healthcare workers have a responsibility to promote and support breastfeeding among their clients, even though their ability to do this may be influenced by their workplace environment and personal experience. However, little is known about exclusive breastfeeding practices and the perceived barriers among health workers.

Objective: To assess the exclusive breastfeeding practices and work-related factors among healthcare workers with children between the ages of 4-6 months in government and private hospitals of Addis Ababa, Ethiopia.

Method: Institution based cross-sectional study was conducted among 369 health care worker mothers with children between the ages of 4-6 months from January to February, 2021. Exclusive breastfeeding was assessed based on infant feeding practice in the 24 hours preceding the survey. A structured questionnaire was used for data collection and EPI data version 4.6.0 to enter, clean and Stata version 16.0 was used to analyze data. Bivariable and multivariable logistic regressions were fitted to identify the presence and strength of association. Odds ratios with 95% confidence interval were computed to determine the level of significance.

Result: The magnitude of exclusive breastfeeding among healthcare workers with infants between the age of 4-6 months was 26.6% (95 % CI: 22, 31) in the 24 hours preceding the survey. Being employee of a government hospital (AOR = 3.09; 95% CI: 1.44, 6.63), giving birth through spontaneous vaginal delivery (AOR=3.71; 95% CI: 1.48, 9.26), being a part time employee (AOR=2.2; 95% CI: 1.19, 4.06) and resumption of work at 5 months (AOR = 3.69; 95% CI: 2.1, 6.46) were found to be significantly associated with higher exclusive breastfeeding practice.

Conclusion: A small proportion of infants are exclusively breastfed during the first 6 months, despite what is recommended in the national and global infant and young child feeding guidelines. The type of organization, mode of delivery, working status and time of return to work were factors associated with exclusive breastfeeding practice. Employers should make workplaces more breastfeeding friendly to enhance exclusive breastfeeding.

1. INTRODUCTION

1.1 Background

Exclusive breastfeeding(EBF) for the first 6 months of life improves the growth, health and survival status of new born and is one of the most natural and best form of preventive medicine(1).EBF plays a pivotal role in determining the optimal health and development of infants and associated with a decreased risk for many early life diseases including otitis media, respiratory tract infection and diarrhea(2)

Breastfeeding is also important for mothers to protect against postpartum hemorrhage, postpartum depression, ovarian and breast cancer, heart disease and type two diabetes(3–5). It is estimated that improving breastfeeding rates to a near universal level could prevent 20,000 maternal deaths from breast cancer(6).And the social benefits include decreased health related expenses(7).

Breastfeeding has been consistently shown to be protective against a large range of immediate and longer-term health outcomes that are a significant burden on individuals, health system and society. For this reason, the World Health Organization (WHO)and United Nations Children's Fund (UNICEF) recommend initiation of breastfeeding within an hour of birth, exclusive breastfeeding for the first 6 months of life, and continued breastfeeding beyond 6 months and at least up to 2 years of age or more along with the introduction of nutritionally adequate and safe complementary foods(8).Exclusive breastfeeding means that the infant receives only breast milk. No other liquids or solids are given, with the except oral drops of vitamins, minerals or medicines(9)

Globally, improving breastfeeding rates could save the lives of more than 823,000 children under age of five every year(10).However, in 2018 globally only 41% of infants were exclusively breastfed under 6 month of life(11). It has been estimated that EBF reduces infant mortality rates by up to 13% in low-income countries(12).A large cohort study undertaken in rural region of Ghana concluded that 22% of neonatal deaths could be prevented if all infants were put to breast within the first hour of birth (13).

Low rates of exclusive breastfeeding result from different work-related factors such as inadequate maternity leave,workload,rigid work time and workplace policies that don't support a woman's ability to breastfeed when she returns to work, which increase the rate of nonexclusive breastfeeding among employed women(14,15).

Healthcare workers have a great influence on infant feeding practices(16),because the importance of healthy nutrition to the normal growth and development of children is well known to them(17).It is expected that they impart their knowledge of the advantages of breastfeeding to the baby, mothers, society and clients. Their ability to do this may be influenced by their, personal experience and workplace environment.

1.2 Statement of the problem

Suboptimal breastfeeding practices, especially non-exclusive breastfeeding under six months of age are contributing to the burden of childhood morbidity and mortality(18,19) and is responsible for 45 % of neonatal infectious deaths, 30 % of diarrheal deaths and 18 % of acute respiratory deaths (20).

Globally, only 41% of infants aged 0 to 6 months are exclusively breastfed(11). Recent analyses indicate that suboptimal breastfeeding practices, including non-exclusive breastfeeding, contribute to 11.6% of mortality in children under 5 years of age (21).Breastfeeding is a tradition in every culture in Africa, however only 37% of infants under six months are exclusively breastfed(22).Exclusive breastfeeding can significantly reduce the number of under five deaths in Africa, especially Sub -Saharan Africa where 41 % of deaths occur mainly due to inadequate breastfeeding practices in combination with high levels of disease (23).

However the Ethiopian Health Sector Transformation Plan had planned to increase the rate of exclusive breastfeeding to 70% by the end of 2020(24), only 59% of mothers breastfed exclusively according to Ethiopian Mine Demographic Health Survey (EMDHS) 2019 and the percentage of exclusive breastfeeding decreased sharply with age, from 73.2% of infant s at 0–1 month to 40.4% of infants at 4–5 months(25).When looking at the median duration of breastfeeding with respect to educational status of women in Ethiopia, women with no education breastfeed for 25.4 months where as those with more than secondary education breastfeed four months lower than that of the previous ones (21.5 months). Comparing by regions across the country one of the shorter median duration of any breastfeeding among children is found in Addis Ababa which is 20 months (26).

In Ethiopia the postpartum period of maternity leave is only four months. Within four months after delivery, working mothers are expected to resume their work and perform like any other employees. Most workplaces do not have the supportive environment for breastfeeding, which would probably result in discontinuation of breastfeeding. There are different studies in Ethiopia which shows the magnitude of breastfeeding among working mothers is much lower than that of unemployed mothers due to various work related factors(27,28).

Healthcare workers have a duty to promote and support breastfeeding among their clients. Although their ability to do this may be influenced by several factors like work-related factors such as supervisor and co- worker support, type of work, workload and maternity leave and also individual factors such as age of the mother, mode of delivery and partner and family support are some of the factors that influence exclusive breast feeding among health care workers. It is thus within expectations that health care workers should be aware of breastfeeding benefit and practice what is ideal for their own infants. This is likely to increase parents 'interest in breastfeeding, especially those who provide care to mothers and babies(29).

However, exclusive breastfeeding among health professional women is very low. According to a study on female medical doctors in Nigeria, only 11% mothers practice exclusive breastfeeding for six months (30).And also the study done in Ethiopia at North Gondar among nurses and mid-wives,35.9% of the participants exclusively breast feed for six months and major reason mentioned by the respondents for discontinue EBF was employment (31).

A study performed in an academic medical center in the USA showed that a negative personal experience of a physician while breastfeeding affect the counseling that she provides to her patients on breastfeeding,92% of mothers felt that their negative personal experience make it difficult for them to counsel clients regarding breastfeeding(32). In a study of pediatricians and the promotion/support of breastfeeding, it was reported that respondents who had personal experience with breastfeeding were 2.3 times more likely to report supportive policies(17).In addition, Freed et al, in their study, reported that residents and physicians with personal experiences of breastfeeding were more confident providing support and advice to breastfeeding patients(33).It is therefore our expectation that HCW who have good breastfeeding practices will most likely promote what they believe in and practice. Evaluating the experiences of this group of women is important as they have an important role in promoting breastfeeding (16,34).

1.3 Significance of the Study

The findings from this study would give insight on the magnitude of exclusive breastfeeding among health care workers and work-related factors that influence EBF practice. It can also help policy makers and relevant stakeholders by provide information about the current status of the work place breastfeeding support provided for health care workers and which could be used as an input to develop policies that could help healthcare provider practice exclusive breastfeeding. In addition, the finding from this research would serve as a baseline data for further researches.

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2. LITERATURE REVIEW

This section includes important findings from previously done literatures from worldwide, continental and also national information about the prevalence of exclusive breastfeeding among health care workers and work-related factors. It also includes conceptual framework which shows the predictors of exclusive breastfeeding among health care workers; which drives from different literatures.

2.1 Exclusive breastfeeding practices

2.1.1. Exclusive breastfeeding

Exclusive breastfeeding is a cornerstone of child survival and child health because it provides essential, irreplaceable nutrition for a child's growth and development. Breast milk is highly nutritious, it provides all the necessary elements needed for infant health during the first six months of life and there- after (6).Early initiation of breastfeeding is encouraged for a number of reasons. Mothers benefits from early suckling because it stimulates breast milk production and facilitates the release of hormone which helps the contraction of the uterus and reduce postpartum blood loss(35).Early initiation of breastfeeding also fosters bonding between mother and child(36)

Even though WHO and UNICEF recommend exclusive breast feeding for the first six months, in order for the infants to achieve optimal growth, development and health(37).Globally the rates of exclusive breastfeeding remain low 41% of children less than six months of age were exclusively breastfed in the period of 2013–2018(11).In low-income and middle-income countries, only 37% of children younger than 6 months of age are exclusively breastfed(6).

In Ethiopia, exclusive breastfeeding for the first six months of infant's life is not widely practiced, the national rate was 59% and there is observed prominent decline of EBF as the age of infant increases, the rates are 73.2% from birth to one month, 68.2% at 2 to 3 months and 40.4% at 4 to 5 months(25).And also, studies conducted in Bahir Dar city and Addis Ababa, Ethiopia revealed that the rate of EBF in infants aged less than six months were 50.3%and 44.2% respectively(38,39)

2.1.2. Exclusive breastfeeding practice among health care workers

One of the major channels for promoting breastfeeding should be the health sector - ante-natal clinics, delivery rooms, postnatal clinics and infant growth monitoring clinics. Health care workers should be responsible for this and they should ensure practices and training that promote, protect and support breastfeeding.

Based on a study done in South India to assess breastfeeding practices among health care professionals with total sample size of 81,the prevalence of exclusive breastfeeding for 6 months was 58.1% and mean duration of EBF was 5.3 months(40).Similarly, study from China indicated that the prevalence of EBF among female physicians and nurses was 19.1% (41)

Other Study done in Nigeria,to assess the knowledge and practices of breastfeeding among female health care workers with a total sample size of 160. Among the total 93(78.8) % started breast feeding within ½ hour after delivery, the remaining initiated breastfeeding later. Exclusive breastfeeding for 6 months 108 (67.9%), the remain 51(32.1%) practiced for less than 6 months. Reasons given by the 51 respondents were work 40 (78.4%), post graduate education/schooling 10 (19.6%) and 8 (15.7%) belief that EBF is not sufficient for a baby up to 6 months of age (42).Similarly, study conducted in a Plateau State, among female resident doctors the prevalence of exclusive breastfeeding was 61.7%(43).

Cross sectional study conducted on 178 Nurses and Midwives with children age from six to twenty months in Ethiopia, showed that the prevalence of exclusive breastfeeding for 6 months was 35% and 49.4% of the participants EBF for only 3 months or less. The mean duration for EBF was 4.1 months 64.1% out of who didn’t practiced EBF use infant formula 11.8% of the participant cow milk use as alternative feeding. (31)

2.2. Factors Associated with Exclusive Breastfeeding Practice

There are so many factors that hinder exclusive breastfeeding practices among health care workers. To address this problem knowing the predicting factors which favor exclusive breastfeeding practices among health care workers is fundamental. From different studies done in the general population and health care workers, we can divide these factors into two; individual factors which include mother age, mode of delivery, number of children and child age and support from family and partner and work relate factors which include organizational support, managerial and co-worker support, breastfeeding break, maternity leave, and physical environment of work place were factors which associated with exclusive breastfeeding practice.

2.2.1 Individual factors

2.2.1.1 Age of the mother

Many studies show that advanced maternal age was associated with higher rate of exclusive breast feeding than younger maternal age(44,45).similarly study conducted in Northwest Ethiopia, found that duration of exclusive breastfeeding increases as the age of the mother increases thus women with older age are more experienced and can practice exclusive breastfeeding compared to the ones with younger age(31).However, in other studies younger women more likely exclusive breastfeed than older women(46)

2.2.1.2 Mode of delivery

Different studies identified that the rate of exclusive breast feeding was higher among mothers who gave birth through vaginal (31,39,41,47–49).Similarly, mothers who gave birth through vaginal were more likely to practice exclusive breastfeeding than cesarean section(50).Furthermore, study conducted in Ghana among city-dwelling professional working mothers found that only 10.3% of mothers exclusively breastfed and mother who had a normal delivery were almost 10 times more likely to practice exclusive breastfeeding than those who delivered by cesarean section(47).

2.2.1.3 Parity

Different studies reported that multiparous mothers more likely practice exclusive breastfeeding than primiparous mothers (28,31).Another cross sectional study conducted in Egypt reported that first-time mothers had a higher tendency to choose artificial feeding rather than exclusive breastfeeding(51).In contrast, a study done in Bahirdar city, Ethiopia reported that mothers who were primipara were two times more likely to exclusively breastfeed than multipara mothers(52).

2.2.1.4 Support from Family and Partner

Family support was defined as support received from family members to ensure the success of exclusive breastfeeding. Different studies identified family support as an enabling factor for exclusive breastfeeding among employed women(53,54).Similarly, study done in Indonesia among employed mothers shows that 30.5% of mothers who provide exclusive breastfeeding with good family support and only 13.2% of mothers who provide exclusive breastfeeding with low family support(55). Furthermore, Nur masruron et al in their study found that mothers who received family support had 2.8 times more likely exclusive breastfeed compared to those who did not family support.(56).Another study which was done in Ethiopia reports that mothers who were not supported by their husbands were 1.9 times more likely to not breast feed exclusively than those who were supported(27).similarly study conducted in Peninsular Malaysia shows that mothers with supportive husbands on breastfeeding were four times more likely to exclusively breastfeed compared to non-supportive husbands(57).

2.2.2 Work related factors

A lot of studies had done to address the role of workplace environment in the promotion of breastfeeding. In recent years, there has been a rise in the participation rate of women in employment. Some may become pregnant while in employment and subsequently deliver their babies. Most may decide to return early to work after giving birth for various reasons. Unless these mothers get support from their employers and fellow employees, they might give up breastfeeding when they return to work. As a result, the duration and exclusivity of breastfeeding to the recommended age of the babies would be affected(58).

Low rates of exclusive breastfeeding among employed mothers result from different work-related factors such as lack of managerial and co-workers support, inadequate maternity leave,

being full-time employee, absence of on-site day care at work site, lack of flexible work time and lack of workplace policies that support a woman's ability to breastfeed when she returns to work, were reported as the major factors affecting breastfeeding practices at work (31,43,47,59–62).

A cross sectional study conducted to examined the association between key workplace breastfeeding support characteristics, job satisfaction, and breastfeeding outcomes among health care employees in North Carolina revealed that mother who had managerial support 1.47 times as likely to practice exclusive breastfeeding than those who hadn't managerial support and also organizational support increased exclusive breastfeeding by nearly twofold (OR 1.80; CI 1.05–3.09) (63).

Alan S. Ryan et al. in their study reports that in the hospital, mothers who worked part time had a significantly($p < 0.05$) higher rate of breastfeeding (68.8%) than those who were employed full time (65.5%)(64). In addition to this, longitudinal study conduct in Australian to investigate the effect of maternal postnatal employment on breastfeeding duration in the first 6 months after birth, shows mothers returning to full-time employment within 3 months of the birth had more than two times more likely ceasing breastfeeding before 6 postpartum months than unemployed mothers(62).

In Pakistan among working women; 41% of mothers exclusively breastfed and mothers who had support in working organizations 4.1 times as likely to practice exclusive breastfeeding than those who hadn't organizational support(35).Other cross-sectional study conducted on 290 employed mothers with children between the ages of six to twelve months to assesses factors that contribute to discontinuing of breastfeeding among employed mothers in Malaysia revealed that more mothers who worked in the private sector (57%) had discontinued breastfeeding at the time of the study than mothers who worked with the government (40%,$p < 0.01$)(41).

Onsite child care is one of work place interventions to facilitate breast feeding among employed women(65).Across sectional study conducted in Indonesia, shows that exclusive breastfeeding at 6 months was significantly higher among working women with lactation space (OR = 2.62)compared to working women without such services(66).

In the past few years in Ethiopia there have been different movements had done by the government and different stakeholders to support employed women, which include extending maternity leave for four months and creating onsite day care centers. Although new Ethiopian federal law proclamation1064/ 2017 require any government institution shall establish a nursery where female civil servants could breastfeed and take care of their babies (67).

Across sectional stud conducted in Ethiopia revealed that mothers who resumed work when their baby was older than 3 months were 1.6 time more likely to provide exclusive breastfeeding compared with mothers who resumed work when their baby was 3 months or younger (31).

CONCEPTUAL FRAMEWORK

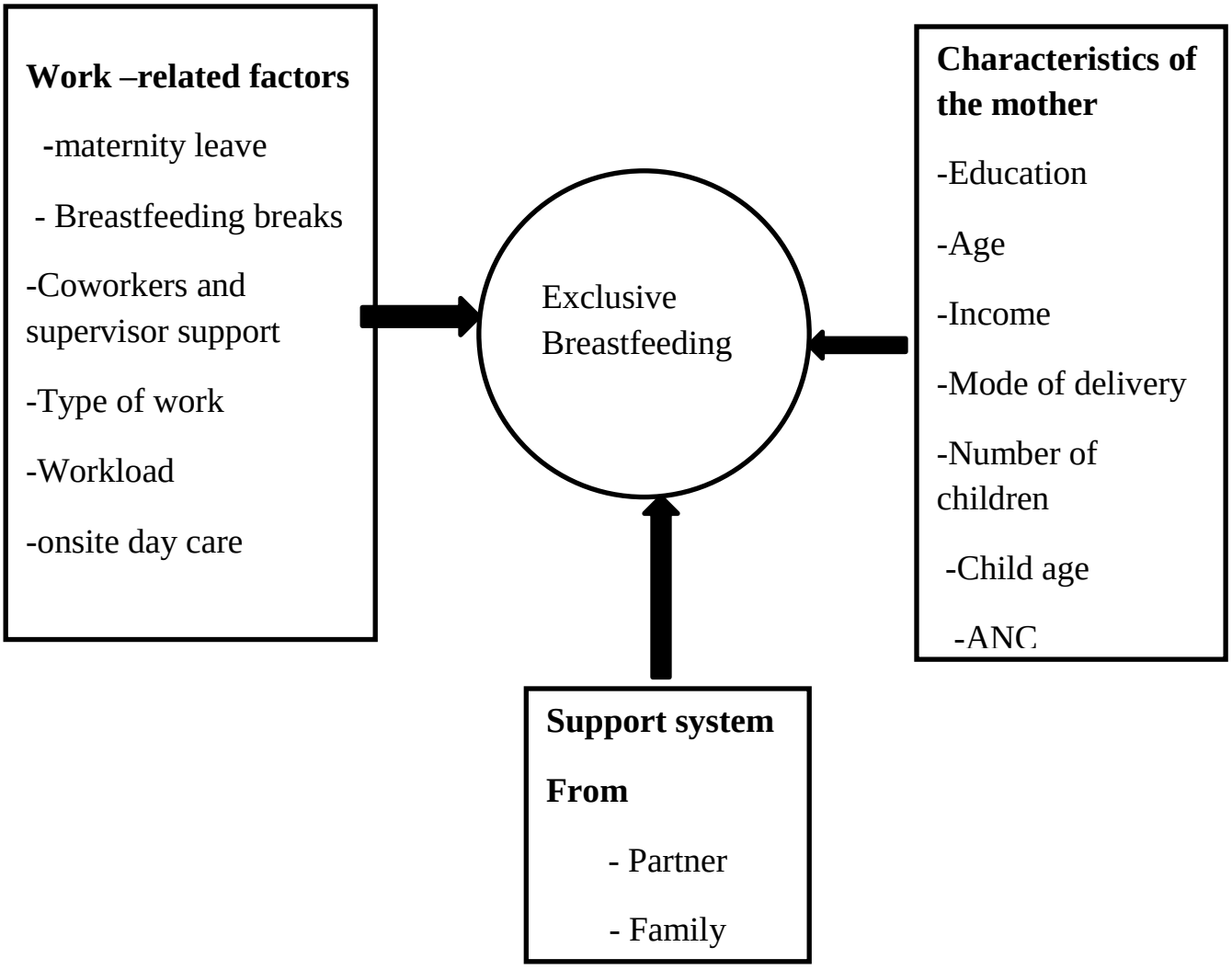

Figure1.Conceptual framework on factors that affect Exclusive breastfeeding practices taken from different literatures Addis Ababa, Ethiopia, 2021

3. OBJECTIVES

3.1 General objective

- To assess the level of exclusive breastfeeding practices and work-related factors among women, health care workers with children between the ages of 4-6 months in government and private hospitals of Addis Ababa, Ethiopia.

3.2 Specific objectives

- To determine the level of exclusive breastfeeding practices among women health care workers with children between the ages of 4-6 months in government and private hospitals of Addis Ababa.
- To identify the association between works-related factors and exclusive breastfeeding practice among health care workers in government and private hospitals of Addis Ababa.

4. METHODS AND MATERIALS

4.1. Study area and period

The study was conducted in Addis Ababa, the capital city of Ethiopia. The city has three layers of administration: city government, 11 sub cities and 117 woredas as administrations. Based on the 2007 census conducted by the Central Statistical Agency of Ethiopia (CSA), Addis Ababa has a total population of 2,739,551, of whom 1,305,387 are men and 1,434,164 women urban inhabitants (68). Over three quarter (79.95%) of women in Addis Ababa is literate which is the highest in the nation and 52% of women in reproductive age who live in Addis Ababa are currently employed in this city according to EDHS 2011(26,68).Addis Ababa has total 0f 47 hospitals (13 governments and 34 private). The study was conducted from January to February 2021.

4.2. Study design

Institution based cross sectional study design was conducted

4.3 Population

4.3.1. Source population

All health care worker mothers with children between the ages of 4-6 months in government and private hospital of Addis Ababa

4.3.2. Study population

All health care workers with children between the age of 4-6 months, in selected government and private hospital of Addis Ababa

4.3.3. Study unit

A single health care worker mother with children between the age of 4-6 months selected based on inclusion criteria and sampling technique in the study period

4.3.4 Inclusion criteria

All health care worker mothers with children between the ages of 4-6 months old and those mothers who returned to their workplace and who are permanent employees of their respective hospitals.

4.4.5. Exclusion criteria

Mothers with multiple babies (twins),or those who were unable to breastfeed due to illness were excluded.

4.5. Sample size determination

For the first objective

The sample size is calculated for the first objective using the single population proportion by Epi Info window version 7 statistical software based on the following assumptions: the prevalence of exclusive breastfeeding for previous study 67.9%(42), marginal error 5% and 95% of confidence interval.

Sample size was determined as follows:

$$n = \frac{(Z\alpha/2)^2 p(1-p)}{d^2} = \frac{(1.96)^2 \, x \, 0.679 \, (1-0.679)}{0.05^2} = 335$$

And 10% non-respondent rate was added, then the total sample size=**369**

Z= the standard score corresponding 95% confidence level

P= prevalence of exclusive breastfeeding

D= margin of sampling error

n= number of sample

Using the above formula and 10% for possible non-response rate, the final sample size was **369.**

For the second objective

The sample size is calculated using a double proportion formula by Epi Info window version 7 statistical software based on the following assumptions: 1:1exposed to unexposed ratio, 5% margin of error, 95% confidence interval, 80% power and 10 % of a non-response rate.

$$n_1 = \left(\frac{r+1}{r}\right)\frac{(p)(1-p)(Z_{\beta}+Z_{\alpha/2})^2}{(p_1-p_2)^2}$$

The following assumptions were used:

P1= proportion of exposure among group one

P2= proportion of unexposed among group two

Zα/2= standard score corresponding 95% confidence interval (1.96)

Zβ=standard score corresponding 80% power (0.84)

r= ratio between group one (exposed) and group two (unexposed) as1: 1 ratio, 10% non-response rate was added to obtain the total sample size

Table 1: sample size calculation for second objective

objectives	Assumption	Zα/2 of 1-β (power	Zα/2 of 95% CI	P1	P2	Ratio	nTotal
Comparing duration of exclusive breastfeeding among midwives and nurse employed mothers	16.8% difference between the two groups(31)	0.84	1.96	48%	31.2%	1:1	317

Therefore, the larger sample size was taken. Hence, a total of **369** participants were included in the study.

4.6. Sampling procedure

The simple random sampling technique was used to select health care workers from government and private hospital. The total 47 hospitals are stratified into government hospitals and private hospitals. Among those facilities; 13 government hospital and 34 private hospitals, 12 private hospitals and 7 government hospitals were selected by simple random sampling technique. A total sample size of 369 study subjects was allocated proportionally for each selected private and government hospitals using proportional allocation.

The selected private hospitals were St.Gabrel, Addis hiwot, Landmark, Betezata, Bethel, T|Haymanot, Girum, Haleluya, ICMC, Hayat, Amin and Zembaba hospital. The selected government hospital were Tikur Anbessa,St. Paul, Gandhi, Ras Desta, Yekatit, Zewditu and Minilik hospital. All the selected hospitals are non-Corona (COVID 19) center. Finally, by simple random sampling technique health care workers who meet the inclusion criteria was selected from the hospital Human Resource Officer (HR) list. All the simple random sampling technique is implemented by using the lottery method.

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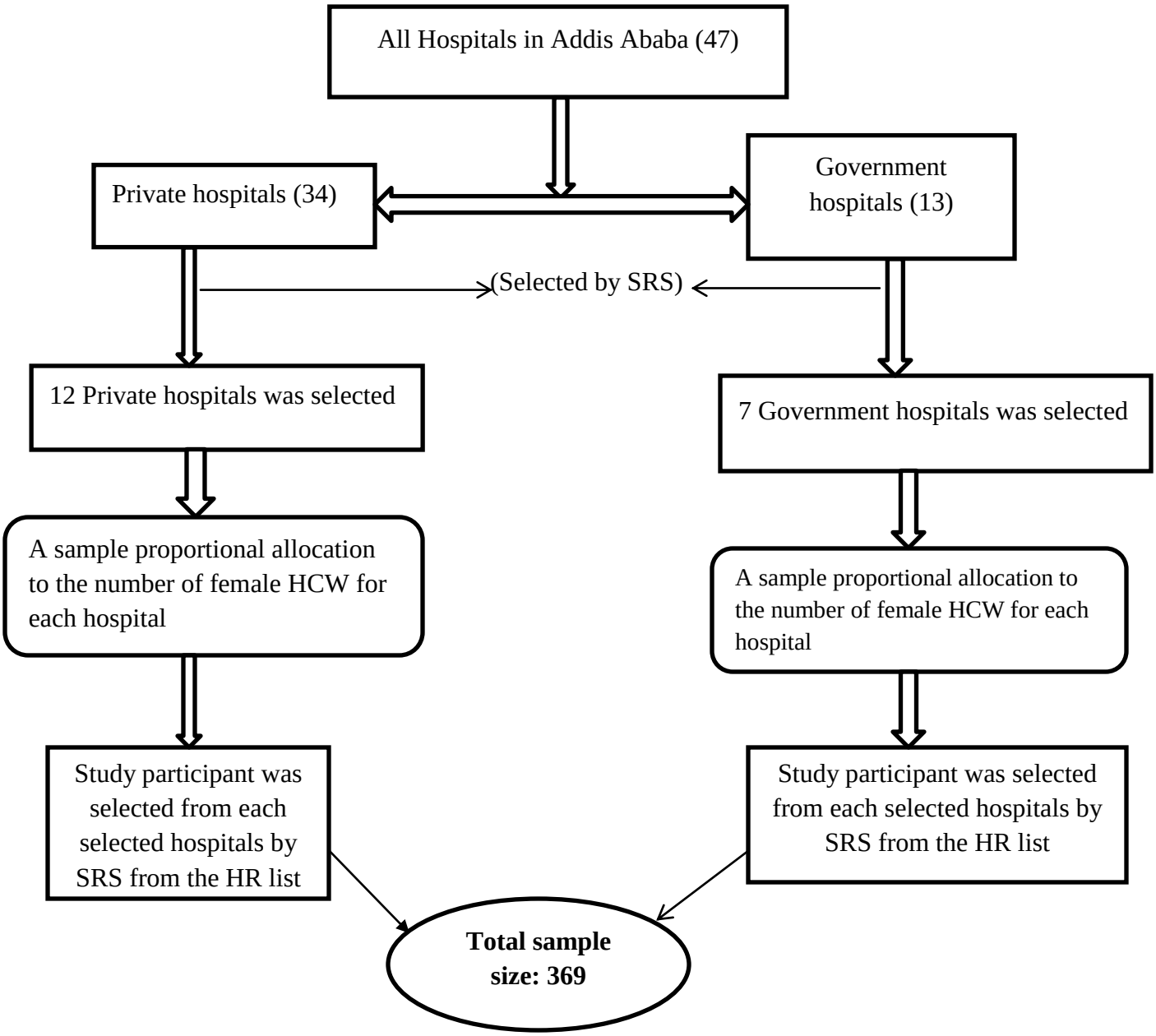


Figure 2. Schematic Presentation of Sampling Procedure, Addis Ababa, 2021

4.7Study Variables

4.7.1 Outcome variable

The outcome measure of this study is exclusive breastfeeding practice.EBF practices that were used in this study is extracted from WHO based on prior 24 hours recalls technique and with response options “yes” or “no (9)

4.7.2 Independent variables

Socio-demographic/economic characteristics: age, religion, marital status, type of profession, monthly household income, education level of husband and support from family and partner were assessed.

Childbirth and health related characteristics: such as mode of delivery, ANC follows up and visit, number of children, sex of a child and infant age was assessed.

Work-related factors: such as maternity leave, breastfeeding breaks, on-site daycare, lighter job, flexible work time, type of organization, working status, management and co-workers support were assessed.

4.8 Operational (Standard) Definitions

- **Early initiation of Breastfeeding**: infants who were put to the breast within one hour of birth(9)
- **Exclusive breastfeeding:** the infant has received only breast milk from his/her mother or a wet nurse, or expressed breast milk, and no other liquids or solids with the exception of drops or syrups consisting of vitamins, mineral supplements or medicine(9)
- **Health care workers:** female health care workers employed in governmental and private hospitals who have a child age between 4-6 months and had returned to work at the time of the interview.
- **Predominant breastfeeding:** the infant predominant source of nourishment has been breast milk, however the infant may also have received water and water based drinks(9).
- **Break for breastfeeding:** If the mother is provided additional time on demand for breastfeeding by the employer during her working hours other than her routine breaks.
- **Part-time**: Defined as less than 35 hours per week (61)

4.9 Data collection tools and procedure

A structured questionnaire prepared based on infant feeding practices in the prior 24 hours recall technique used to assessing exclusive breast feeding practice. Data were collected by face-to face interview technique, using pre-tested structured questionnaires, adapted from different literatures EPBS-Q (69),EDHS (26) and WHO(9). The content of the questionnaire included questions on infant characteristics (age and sex), maternal socio-demographic characteristics (age, type of profession, religion, income, education level of husband, marital status, religion and support from family and partner), work related factors (maternity leave, breastfeeding breaks, on-site daycare, lighter job, flexible work time, type of organization, working status, management and co-workers support) and exclusive breast feeding. The data was collected by four clinical nurses under supervision of one health officer.

4.10 Data quality management

Data quality was assured before, during and after the data collection process

Before data collection: An objective based and standardized questionnaire by WHO was adopted. The questionnaire was initially developed in English then translates to local language Amharic. All the data collectors and supervisors were trained for three days about the purpose of the study, how to approach each interviewee, regarding ethical issues and data quality.Pre-testing of questionnaire was undertaken to check the understandability by taking 5% of sample volunteer mother in the institution which are not included in the actual data collection.

During data collection: During data collection every questionnaire filled by interviewee was checked by supervisors daily for its completeness. Unfilled questions on the questionnaire were completed by revisiting those institutions.

After data collection: the supervisor and the principal investigator together were rechecked the completeness and consistency before transferring it into computer software.

4.11 Data analysis

The data were entered, cleaned and edited using EPI-data 4.6 and transferred to Stata version 16 for further analysis. Descriptive statistics were used to describe the characteristics variables in the study. Binary logistic regression model was fitted to identify the association's exclusive breastfeeding and independent variables. All variables that show an association at p-value of

less than 0.2 in bivariable analysis was selected as candidate for initial multivariable logistic regression model. Both crude and adjusted odds ratio were calculated with their corresponding 95% confidence interval. Statistical significance of the findings was declared using odds ratio with 95% confidence interval and P value <0.05

4.12 Ethical considerations

Ethical approval was obtained from School of Public Health; Collage of Health Science, Addis Ababa University Institutional Review Board. Formal letter was also submitted to all the concerned bodies to obtain their cooperation. Before data collection informed written consent was obtained from health care workers after the necessary explanation about the purpose, procedures, benefits, risks of the study. Respondents were also informed that they could refuse or discontinue participation at any time and they were informed the fact that information was recorded without their name being mentioned. Only codes were used to keep it anonymous and maintain confidentiality and privacy of respondents.

In order to minimize the risk of COVID 19 transition we created a better and safer environment for the data collectors and the participants through providing personal protective equipment like a glove, face mask and sanitizer.

4.13 Dissemination of results

The result of this study will be submitted to the School of Public Health, Addis Ababa University, and College of Health Sciences and will be communicated to all concerned bodies. Furthermore, efforts will also be made to disseminate the result through publication and presentation in scientific conferences**.**

5. RESULTS

5.1. Socio-demographic characteristic of the study participant

A total of 369 infant mother pairs were included in the study and 343 participants were willing to take part in the study making the response rate 92.9%.The socio-demographic characteristics of the study population is shown in Table 2.The mean (SD) age (year) of the mother in the study sample was 29.1(± 4.4 SD) and 164 male and 179 female infants participated in the study. The mean ages of children were 4.4(±0.5 SD) months. The religion distribution showed, 255 (74.3%) were Orthodox Christians followed by Muslim 49 (14.3%), Protestant 10.2 (10.2%) and Catholic 4 (1.2%). The majority of respondents 320 (93.29%) were married and 197 (57.4%) had more than one child. Regarding the monthly household income, 155 (45.2%) of respondent's monthly household income between 11000-15000 Birr. Regarding the profession of the mothers, 141 (41.1%) mothers were nurse,90 (26.2%) were midwife, 58 (16.9%) where lab technologist, 24 (7.1%) were general practitioner and were Other 30 (8.7%). Among those 27.7% of study participants were employed in the private hospitals and 72.3% were employed in governmental hospitals. Regarding husbands' education status; 3 (0.87%) had primary education, 35 (10.2%) secondary school, 59 (17.2%) had college diploma, 177 (51.6%) had university degrees and 69 (20.1%) had advanced degree.

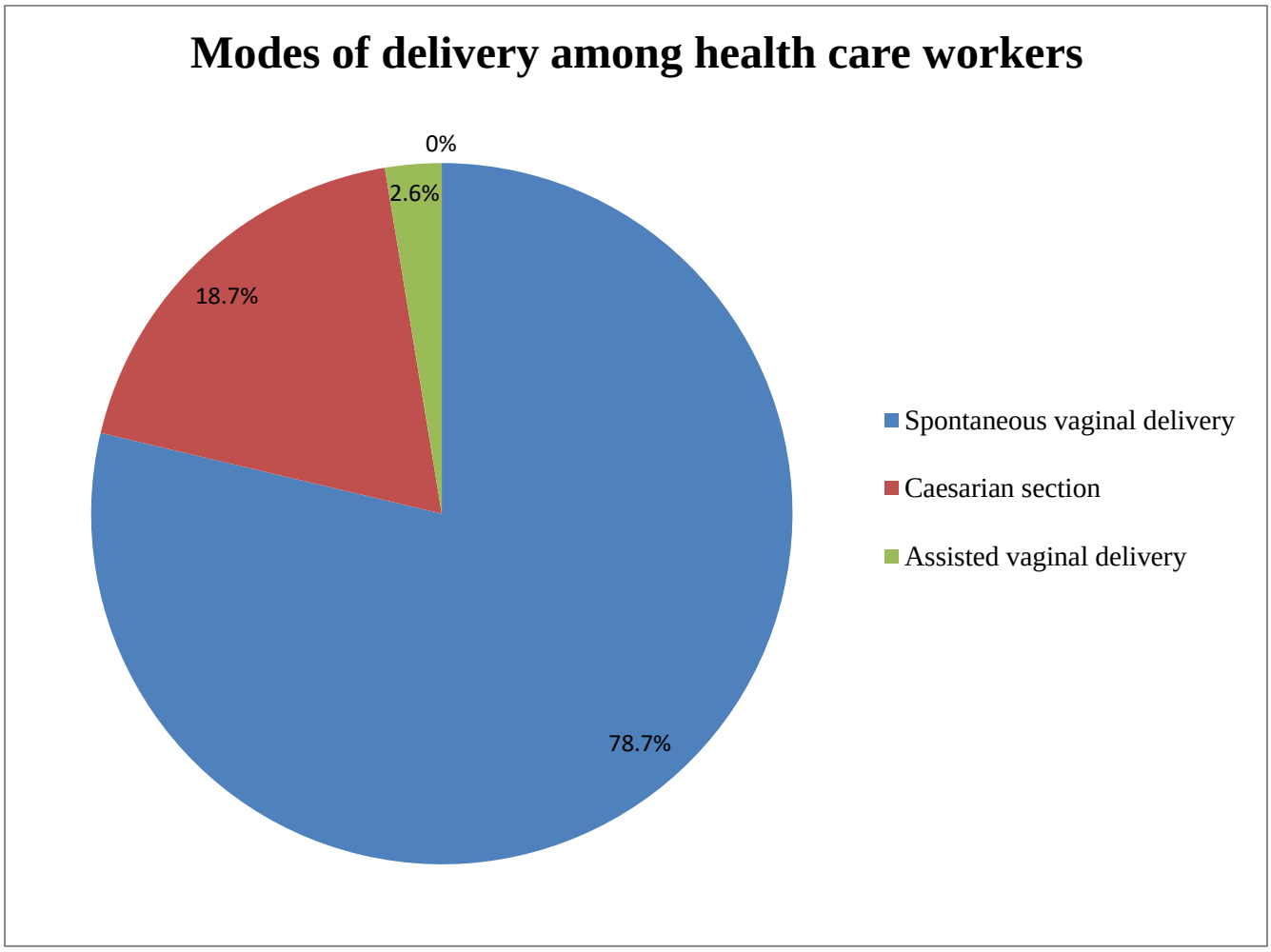
Table: 2 Demographic and socioeconomic characteristics of respondents (n = 343) in Addis Ababa hospitals, Ethiopia, 2021

Variables (343)	Frequency (n)	Percentage (%)
Infant gender		
Male	**164**	**47.8**
Female	**179**	**52.2**
Infant's age		
4 months	**195**	**56.8**
5 months	**148**	**43.2**
Mother's age (years)		
20-24	**46**	**13.4**
25-29	**147**	**42.9**
30-34	**92**	**26.8**
35-39	**50**	**14.6**
40-44	**8**	**2.3**
Marital status		
Married	**320**	**93.3**
Divorced	**11**	**3.2**
Widow	**8**	**2.3**
Single	**4**	**1.2**
Religion		
Orthodox	**255**	**74.3**
Protestant	**35**	**10.2**
Muslim	**49**	**14.3**
Catholic	**4**	**1.2**
Working profession		
General practitioner	**24**	**7.1**
Nurse	**141**	**41.1**
Midwife	**90**	**26.2**
Lab technologist	**58**	**16.9**
other	**30**	**8.7**

Type of organization		
Private hospital	**95**	**27.7**
Government hospital	**248**	**72.3**
Husband's education		
Primary education	**3**	**0.9**
Secondary education	**35**	**10.2**
College diploma	**59**	**17.2**
University degree	**177**	**51.6**
Advanced degree	**69**	**20.1**
Monthly Household income (in Birr)		
6000-10000	**101**	**29.4**
11000-15000	**155**	**45.2**
>=16000	**87**	**25.4**
Parity		
Primiparous	**146**	**42.6**
Multiparous	**197**	**57.4**

5.2 Childbirth and health service related characteristics

All respondents (100%) had ANC follow up and two hundred seventy-seven (80.7%)of the respondents attended a health facility for greater than four visits. All respondents delivered their baby at the health facility and most 270 (78.7%) of the respondents had spontaneous vaginal deliveries.



Figer 3: Mode of delivery among healthcare workers in Addis Ababa, 2021

5.3 Exclusive breastfeeding practices of study participants

In this study the magnitude of EBF practices was 26.6% (95 % CI 22, 31) among health care worker with children between the ages of 4-6 months in 24 hour preceding the survey. The exclusive breastfeeding practice of healthcare workers is shown in Table 3.Majority of 340 (99.1%) of mothers had ever breast fed and 335 (97.6%) we're currently breastfeeding. The proportion of mothers who gave colostrums to the newborns was 96.7 % and predominantly breastfeed was given to170 (51.7%) of infants.

Two hundred eighty four (82.8%) of mothers-initiated breastfeeding within the first one hour of delivery and 246 (73.4%) mothers who did not practice exclusive breastfeeding, infant formula was the most common form of alternative feeding reported by 237(69.1%) of respondents

Among those 246 (73.4%) who did not practice exclusive breastfeeding 197 (80.1%) mother returns to work, 30 (12.2%) rigid work schedules,12 (4.9%) decrease breast milk secretion and 7 (2.8%) mother sick were reasons mentioned for the failure to exclusively breastfeed by the respondents. 181 (54.1%) of mothers breast fed <8times/day.

Table 3: Exclusive breastfeeding practices based on a 24 h-recall among respondents in Addis Ababa, Ethiopia, 2021

Variable	Frequency	Percentage (%)
Ever breast fed		
Yes	340	99.1
No	3	0.9
Time to initiate breastfeeding		
Within one hour	284	82.8
After one hour	59	17.2
Colostrum feeding		
Yes	332	96.8
No	11	3.2
Breastfeeding frequency (last 24 hours)		
>=8 times	154	45.9
<8 times	181	54.1
Predominant breastfeeding		
Non-predominant breastfeeding	165	49.2
Predominant breastfeeding	170	50.8
Exclusive breastfeeding status		
Exclusively breastfed	89	26.6
Non-Exclusively Breastfed	246	73.4
Reason for Non-exclusive Breast feeding		
Mother returns to work	197	80.1
Rigid work schedules	30	12.2
Decrease breast milk secretion	12	4.9
Mother sick	7	2.8

5.4 Work related factors associated with exclusive breastfeeding practice

Most respondents 226 (65.9 %) resumed work when their baby was 4 months old. The majority 248 (72.3%) worked full time and 9.7% of the respondents were provided break for breastfeeding. Only 40(11.6%) of respondents were provided on-site child care centers. However, during data collection all on-site day care centers were closed due to COVID-19.

In bivariable logistic regression analysis, type of organization, mode of delivery, parity, manager support breastfeeding, work status, time of return to work, flexible work time and family encourage were shown associated with the dependent variable ($p < 0.2$) and included in to multivariable analysis. In multivariate analysis, type of organization, mode of delivery, working status and time of return to work was significantly associated with exclusive breastfeeding practices for the overall study participants.

Respondents working in the government organization were three times more likely to practice exclusive breastfeeding as compared with those who are working in the private organization (AOR= 3.09 ;95% CI 1.44,6.63); Mothers who delivered through spontaneous vaginal delivery were more than three times more likely to practice exclusive breastfeed as compared with those who delivered through cesarean section (AOR = 3.71 ; 95 % CI 1.48,9.26).Mother who worked part time were two times more likely to practice exclusive breastfeed as compared those who worked full time (AOR = 2.20 ;95% CI1.19,4.06).Women who resumed to work at five months were more than three more likely to practice exclusively breastfeed than those who resumed work at four months (AOR = 3.69;95% CI2.10,6.46).

Table 4: Bivariate and multivariable logistic regression factors associated with exclusive breastfeeding practices among respondents in Addis Ababa, Ethiopia, 2021

Variables	EBF No (%)	Not EBF No (%)	Crude OR (95% CI)	Adjusted OR (95% CI)
Type of organization				
Private	12 (12.9)	81 (87.1)	1.0	1.0
Government	77 (31.4)	165 (68.6)	3.15(1.62, 6.11)**	3.09 (1.44 ,6.63)**
Mode of delivery				
Cesarean section	7(11.9)	52(88.1)	1.0	1.0
Spontaneous vaginal deliver	81(30.3)	186(69.7)	3.23(1.40,7.42)**	3.71(1.48,9.26)**
Assisted vaginal delivery	1(11.1)	8 (88.9)	1.01(0.10,8.58)	1.69(0.16,17.08)
Parity				
Primiparous	34(24.1)	107(75.9)	1.0	1.0
Multiparous	55(28.3)	139(71.7)	1.24(0.75 ,2.04)	1.70(0.96 ,3.00)
Family support				
No	22(21.6)	80(78.4)	1.0	1.0
Yes	67(28.7)	166(71.3)	1.46(0.84,2.54)	1.40(0.75,2.64)
manager support				
No	18(20)	72(80)		
Yes	71(28.9)	174(71.1)	1.63(0.90,2.3)	1.62(0.83,3.15)
Working status				
Full time	54(22.4)	187(77.6)	1.0	1.0
Part time	35(37.2)	59(62.8)	2.05(1.22 ,3.44)**	2.20(1.19 ,4.06)*
Time of return to work				
Four months	40(18)	182(82)	1.0	1.0
Five months	49(43.3)	64(56.7)	3.48(2.10 ,5.77)**	3.69 (2.10 ,6.46)**

Flexible work time				
No	41(20.8)	156(79.2)	1.0	1.0
Yes	48(43.3)	90(56.7)	2.02(1.24 ,3.31)**	1.59(0.88 ,2.86)

*p-value <0.05, **p-value<0.01

6. DISCUSSION

This study was carried out to investigate the magnitude and work related factors associated with exclusive breastfeeding practices among health care workers, in Addis Ababa hospitals. The study revealed that the magnitude of exclusive breastfeeding practice was 26.6 % (95 % CI: 22, 31).In the multivariate analysis, type of organization, mode of delivery, working status and time of return to work postpartum were significantly associated with exclusive breastfeeding practice.

The finding of this study was lower than studies conducted in North Gonder zone, Ethiopia which showed exclusive breastfeeding practice was 35.9% among female Nurses and Midwives (31).This difference may be attributed to sample size difference and also it may be in Addis Ababa high patient flow in the hospital area which causes tight work schedule related to North Gondar zone. This finding was also lower than the national exclusive breastfeeding prevalence in Ethiopia shows that 40% of mothers were exclusively breastfeed for 4–5 months(25) and study conducted Southern Ethiopia, shows that 54.4% of mothers were exclusively breastfeed for 4-5 months(70).This difference may be due to the national breastfeeding study was conducted in rural and urban areas and used large sample size; And in South Ethiopia, the study conducted in rural district and includes large number of unemployed mothers. Furthermore, this finding was lower as compared to study conducted in south India revealed that 58.1% of female health care workers were exclusively breastfed(71).This difference may be since different countries use different interventional policies to promote EBF among employed mothers.

However, the exclusive breastfeeding rate obtained in present study was higher as compared with the 11.1% reported from female medical doctors Nigeria(30).This difference may be due to methodological variation they used recall since birth to measure exclusive breastfeeding practice and the sample size difference.

In this study the type of organization in which they work was shown statistically significant association with exclusive breastfeed, in which those mothers who are working in the government hospital were three times more likely to EBF than those who are working in private hospitals. This finding is consistent with the findings from Ethiopia(60) and Malaysia(72).This might be related to mothers working in the government hospitals have more workplace

breastfeeding support such as work-site day care centers for infants, flexible use of annual leave and have flexible work time as compared to those working in private hospitals.

In present study, mothers who gave birth spontaneous vaginal delivery breastfed their infants more than three times more likely to exclusively breastfeed compared with mothers who give birth through cesarean section. This finding was consistent with the finding of studies done in Ghana, Ethiopia and Malaysia(38,47,50).This could be due to the pain the mother experiences and may delay giving of breast milk and start other formula milk in the first few days to the baby and after that the mother may continue.

In this study, mothers who were working part time within 6 months after giving birth 2 times more likely to practice exclusive breastfeeding compared with mothers who were working full time. This finding was consistent with the finding from Ethiopia(60) and North America (64). This may be due to their working hours per day is shorter; they have more time to stay with their infants. In other study conducted in Australian found that part-time employment does not contribute to mothers' ability to maintain breastfeeding for 6 months(61).

In this study the time of return to work was showed statistically significant association with exclusive breastfeed, in which those mothers who are returned to work at 5 months after giving birth were more than 3 times more likely to practice exclusive breastfeeding than mothers who return to work at 4 months. Similar findings were obtained in other studies done in Ghana(47) and Brazil(73) and Ethiopia(31). In this study 226 (65.9%) of the respondents resumed work when their babies were 4 months due to maternity leave allotted in Ethiopia is only 4 months and most of these mothers were unable to breastfeed during working hours. Similarly, in Ghana and Brazil the postpartum period of maternity leave is three and four months respectively. Within three and four months after delivery, mothers are expected to resume their work and may decide to stop EBF early since once they returned to work and mother who resumed work at five months after giving birth have more time to stay with their infant to practice EBF.

7. STRENGTH AND LIMITATION

Strength of the study

The strength of this study is data collected from both private and government hospitals. This enables to catch heterogeneous groups and generalizing our results for mothers employed as health care workers. In ascertaining exclusive breastfeeding, we used the 24-hours recall method to determine exclusive breastfeeding, which currently is recommended by WHO. Hence, we minimized the recall bias in ascertaining exclusive breastfeeding that could have occurred by the other methods.

Limitation of the study

There is a limitation to this study since the study design is a cross-sectional study; it is difficult to establish a causal relationship between the determining factors and exclusive breastfeeding practice. Moreover, since the single 24 hour recall only capture the current status, it may not represent the usual intake of an infant if there is a day to day variation in the feeding pattern, which may consequently lead to an overestimate the prevalence of exclusive breastfeeding. In addition, there might be a recall bias in ascertaining some variables like early initiation of breastfeeding and other maternal health care related variables.

8. CONCLUSION AND RECOMMENDATION

Conclusion

A small proportion of infants are exclusively breastfed during the first 6 months, despite what is recommended in the national and global infant and young child feeding guidelines. Being an employee of a government hospital, giving birth through spontaneous vaginal delivery, being a part time employee and resumption of work at 5 months. Employers should make workplaces more breastfeeding friendly to enhance exclusive breastfeeding.

Recommendations

Based on the finding policy makers should encourage employers, especially for private organizations to make workplaces more breastfeeding friendly by establishing work-site day care centers for infants, flexible use of annual leave, allow leave without pay and flexible work time in order to encourage nursing mothers to breastfeed their babies optimally.

In addition to this policy makers should consider improving the legislation of the 4 months postpartum maternity leave to increase employed mother's exclusive breastfeeding practice.

We also recommend other researchers, a longitudinal study which clearly shows a temporal association between works-related factors and exclusive breastfeeding practices among health care workers.

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ANNEXES

Annex 1: Information sheet

Addis Ababa University, School of public health

Subject Information Sheet

Hello, My name is ———————————————— I am here on behalf of Rita Petros student of Addis Ababa University School of public health. She is conducting a research on 'Exclusive breastfeeding practice and work related factors among health care workers in government and private hospitals of Addis Ababa". For the partial fulfillment of master's in public health in Addis Ababa school of public health. She received permission from Addis Ababa university school of public health to conduct this study.

The aim of this study is to assess the exclusive breastfeeding practices and work related factors among healthcare workers with children between the ages of 4-6 months in government and private hospitals of Addis Ababa, Ethiopia. The study will help in providing a baseline data for policy makers and other researchers on issues regarding exclusive breastfeeding practices and work related factors among health care workers.

You are selected randomly to participate in this study because you are a mother with a child age between 4-6 months. Your participation is purely based on your willingness. You have full right either to participate or decline to be a participant in this study. If you choose to take part in the study you will be asked to answer some questions about yourself, your delivery experience and your breastfeeding practice. You may respond to all the questions or you may not answer questions you don't want to, and have the right to stop the interview at any time. You also have the right to choose not to take part in this study.

Participating in this study will not have any risk or harm. The study could provide baseline data for policy makers and relevant stakeholders to know the status of the existing breastfeeding practices and to come out with sound policies for health care workers to ensure the provision of workplace facilities for lactating working mothers.

Whether you are willing to participate, refuse or decide to withdraw later, you will not be subjected to any ill-treatment. The interview takes 20 minutes. The information that you provide

will be kept confidential by using only code numbers and locking the data.Your name will not be written on the questionnaire.No one will have access to the non-coded data except the principal investigator and the data will not be used for purposes other than the study.Your willingness and active participation is very important for the success of this study.

Contact details of the principal investigator and the person to whom to contact at any time for further explanation:

Name of principal investigator: Rita Petros

Email: ritapetros20@gmail.com

Cell phone: +251 916-28-34-88

Annex 2: Informed Consent

Based on the understanding of the information I gave you, are you willing to participate in this Study? A. Yes B. No

1. If yes, may I give you the questionnaire?

2. If no, skip to the next participant by writing reasons for

_____

Informed consent Certified by:

Respondent's signature _____ date _____

Name of data collector _____ Signature _____

Questionnaire number _____

Result of data collected:

1. Completed

2. Respondent not available

3. Refused

4. Partially completed

Checked by: Supervisor: Name _____ Signature_____

Instruction: circle all the possible answers of the respondent from the choice provided.

Annex 3: Questionnaire (English Version)

Addis Ababa University School of Public Health

Survey Questionnaire to assess the exclusive breastfeeding practices and work related factors among healthcare workers with children between the ages of 0-6 months in Government and Private Hospitals of Addis Ababa, Ethiopia. 2019

Date of data collection ____/_____/_____

Data collector Name ———————— Signature ————————

Checked by Supervisor Name ———————— Signature ————————

Part1.Demographic and Socio-economic information

Please Circle your possible answer in the response box**.**

No	Question and filter	Coding categories	Skip
101	Sex of the infant	Male……..1 Female……... 2	
102	In what month and year was (Name) born?	Day _____ Month _____ Year _____	
103	Infants Age in completed month	_____	
104	How old are you in completed years?	Years	
105	Marital status of the mother	Married……1 Single……...2 Divorced……..3 Widow…….4 Separated…….5	
106	What is your religion?	Orthodox……..1 Catholic……2 Protestant……..3 Muslim…….4 Other (specify)…….5	
107	Where do you work?	private hospital….1 Government Hospital…2	
108	What is your medical profession?	1.General practitioner 2.specialist 3.Nurse 4.Midwife 5.Lab technologist 6.other(specify) _____	

109	What is your Spouse educational level	1.Primary education 2.secondary school completed 3. College diploma 4. University degree 5. Advanced degree	
110	What is the amount of your monthly salary?		

Part 2. child birth and Exclusive breast feeding experience

Now I'm going to ask you about your pregnancy, childbirth and breastfeeding experience

No	Question and filter	Coding categories	Skip
201	Where did you give birth to your child (name)?	Government hospital…1 Privet hospital….2 Government health center…..3 Privet clinic…..4 Non-governmental health facility…5 Your home……6 Others home……7	
202	When you were pregnant with the young children, did you go to a health facility for Antenatal care?	Yes……1 No……..2	
202	If your response is yes, how many antenatal visits did you make to this health facility for care before you gave birth?	———— visits ☐ None	
203	How many months pregnant Were you when you first	———— Monthes	

	received antenatal care for pregnancy?		
204	Mode of delivery	Spontaneous vaginal delivery……1 Caesarean section……2 Assisted vaginal delivery…..3	
206	How many children's do you have?	1. Son---------- 2. Daughters ----------	
207	Have you ever breastfed (name)?	Yes……..1 No……...2	If No go to 213
208	How long after birth did you first put (name) to the breast?	Immediately(less than one hour)……000 Hours……1 /__/__/ Days……..2 /__/__/	
209	Did you give (name) the first yellowish milk (colostrum)?	Yes……..1 No……2	
210	Are you currently breast Feeding	Yes…….1 No……..2	If No go to 213
211	Was breastfed yesterday during the day or at night	Yes…….1 No……..2	
212	How many times did you breastfeed young child yesterday during the day or at night?	No of 24 hours feeding [____|___]	
213	Sometimes babies are fed Breast milk in different ways, Did (NAME) consume breast milk by spoon, cup or bottle in any of these ways yesterday	Yes…….1 No……..2	

	during the day or at night?				
214	Was (name) given any vitamin drops or other medicines as drops yesterday during the day or at night?	Yes…….1 No……..2			
215	Was (name) given ORS yesterday during the day or at night	Yes…….1 No……..2			
216	I would like to ask you about some liquids that may have had yesterday during the day or at night Did have any?	Yes No Plain water……..1 2 Infant formula…….1 2 Animal milk…….. 1 2 Fruit juice drinks……1 2 Thin porridge ……..1 2 Yogurt……1 2 Any other liquid 1 2			
217	Did (name) ate any of the food during the day or at night? Whether at home or Outside the home?		Yes	No	

	A.Porridge, bread, rice, noodles or other foods made from grains	1	2	
	B.Any commercially fortified baby food?	1	2	
	C. Any food made from teff, like injera,kita.	1	2	
	D.White potatoes, cassava, bulla or any other foods made from roots	1	2	
	E.Any dark green leafy vegetables	1	2	
	F.Any other fruits or vegetables			
	G.Liver, kidney, heart or other organ meats	1	2	
	H. Any meat, such as beef, pork, lamb, goat,chicken	1		
	L.Eggs	1	2	
	M.Any fresh or dried fish or shellfish	1		
		1	2	
		1	2	
		1	2	

218	Are you still Exclusively breast feed?	Yes…….1 No……..2	If No go to 219
219	Why did you stop Exclusive breast feeding for the child(Name)	Yes No 1. Mother return to work,,,,,,1 2 2. Mother got pregnant……..1 2 3. Mother sick/Weak……..1 2 4. Fear of loss of beauty……..1 2 5. Child sick/Weak……1 2 6. Breast Nipple Problem……..1 2 7. Not enough milk……..1 2 8. Other (Specify)……..1 2	
220	How old was your baby when you stopped feeding him/her breast milk¬?	. _____ months	

Part 3.suport from family to combine work and breastfeeding

Now I'm going to ask you about whether you received any information and support on how to combine breastfeeding and working

No	Question and filter	Coding categories	Skip
301	Did your family encourage you to continue breastfeeding when you return to work?	Yes…….1 No……..2	
302	Did your partner encourage you to continue breastfeeding when you return to work?	Yes…….1 No……..2	

303	While you are working, who takes care of this child? Please select all that apply.	1. Family member or friend 2. A nanny or sitter at my home 3. A daycare provider. 4. onsite daycare at my worksite 5.Other: (please describe):	

Part 4. Workplace support, Maternity leave and break schedule at work

Now I'm going to ask you about how your work-site supported breastfeeding,the maternity leave and your break schedule at work while you were breastfeeding your child

No	Question and filter	Coding categories	Skip
401	Did yourworkplace provide a designated on-site daycare for breastfeeding?	Yes……1 No…….2	
402	Have been given a lighter job when you return after childbirth?	Yes…….1 No……..2	
403	Do your coworkers willingly cover for youwhen you need to breastfeed?	Yes…….1 No……..2	
404	Did your manager support you breastfeeding at work?	Yes…….1 No……..2	
405	When you did return to work, was it…?	1.part-time (on average less than 30 hours a week) 2.full time (on average 30 or more hours a week)	
406	Are you able to take a break from work when you need to breast-feed your baby?	Yes…….1 No……..2	**If No go to 409**
407	If you say Yes, how many times you visit the Kids in a day?	_____times per day	

408	Is your break long enough for breast feeding?	Yes……1 No……..2	
409	Do you skip breastfeeding some days when your work schedule was too hectic?	Yes…….1 No……..2	
410	How long was your maternity leave?	_____ Months	
411	How many months after giving birth did you return to work?	_____ Months	
412	How many hours do you work in a day after return to work?	_____Hour per day	
413	Is there shift work in your Hospital?	1. Yes 2. No	
414	If your answer is yes in which shift you are working?	1. only day shift 2. day and evening shift 3. night shift	
415	Do you have flexible work time during working hour, to go home for breastfeeding?	Yes…….1 No……..2	

Annex 4፡ Information sheet (Amharic version)

አዲስ አበባ ዩኒቨርስቲ ጤና ሣይንስ ፋካሊቲ የህብረተሰብ ጤና አጠባበቅ ትምህርት ክፍል

የተጠያቂው የመላሾች\የመረጃ ቅፅ

ጤናይስጥልን እንደምን አሉ ስሜ.....ይባላል።የመጣሁት በአዲስ አበባ ዩኒቨርስቲ የህብረተሰብ ጤና አጠባበቅ የስነ ምግብ ትምህርት ክፍል ለሚያደርገው የማስተርስ ዲግሪ የማሟያየጥናትና የምርመር ስራ እየሰራች ያለችውን ተማሪ ሪታ ጴጥሮስን ወክዬ ነው።በመንግስት እና በግል ሆስፒታሎች የሚሰሩ የጤና ባለሙያዎች ጡት ማጥባት ከስራ ጋር ያለውን ግንኙነት ጥናት እያደረገች ሲሆን ከአዲስ አበባ ዩኒቨርሲቲ አዲስ አበባ ከተማ ኣስተዳደር ቢሮና ከተመረጡት መስሪያቤቶችም ፍቃድ አግኝታለች።የዚህ ጥናት ኣላማ በሚሰሩበት ሆስፒታል ውስጥ ያሉት የጤና ባለሙያዎች የጡት ማጥባት ሁኔታን ለማየት እና ከስራ ጋር ያለውን ተግዳሮቶችን ለማሳየት ነው።

በመሆኑም ይህ ጥናት ለእናቶች እንዱሁም ለህፃናት አሳሳቢ የሆነውን የጡት ማጥባትና የስራ ሁኔታን ስለሚያጠና ለሁለም የህብረተሰብ አካሌ ጠቃሚና ገንቢ ነው።በተጨማሪም የጥናቱ•ውጤትለሌሎች ተመራማሪዎች•እንደመነሻ፤በዚህም ዙሪያ ለሚሱሩ አካላት እንደአንድ መረጃ በመሆኑ ለተለየዩመሻሻያዎች ሊውል ይችላል።እርስዎ በዚህ ጥናት ላይ እንዲሳተፉ የተመረጡት መስሪያ ቤቶ በተደጋጋሚ በተደረገ የአጋጣሚ የናሙና አወሳሰድ ስሌት መሰረት ለዚህ ጥናት አላማ ከተመረጡት በአንዱ ውስጥ እርስዎ ስለሚሰሩ ነው።የእርስዎ ተሳትፎ ሙሉ በሙሉ በእርስዎ ፍቃደኝነት ላይ የተመሰረተ ነው።በጥናቱ ላይ ያለመሳተፍ ሙሉ መብት አሎዎት ። ለመሳተፍ ፍቃደኛ ከሆኑ በኋላም በፈለጉት ጊዜ ማቆም ወይም ማቋረጥ ይችላሉ። በጥናቱ ባለመሳተፍዎ የሚደርስቦትምንም አይነት ችግር አይኖርም።በጥናቱ ለመሳተፍ ከተስማሙ እርስዎን የተወሰኑ ጥያቄዎችን እንጠይቆታለን።ይህ መጠይቅ 20 ደቂቃ ያህል ይፈጃል።

በመጨረሻም ከእርስዎ የምንሰበስበው መረጃ ከስምዎ ጋር አይያያዝም።ስምዎት እንደማይጠቀስ፤ሚስጥራዊ ሆኖ እንደሚቆይ እና ለማንም አካል ተላልፎ እንደማይሰጥ ልናረጋግጥልዎትእንወዳለን።የዚህ ጥናት ውጤት ግን ተጠርዞ እና ተዘጋጅቶ ጉዳዩ ወደ ሚመለከታቸው የጤና፡ድርጅቶች፡ወይም፡ለሌሎች፡አካላት፡ሊሰጥ፡ይችላል።

ከላይ፡በተገለጸውን፡ቅጽ፡መስማማትዎን፡በፊርማዎ፡ያረጋግጡ

መረጃው፡የተሰጠበት፡ቀን _____

የአጥኚው፡ፊርማ _____

ለተጨማሪ፡ማብራሪያ፡የዋና፡አጥኚውን፡አድራሻ፡ይጠቀሙ

ስም፡ሪታ፡ጴጥሮስ

ኢሜይሌ: ritapetros20@gmail.com

ስልክ+251 916283488

Annex 5: የስምምነት፡መጠየቂያ·ማረጋገጫ፡ቅፅ

ከላይ፡በሰጠዎት፡መረጃ፡መሰረት፡በጥናቱ፡ላይ፡ለመሳተፍ፡ፈቃደኛነዎ

1.አዎ

2.አይደለሁም

ፈቃደኛ፡ካልሆኑምክንያቱን፡ፅፈው፡ወደሚቀጥለው፡ተሳታፉ፡እለፍ_____የተሳታፊ፡ፊርማ _____ ቀን _____

የመረጃ፡ሰብሳቢ፡ስም_____ ፊርማ _____

የመጠይቁ፡ቁጥር _____

መጠይቁ፡የተካሄደበት፡ቀን _____

የመጠይቁ፡ውጤት

1.ሙሉ፡በሙሉ፡የተሞላ

2.በከፊል፡የተሞላ

3.ምንም ያልተሞላ

በተቆጣጣሪዎች፡ተረጋግጧል፡ስም _____ ፌርማ _____

ለተጨማሪ፡ማብራሪያ፡የዋና፡አስጠኚውን፡አድራሻ፡ይጠቀሙ

ስም፡ሪታ፡ጴጥሮስ

ኢሜይል:ritapetros20@gmail.com

ስልክ:+251 916283488

ማሳሰቢያ፡ተሳታፊዎች፡የሚሰጡትን፡መልስ፡ከተሰጡት፡አማራጮች፡ውስጥ፡ለይተው፡ያክብቡ

Annex 6፡Survey questionnaires (Amharic version)

የመጠይቁ፡መለያ፡ቁጥር _____

በአዲስ፡አበባ፡ዩኒቨርስቲ፡ህክምና፡ሣይንስ፡ፋኩልቲ፡የህብረተሰብ፡ጤና፡አጠባበቅ፡ትምህርት፡ክፍል፡በመንግስ ት፡እና፡በግል፡ሆስፒታሎች፡የሚሰሩ፡የጤና፡ባለሙያዎች፡ጡት፡ማጥባት፡ከስራ፡ጋር፡ያለው፡ንግንኙነት፡ለማወ ቅ፡የተዘጋጀ፡የጥናታዊ፡ፅሁፍ፡መረጃ፡መሰብሰቢያ፡መጠይቅ።

ክፍል1.መሰረታዊመረጃንየተመለከቱጥያቄዎች

ተ.ቁ	ጥያቄ	መልስ	ዝለል
101	የህፃኑጾታ	ወንድ…….1 ሴት……2	
102	ህፃኑየተወለድበትቀን	1) ____ ቀን_____ወር_____ ዓ.ም	
103	የህፃኑእድሜበወራት	ወራት _____	
104	እድሜዎትስንትነዉ?		
105	በአሁኑወቅትያልዎትየጋብቻሁኔታእንዴትነዉ?	1)ያገባች 2) ያላገባች 3) የተፋታች 4)የሞተባት 5) የተለያየች	
106	የየትኛውሃይማኖትተከተይነዎት?	1)ኦርቶዶክስ 2) ካቶሊክ 3)ፕሮቴስታንት 4) ሙስሊም 5)ሌላ _____	
107	የትነውየምትሰሪው?	በግልሆስፒታል……..…1 በመንግስትሆስፒታል….2	
108	የህክምናሙያሽ(profession)ምንድንነው?	1.ጠቅላላሃኪም	

		2.ስፔሻሊስት 3.ነርስ 4.ሚድዋይፍ 5.ላብራቶሪቴክኒሻን 6.ሌላ_____	
109	የባለቤትዎትየትምህርትደረጃ ?	1.አንደኛደረጃያጠናቀቁ 2. ሁለተኛደረጃያጠናቀቁ 3. ኮሌጅዲፕሎማ 4. የዩንቨርስቲዲግሪ 5. ሁለተኛዲግሪናከዚያበላይ	
110	ወርሀዊየቤተሰቡየነፍስወከፍገቢ	_____ ብር	

ክፍል2.ከልጆችወሊድእናከጡትማጥባትጋርየተያያዙጥያቄዎች

ተ.ቁ	ጥያቄ	መልስ	ዝለል
201	ልጅዎንየትነውየተወለደው?	1. የመንግስትሆስፒታል 2. የግልሆስፒታል 3. የመንግስትጤናጣቢያ 4. የግልክሊኒክ 5. መንግስታዊያልሆነክልኒክ 6. ቤት 7. የልምድአዋልጅቤት 8. ሌላይጥቀሱ----------	
202	ልጅዎንከመወለዳዎበፊትቅደመወሊድየ ጤናምርመራበማንኛዉምየጤናድርጅትክ ትትልአድርገዉያዉቃሉ	አዎ…….1 አላዉቅም…..2	
203	መልሰዎአዎከሆነስንትጊዜተከታትለዉያ ዉቃሉ? .	……ጊዜ	
204	የመጀመሪያውንየቅድመወሊድክትትልሲያ ደርጉየስንትወርነፍሰጡርነበሩ	ወር _____	

205	ህፃኖትንየወለዱትበምንድነው?	በማህፀን…..1 በቀዶጥግና…….2 ላሊይጥቀሱ…….3	
206	ስንትልጆችአሉሽ?	1.ወንድ _____ 2.ሴት _____	
207	አሁንየወለዱትንልጅምንጡትአጥብተዉያ ዉቃሉ?	1. አዎን 2. አይደለም	አይደለምከነሆ ወደጥያቄ213ይ ሂድ
208	ከተወለደከስንትጊዜበኋላልጅሽንጡትአስጀ መርሽው?	1. ወዲያውእንደተወለደ 2. በአንድሰዓትጊዜውስጥ 3. በቀናትከሆነይጥቀሱ_____	
209	የመጀመሪያዉንየጡትዎወተት(እንገር) አጥብተዋል?	አዎን……....1 አደለም……..2	
210	በአሁንሰዓትጡትእያጠባሽ ነው?	አዎ……..1 አይደለም…….2	አይደለምከሆነ ወደጥያቄ213ይ ሂድ
211	ትላንትማታወይምቀንላይጡትአጥብተው ትነበርልጅትን?	አዎን……...1 አደለም……..2	
212	ከትላንትናንጋትእስከዛሬንጋትምንያህልጊ ዜልጀዎንአጥብተዋል?	1. .....ጊዜ 2. አላስታዉስም	
213	ትላንትማታወይምቀንላይለልጆዎየጡትወ ተትበማንኪያ፣ኩባያወይምበጡጦሰጥተው ትነበር?	አዎን……..1 አደለም…...2	
214	ትላንትማታወይምቀንላይለልጅሽየቫይታ ሚንጠብታወይምመድሀኒትሰጥተሽውነበ ር?	አዎን……..1 አደለም…...2	
215	ትላንትማታወይምቀንላይለልጅሽORSሰጥ ተሽውነበር?	አዎን……..1 አደለም…....2	

216	ትላንትማታወይምቀንላይለልጅሽከዚህበታ ችከተዘረዘሩትፈሳሽምግቦችውስጥሰጥትሽ ውነበር?	1.አዎን2.አይደለም ውሃ ……..……...1 2 የዲቄትወተት……...1 2 የላምወተት……....1 2 የፍራፍሬጭማቂ……..1 2 ቀጠንያለገንፎ……...1 2 እርጎ……1 2 ሌላይጠቀስ……1 2		
217	ትላንትማታወይምቀንላይለልጅሽከዚህበታ ችከተዘረዘሩትምግቦችሰጥትሽውነበር?	አዎን	አይደለም	
A	ገንፎ፣ዳቦ፣ፓስታ፣ሩዝ፣ብስኩት፣ ወይምከአኛበቆሎገብስ፣ስንዴ፣ የተዘጋጁ ሌላ አይነት ምግቦች	1	2	
B	ሴሪሉም፣ፋፋ	1	2	
C	ከጤፍየተዘጋጁምግቦች እንጀራ ቂጣ ገንፎ,	1	2	
D	ድንች ቡላ ቆጮ ዱባ፣ካሮት ስኳር ድንች	1	2	
E	ጎመንአትክልቶች	1	2	
F	ማንጎ ፓፓያ	1	2	
G	ጉበት፣ ኩላሊት	1	2	
H	ስጋ	1	2	
I	እንቁላል	1	2	
J	አሳ	1	2	
220	በአሁኑወቅትልጅዎንእያጠቡነው?	አዎን……...1 አይደለም…..2		
221	መልስዎአይደለምከሆነጡትማጥባትለምን አቆሙ?	1.ወደስራበመመለስምክንያት……....1 2.እናትበመጸነሷ……..…..1 3. እናትበመታመሟ……1 4. ዉበትስለሚቀንስ……1 5. ህጻኑበመታመሙ……..1 4. የጡትህመም……..1		

		5. በቂወተትስላልነበረኝ……..…..1 6. ሌላምክንያትካለይገለጽ_____	
222	ልጅዎንየጡትወተትማጥባትሲያቋርጡእ ድሜዉስንትነበር?	……..ወር	

ክፍል 3.የቤተሰብድጋፍከጡትማጥባትጋርያለውተያያዥነት

ተ.ቁ	ጥያቄ	መልስ	ዝለል
301	ባለቤትሽወደስራስትመለሺጡትእንድታጠቢድጋፍያደርግልሻል?	አዎን……...1 አይደለም…..2	
302	ቤተሰብወደስራስትመለሽጡትእንድታጠቢድጋፍያረጉልሻል?	አዎን…..1 አደለም…..2	
303	አንቺወደስራስትመለሽልጅሽንማነውየሚንከባከብልሽ?	1.የቤተሰብአባል 2.የህጻናትማቆያ 3.ሞግዚት/ሰራተኛ 4.በመስሪያቤትየሚገኝየህጻናትማቆያ 4.ሌላ_____	

ክፍል4- ከስራጋርተያያዥነትያላቸዉጥያቄዎች

ተ.ቁ	ጥያቄ	መልስ	ዝለል
401	መስሪያቤቱውስጥለጡትማጥብያየተዘጋጃየህፃናትማቆ ያአለ?	አለ……....1 የለም……....2	
402	ከወሊድእረፍትስትመለሺየስራጫናቀንሶልሻል?	አዎ……...1 አልቀነሰም….2	
403	የስራባልደረቦችሽጡትለማጥባትስትፈልጊስራሽንይሸፍ ኑልሻል?	አዎን……..1 አደለም……...2	

404	የስራኃላፊነትሽጡትእንድታጠቢድጋፍያደርግልሻል?	አዎን……..1 አደለም……...2	
405	ከወሊድእረፍትበኋላወደስራስትመለሽየነበረሽስራ	1.የግማሽቀንስራ(በአማካይበሳምንት 30 ሰዓትበታች) 2.የሙሉቀንስራ(በአማካይበሳምንት 30ሰዓትበላይ)	
406	ተቋሙጡትየሚያጠቡእናቶችንየጡትማጥቢያእረፍት ሰዓትይሰጣል?(ለምሳሌዘግይቶመግባት፣ቀድሞመዉጣት…)	1.አዎን 2. አይሰጥም	
407	መልሶዎ**አዎን**ከሆነበቀንስንትጊዜፈቃድያገኛሉ?	በቀን_____ ጊዜ	
408	በቀንምንያህልሰዓትይሰጦታል?	ሰዓት….. ደቂቃ…..	
409	ስራዎጡትለማጥባትአስቸጋሪአድርጎበዎታል?	አዎን……1 የለም…..2	
410	ለምንያህልወርየወሊድእረፍቶዎንተጠቀሙ?	……..……..ወር	
411	ልጅዎንከወለዱከስንትወርበኋላወደስራዎተመለሱ?	ከ……..ወርበኋላ	
412	በተቋሙዉስጥበቀንለምንያህልሰዓትይሰራሉ?	ለ……..ሰዓት	
413	በተቋሙዉስጥየስራሽፍትአለ?	አዎን……..1 የለም……..2	
414	**አዎን**ከሆነመልሰዎበተቋሙዉስጥየሚሰሩትየስራሽፍትበየትኛዉነዉ?	1. ቀንብቻ 2. ቀንእናምሽት 3. ማታ 4. ሌላካለይገለጽ _____	
415	ለስራሰዓትልጆዎንጡትለማጥባትወደቤትይሄዳሉ?	አዎን……...1 አልሄድም….2	

Rita PetrosLamejo (Public Health Officer).

Tel: +251916283488, Email: retapetros20@gmail.com

Curriculum Vitae

Personal Information

Name: Rita Petros

Sex: Female

Nationality: Ethiopian

Address: Bole,Addis Ababa Tel (cell): +251916283488 or +251911918639

Email: ritapetros20@gmail.com

Education

BSC degree in Public Health_ School of Health Sciences, Ambo University, Oct 2003 E.C to Jun 2006E.C

Work experience

Health Officer_ Woreda 11 Health Center, Yeka Sub-city, and Addis Ababa City Administration Health Bureau from Sep 27/1/2007 E.C up to Jun 30/10/2007 E.C.

From July 30/10/2007 E.C up to 1/3/2011E.C,I had worked in woreda 12 Health center in yeka sub city, Addis Ababa city Administration Health Bureau

Roles and Responsibilities

- Work as a staff member and focal person for IMNCI/integrated management neonatal and childhood illness in under five outpatient department
- Worked as service provider in EPI (expanded program of immunization), VCT (volunteer counseling and testing) and ART (anti¬retroviral therapy)in the health center
- Worked as health officer in OPD/outpatient department/, emergency and treating and counseling patients for various health conditions
- Participated in different campaigns like meningitis, measles and polio in yeka sub city woreda 11 and woreda 12 health centers
- Participated in infection prevention and control activities as member of the health center
- I participated different survey as data collector, for example I participate as data collector in Assessment of perceptions and preventive practices of COVID19 among Government Employees in Addis Ababa

- Worked as coordinator in family health program with health Extension workers

Language

Amharic: fluent in reading, writing, speaking and listening

English: fluent in reading, writing, speaking and listening

Kembatigna: fluent in reading, writing, speaking and listening

Computer skills

I am computer literate and use various programs like Office Applications (word, excel, windows, access, and power point) for routine office works, and other software programs. I familiar with internet and other virtual communication technologies.

Trainings and Professional development

- Trained on how to mainstream integrated management of neonatal and childhood illness activities
- Trained on syndromic approach to STI /sexual transmitted illness/ management
- Trained on Management of Tuberculosis in children
- Trained ART and VCT
- Trained on emergency case treatment
- Trained on expanded program on immunization

Reference

Mr.Tilahun Assets,yekasub city Wereda 12 health Centre HPDP core process owner Tel:+251¬912¬090559

Mr.Getu Girma,yeka sub city Wereda 12 health center medical director Tel:+251¬911-556937