ADDIS ABABA UNIVERSITY COLLEGE OF HEALTH SCIENCES
SCHOOL OF PUBLIC HEALTH

ASSESSMENT OF SUBOPTIMAL BREAST-FEEDING PRACTICE AND ASSOCIATED FACTORS, AMONG MOTHERS EMPLOYED IN THE PUBLIC SECTOR, IN NEFAS SILK LAFTO SUB-CITY ADDIS ABABA, ETHIOPIA.

BY:
ASNAKE KEBERE (BSC)

ADVISORS,
SOLOMON SHIFERAW (M.D, MPH, PHD)

MRS. YALEMWORK GETNET (BSC, MPH)

A RESEARCH THESIS SUBMITTED TO THE SCHOOL OF GRADUATE STUDIES OF Addis Ababa UNIVERSITY, COLLEAGE OF HEALTH SCIENCE, AND SCHOOL OF PUBLIC HEALTH IN PARTIAL FULLFILLMENT OF THE REQUIREMENT FOR THE DEGREE OF MASTER OF PUBLIC HEALTH (General MPH).

OCTOBER, 2020,
ADDIS ABABA, ETHIOPIA.

ADDIS ABABA UNIVERSITY COLLEGE OF HEALTH SCIENCES

SCHOOL OF PUBLIC HEALTH

ASSESSMENT OF SUBOPTIMAL BREAST-FEEDING PRACTICE AND ASSOCIATED FACTORS, AMONG MOTHERS EMPLOYED IN THE PUBLIC SECTOR, IN NEFAS SILK LAFTO SUB-CITY ADDIS ABABA, ETHIOPIA

BY:

ASNAKE KEBERE (BSC)

APPROVED BY THE EXAMINING BOARD

CHAIRPERSON, DEP. GRADUATE COMMITTEE	SIGNATURE	DATE
_____	_____	_____
PRIMARY ADVISOR	SIGNATURE	DATE
Dr. SOLOMON SHIFERAW	_____	_____
INTERNAL EXAMINER	SIGNATURE	DATE
_____	_____	_____
EXTERNAL EXAMINER	SIGNATURE	DATE
_____	_____	_____

Acknowledgement

I would like to thank God for his tremendous help to accomplish this work from beginning to end. Also I am grateful to both of my advisors, Dr. Solomon Shiferaw and Mrs. Yalemwork Getnet for their help in selecting my research topic and for their technical support throughout development of my thesis. I want to thank Addis Ababa University, School of Public Health for giving this learning opportunity and course coordinator Mr. Gebretsadik Shibere. Finally I would like to thank Addis Ababa Health Research Ethical Review Directorate, Nefas Silk Lafto sub city health office, School Directors, Medical Directors of Health Centers and those who participated in this research both as data collectors and participants.

Table of Contents page

Acronyms

AA	Addis Ababa
AAU	Addis Ababa University
AARHB	Addis Ababa Regional Health Bureau
CM	Centimeter
C/S	Caesarean Section
IMNCI	Integrated Management of Neonatal and Childhood Illness
K .g	Kilogram
PI	Principal Investigator
SPH	School of Public health
SPSS	Statistical Package for Social Sciences
SNNPRS	Southern Nation Nationalities and Peoples Regional States
S.V.D	Spontaneous Vaginal Delivery

List of tables

List of figures

Abstract

Background

Suboptimal breast-feeding is among the main general medical issues around the world. It represents about more than 1million infant mortality every year, 10% of worldwide disease trouble, and 11.6% under five mortality. Breast-feeding moms faces numerous impediments to practice exclusive breast-feeding and work is one of the major factors.

Objective

To evaluate Suboptimal breast-feeding practice among mothers employed in the public sector with youngsters under a half year, in Nefas Silk Lafto sub-city, Addis Ababa, Ethiopia.

Methods

The study was conducted in Nefas silk Lafto sub city, in Addis Ababa. A total of 265 mothers working in public service with children less than 6 month were selected by using sampling probability proportional to number of women public servant in each sector and mothers with children less than 6months were selected purposively until reaching at required number of mothers assigned for the sector. Data were collected using self-administered structured questionnaire designed according to 24 hours nutritional recall method. Data were entered into Epi-info version7, cleaned and exported to SPSS version 25 for analysis. Frequency, mean and standard deviation were performed for continues variables and categorical variables were assessed by computing frequency and percentage. Statistical association and Significance were assessed by crude and adjusted OR with 95% C.I respectively, the associations between dependent and independent variables were assessed by using binary logistic and multivariable regression.

Result: *Two hundred sixty five (95%) mothers of children have agreed to participate in the study, Mean maternal and infant's age were 29.19 (SD ± 4.36) years and 4.86 (SD ± 1.07) months respectively, the magnitude of sub optimal breast-feeding practice was 58.1% 95% c.i (53.2,62.9). Mothers with breast feeding frequency <8 times/24 hrs [AOR 4.39(1.8, 10.5)], occupation being Health care provider [AOR 6.87 (1.45, 32.57)], returning from maternity leave and mode of delivery Spontaneous vaginal delivery [AOR 0.22 (0.06, 0.83)] were associated with suboptimal breast feeding.*

Conclusion and recommendation*: The magnitude of suboptimal breast-feeding practice is high among public segment moms. Maternal occupation, getting back from maternal leave, and breast-feeding of < 8times/24hrs were among factors which increment suboptimal breast-feeding practice. SVD was found to decrease suboptimal breast-feeding practice. Measures ought to be made to improve work environment condition by benefiting on onsite breast feeding center and particular flexibility of work place for breast feeding moms after they get back from maternity leave. Health education about Spontaneous Vaginal Delivery for moms ought to be advanced.*

1. Introduction

1.1Background

WHO characterizes Optimal breast-feeding as the early commencement of breast feeding inside 1 hour of birth, exclusive breastfeeding for the initial a half year of life, and kept breastfeeding for as long as 2 years or past with suitable complementary feeding starting at a half year. Any breast-feeding practice not satisfying this definition is considered as suboptimal breast-feeding practice, for example, disposing of colostrum, giving pre-lacteal food, postponed inception of breast feeding, non-exclusive breast feeding, and not proceeding with breast feeding up to 2years.

Suboptimal breast feeding is among the main general medical issues around the world. It accounts about more than 1million newborn child mortality each year10% of worldwide illness trouble, and 11.6% under five mortalities. The worldwide rate and pattern of exclusive breast-feeding fluctuates in various region of world; it was conceivable to build levels of exclusive breastfeeding somewhere in the range of 1985 and 1995, worldwide paces of exclusive breastfeeding expanded by 2.4%per year on average expanding from 14% to 38% more than 10 years however diminished in this manner in many districts. Nonetheless, 25 nations expanded their paces of exclusive breast-feeding by 20% rate points or more after1995, a rate that is like what is expected to accomplish the worldwide objective. Nations as of now at or close to half exclusive breast-feeding should keep on taking a step at enhancements as a result of the wellbeing and financial advantages of exclusive breast-feeding. In these cases, it is Suggested a base increment of 1.2% every year or more (1, 2). Regardless of the critical proof showing the helpful effect of optimal breast-feeding rehearses on infant, child wellbeing, and survival, there has been little improvement in optimal breastfeeding rehearses internationally just 38% of infants 0 to a half year old are only breastfed, and activity to increment to 50% incorporates scaling up and checking breast feeding interventions(3).

As per Ethiopian demographic health survey report, Ethiopia's breast feeding markers has indicating progress; including Exclusive breast-feeding has reliably expanded from 49% in 2005 to 52% in 2011, and 58% in 2016, Early breast feeding inside 1hr of 73%, practice of prelacteal feeding decreased from 29% in 2005 to 27% in2011, and further to 8% in 2016. The median length of breast feeding was23.9 month for children under three years, median exclusive breast feeding was 3.1 month. At the point when we take look at Addis Ababa's circumstance, 67.5%of children start breast feeding inside 1hr of birth, and median term of Exclusive breast feeding was 2.9 month, which is beneath national targets and WHO's proposal.

Early nourishment assumes a significant job in the source of adulthood disease, for example, type2 Diabetes Mellitus, hypertension, obesity, and metabolic conditions. In this way, proper feeding practice ought to be built up in neonatal period, and proceed all through infancy, and youthfulness. Human milk has defensive impact against looseness of the bowels, otitis media, Urinary Tract Infection, necrotizing entro-colitis, septicemia, youth malignant growths, lymphoma, hypersensitivity and baby mortality. On account of this choice to breast feed ought to be considered as general medical problem and not just a way of life choice (4).

The achievement of commencement and continuation of breastfeeding relies upon different factors, for example, education about breast feeding at ANC, clinic breast feeding practice and strategies, family and social help, maternal education, information about IYCF, parity, method of delivery, home delivery, and information about breast feeding (4-6). Formation of steady condition for urging moms to breast feed their kids has risen as key medical problem for the two ladies and youngsters. A literature review in Egypt uncovers regular hindrances, for example, absence of information about lactation issues, helpless family and social help, socially accepted practices, humiliation, employment and child care, and health service. Explicit boundaries to employed moms, parts of workplace that adds to overall impression of work environment breast feeding support have been portrayed, for example, organization approaches/work culture, trough uphold/absence of help, and physical condition of breast feeding spaces (7).

Despite the fact that Addis Ababa appreciates higher rates of ANC coverage, Institutional delivery, education (87.8%), and employment (52%) among ladies, there is deficiency with respect to optimal breast feeding practice in the city when contrasted with different region, particularly concerning short median term of exclusive breast-feeding, early inception of breast feeding, and higher act of pre-lacteal feeding. This could be expected higher level of literate and employed moms in the city. As per EDHS and study conducted in Gondar Ethiopia, indicated lower level of exclusive breast-feeding among employed moms when contrasted with jobless moms. This should be concentrated further to see trouble to stick to suggested optimal breast-feeding practice among employed moms in Addis Ababa.

Work can influence exclusive breast-feeding particularly for employed moms in the public sector. Since there is restricted privilege, just 4 months maternity leave and when they return back to work, they experience trouble to proceed with breast-feeding solely. They will be driven away from their youngster at kid day care and attendants, looking through other feeding choices since dominant part of public sectors need convenience like nearby kid care centers at work place, breast-feeding corners and breaks.

1.2 Statement of the problem

Internationally, there is predictable and considerable proof that early, exclusive, and kept breastfeeding through 23 months altogether lessens neonatal and youngster mortality by (18%), serious infections by (60%) and mental improvement scores augmentation of (5.2pointes) related with feeding mother's own milk contrasted and formula feeding. optimal breast feeding is a basic work on during this period to forestall stunting, advance ideal children development, and lessen mortality (8).

Ethiopia's legislature is endeavoring to accomplish ideal breast feeding by 2020.The usage of optimal feeding will improve healthy growth, and advancement of youngsters. Breastfeeding is among the five best mediations that will forestall a sum of 415,688 under-five and 210, 234 neonatal mortality in Ethiopia over the time of five years (9).

There are products of variables that impact suboptimal breast feeding practice including education about breast feeding at ANC, medical clinic breast feeding practice, and approaches, family and social help, maternal education, information about IYCF, parity, method of delivery, employment status, home delivery, information about breast feeding(10).Employment is one of regularly referenced affecting elements of exclusive breast-feeding, in light of the fact that employed ladies may get pregnant, and give birth an offspring, doing so they may experience trouble to only breast feed their youngsters in the wake of returning back to work completing 4 month maternity leave. It will be not really conceivable to solely breast feed, except if there is strong staff, adaptable work place, and supportive chiefs.

Study done in Addis Ababa with title of Exploring breast feeding practice among employed moms, and view of managers towards breast feeding practice of employed moms utilizing phenomenological method indicated that, employed moms concede to the significance of breast feeding and come back to work was referenced as significant hindrance to breast feed. Moms with convenience (6month maternity leave or onsite child care center) communicated better breast feeding, and fulfillment with their activity, yet Employers in foundation with neither one of the accommodations communicated absence of inspiration of moms in the wake of coming back from maternity leave. Moreover Employers in organization with one of convenience clarified better efficiency, focus, and breast feeding practice of moms on work. Onsite child care center is most engaged accommodation (11).

There is impediment of adequate data on status of suboptimal breast-feeding in urban setting like Addis Ababa. Since there is generally higher level of education (87.8%) of lady than country territories, Literate moms have higher propensities to rehearse pre-lacteal and nonexclusive breast feeding than uneducated moms. For instance about 17% of kids from mother with above secondary education get pre-lacteal

feeding, whereas 7-8% for those moms' secondary or lower education and babies in urban region are bound to get pre-lacteal feeding (12%) than in country territories (7%). Furthermore just 61% of newborn children whose moms have more than secondary education began to breast feed inside 1hour of birth, contrasted and 73-74% babies from moms of below secondary education (5). This study planned to measure the magnitude of suboptimal breast feeding Practice and distinction in suboptimal breast-feeding practice among moms associated with different public service sectors.

1.3 Rationale

This study will be useful to research the weight of the of issue among ladies' in public sector in Nefas silk lafto sub city, due to numerous children are not optimally breast fed among the individuals who come to Health Centers looking for clinical consideration, growth monitoring, and EPI services. Since there is restricted studies performed on suboptimal breast-feeding practice in public sector workers and it will add to existing writings by exposing weight of suboptimal breast-feeding centering employed fragment of population.

Since the breast-feeding focuses of the nation is not met, this investigation will be useful to health experts, and programmers to give due consideration by indicating what amount employed moms are enduring to execute exclusive breast feeding.

1.4 Significance of the Study

The finding of study will give valuable data to improve workplace strength to breast feeding moms, subsequently decrease the under-five mortality to 29/1,000 live births by 2020 and to handle issues that trigger suboptimal breast-feeding practice in the community. The study will likewise be useful in recognizing factors towards usage of optimal breast feeding. Along these lines adds to progress of low (2.9months) median span exclusive breast-feeding and to build length of exclusive breast-feeding in Addis Ababa (5), fills the lack of locally accessible reported proof on issue.

It is accepted that the finding of this study helps health programmers, public service agency, and health workers to comprehend the earnestness of the issue. It will assist with planning and implement appropriate intervention in the community. This study will be additionally critical to civil service agency, and health office to give due accentuation towards working mothers' issues to optimally breast feed their children, and to make working condition great to breast-feeding mothers.

2. Literature Review

2.1. Definition of optimal breast-feeding

Optimal breast-feeding is characterized as the early inception of breast feeding inside 1 hour of birth, exclusive breast-feeding for the initial a half year of life, and continued breastfeeding for as long as 2 years or past with appropriate complementary feeding starting at a half year. Any breast-feeding practice not satisfying this definition is considered as suboptimal breast-feeding practice, for example, disposing of colostrum, giving pre-lacteal food, deferred inception of breast feeding, non-exclusive breast-feeding, and not proceeding with breast feeding up to 2years.

As per lancet breast-feeding series: Systematic review and Meta-analysis with title why contribute, and what it will take to improve breast feeding practice? Around the world the predominance of breast feeding at 12month is most noteworthy in sub Saharan Africa, South Asia, and parts of Latin America. In most high-income nations prevalence is lower than 20%. It turns out to be more uncommon in high- income nations, better educated, wealthier, and urban ladies' in low-and middle-income nations. Breast feeding substitutes were seen as present day and esteemed, yet breast-feeding was related with being poor. For all low-and middle income nations exclusive breast feeding expanded from 25% in 1993 to 37% in 2013, in the wealthiest 20% in every nation breast-feeding expanded from 16% to 36%, while most unfortunate 20% follow general pattern.

2.2. Magnitude of optimal breast-feeding

The most elevated predominance is in Rwanda 85%, and 76% in Sri Lanka, <1% in UK, 27%USA, 35% in Norway and 16%in Sweden. Aside from of early inception, prevalence of all pointers diminished with expanding public riches, low-income nations had high commonness of breast feeding at all ages. The worldwide objective of exclusive breast-feeding is 95% and 6 to 23months 90% for any breast feeding. Ethiopia, Nepal, Rwanda, Burundi, and Guinea, are nations as of now have levels above worldwide target (12). The pace of exclusive breast feeding differs all around the world for instance its about 7.6% in South Africa, there is early inception of sold nourishments at 3 month in 43.2% and 15% before two month (13). Study in Cameron demonstrated that commonness of exclusive breast-feeding was 26% and 72% in blend with different nourishments, 2%did not breast feed because of absence of breast milk stream or babies refusal to suckle (10). In Nigeria among newborn children 0 to 5 months 14% were exclusively breast feed and 48 % predominantly breast feed. Among youngsters matured 0-23month 38% breast feed with

1hour of birth and 15%were bottle feed (31). A comparative study between bottle feed and exclusive breast feed babies in Pakistan demonstrated that 21% of only breast feed newborn children have normal weight when contrasted with bottle feed babies which is 25%, there was no noteworthy distinction found in nourishing status of the two gatherings, anyway the occurrence of allergy, infection and diarrhea was fundamentally pervasive in bottle feed babies than only breast feed (14). The prevalence of suboptimal breast-feeding was 29.8% and 70.2% of mothers started breast feeding with in 1hour after delivery in study done in Somali Land (15).

At the point when we look at Ethiopia's circumstance the rate of exclusive breast-feeding is 58%, 8% prelacteal feeding and 73% early commencement of breast feeding which is beneath National targets of Exclusive breast-feeding of 80%, Early inception of breast feeding of 90%, and complementary feeding with proceeded with breast feeding of 100% by2020, from baseline 52%, 51% and half respectively (5, 9). A meta-analysis on studies done in various areas of Ethiopia about exclusive breast feeding indicated that the pooled prevalence of exclusive breast-feeding was 59.3%with 95%c.i(53.8,64.8%) and in sub group meta-analysis the most elevated prevalence of exclusive breast-feeding was accounted for in Afar district with predominance of 65.6%,95% c.i (48.5,82.7%), trailed by SNNPRS,63.8%,95% c.i (54.6,73%),and Oromiya 61.8% (61.2,71.3%) (6).The commonness of exclusive breast feeding was 50.1%. Mothers with youthful newborn children matured 0-1month AOR 3.86 (1.64,9.07) that mean youthful babies were probably going to be exclusively breast fed around 4 times more than those 4-5months infants, jobless moms AOR 3.01 (1.46, 6.20), low income moms AOR 3.61 (1.75,7.45), moms who got breastfeeding advising in pregnancy AOR 2.76 (1.52,4.99), took care of colostrum AOR 3.50 (1.45,8.45), didn't give prelacteal takes care of AOR 4.48 (1.82, 11.03) and were upheld by their husband AOR 2.67 (1.04,6.95) were bound to rehearse exclusive breastfeeding than their counterparts as indicated by study in East Gojjam zone (21).

The pervasiveness of suboptimal breast-feeding of babies was discovered to be 56.9%in Hula SNNPRS. Almost half (49.4%) of the moms postponed inception of breast feeding, and 13.4% of the infants were taken care of breast non-exclusively(8),in other investigation done in Arba Minch zuria it was discovered (53.8%)11%of moms disposed of colostrum and 42.8% started Breast-Feeding deferred. Postponed inception of breastfeeding was emphatically connected with absence of maternal education. Health worker uphold for ladies at Delivery times were conversely connected with postponed inception of breast feeding practices (22).

Egata et al. discovered that the commonness of non-exclusive breast-feeding in babies matured under a half year was 28.3%. Non-exclusive breastfeeding was bound to be rehearsed by mothers who were not married right now. The pace of non-selective breastfeeding was higher (34.2%) among offspring of moms

who had less access to health facilities, Non-exclusive breast-feeding was common (63.8%) among offspring of mother who had less Knowledge about IYCF. Prelacteal feeding was drilled by 75.8% of the mothers (10).

2.3. Associated factors of breast-feeding

Advertising of breast milk substitutes adversely influences breast feeding: worldwide deals of 2014 of $44.8billion shows industry's huge serious case on newborn child feeding. It results financial misfortunes about $302billion or 0 .49% of world gross national income. The end was breast feeding gives short and long term, wellbeing, financial, and natural favorable circumstances to kids, ladies, and society. To implement these additions, political help and budgetary ventures are expected to secure, advance, and backing breast feeding by scaling up known interventions, policies, and programs (12).

Early inception of breast-feeding was related with higher maternal education, frequent ANC visit, and birth interval. Yet, cesarean section delivery is related with postponed inception of breast feeding. Educated mothers, older age, and from wealthier families only breast feed their infants. A systematic review and meta-analysis on exclusive breast-feeding practice in Ethiopia and its relationship with ANC and institutional delivery, uncovered ANC is fundamentally connected with exclusive breast-feeding, the like hood of exclusive breast-feeding practice was 2.1timeshigher among moms who had ANC visit, contrasted with their counter parts with OR 2.1 (1.5, 2.8) and institutional delivery was decidedly connected with exclusive breast feeding OR 2.2 (1.3, 3.5) (6).

Study in turkey with title of breast-feeding experience of female doctors and the effect of law change on breast feeding, with mean to ascertain the impact of improved law on breast feeding among female doctors. The distinction in term of exclusive breast feeding, and total breast feeding were assessed according to new law. They utilized cross-sectional examination including female doctors working in three hospitals in Istanbul in August 2014. They found that the impact of progress in law were measurably critical on the term of maternity leave, and improved working hours subsequent to coming back to work, and exclusive breast feeding with OR (4.47) and total OR (2.56) breast-feeding for >12month fundamentally expanded after new law. They reasoned that this examination demonstrated legitimate improvement reflected positive results. There is something else entirely to be finished with state of working place, and disseminating rights similarly to ladies rehearsing surgical disciplines as well (16).

Another examination done in U.S.A in 2014 with title of maternity leave length and full time/part work status is related with U.S.A moms' capacity to meet breast-feeding goal. Point of the examination was to

survey whether maternity leave term and return status were related with not meeting a mother's aim to breast feed at least 3 month. They utilized secondary data from cohort study for newborn child feeding practice. They discovered 28% of moms didn't meet their goal to breast feed at least 3 months. The OR not meeting to breast feeding at least 3 month were higher among moms who came back to work contrasted and not working at 3month. The conclusion was coming back to all day work before 3 month may diminish mother's capacity to meet her expectation to breast feed at least 3 month. Managers uphold for adaptability working schedule may offer more ladies accomplish their breast-feeding goals (17).

Production of favorable condition for urging mothers to breast feed their kids has developed as key medical problem for the two ladies and kids. Study in Taiwan indicated 56.3% of moms' breast feed during maternity leave and 33.1% never breast feed. Within the sight of lactation rooms and breast siphoning breaks, anyway 10.6% keep on breasting feed subsequent to coming back to work site. This was connected realizing breast feeding arrangements at work place, office work, and adaptable work schedule (18). Employment is persistent hindrance to proceed with breast feeding, because of absence of help from managers, absence of break time, deficient siphoning and putting away milk, lack of resources that promotes breast feeding, lack of supports from colleagues are among the challenges faced by employed mothers to continue breast feeding by expressing their milk in work place(19). To encourage and increase the rate of continued breast feeding, work place should establish dedicated breast-feeding rooms and maintain comfortable and clean environment (20).

A similar cross-sectional investigation in Gondar demonstrated the mean span of moms to solely breastfed was discovered 4.77 months (± 1.36 SD). Exclusive breastfeeding was higher among jobless 48.0% with 95% Confidence Interval (42.0%, 54.0%) than employed (20.9%) with 95% CI (16.0%, 25.0%). Parity of three youngsters or more and having social help were decidedly connected with Exclusive breastfeeding while poor knowledge, Wealth list of the medium level was contrarily related among employed moms. On account of jobless moms, vaginal delivery and having social help were decidedly connected with exclusive breastfeeding while, poor knowledge, and not having antenatal follow up contrarily associated (23).

Setegn et al found the commonness of exclusive breastfeeding over the most recent 24 hours going before the review was 71.3%. The middle length of exclusive breastfeeding was three months and mean recurrence of breastfeeding was six times each day. Being un-employed and age of babies of under two months were autonomously connected with exclusive breast-feeding. Moms who started breastfeeding inside one hour of birth were 2 times bound to rehearse exclusive breastfeeding than moms who started following 60 minutes (24).

An examination in North East Ethiopia found that commonness of prelacteal taking care of was 38.8%. Home delivery was a predisposing factor for rehearsing prelacteal taking care of. Moms who conceived an offspring at home were 7 times bound to rehearse prelacteal taking care of when contrasted with moms who delivered at health facilities. Moms who didn't know about the dangers related with prelacteal feeding were almost 4 times bound to rehearse prelacteal taking care of when contrasted with knowledgeable moms. Late inception of breastfeeding (following one hour of delivery) was additionally connected with prelacteal feeding practice. The significant reasons expressed for giving prelacteal taking care of were to forestall " evil eye" and sickness and to "clean baby's stomach"(25).

Study in North West Ethiopia demonstrated that dependent on knowledge score, 69.8% of the respondents were gathered as having great information and 30.2% of the investigation members were arranged as having helpless information. Three hundred fifteen 82% knew about EBF and 18% don't Know about Exclusive Breast Feeding. Their significant source of data was Health organizations 66.4%.70% of respondents have great information about perfect opportunity to give breast milk to a child after birth. 45.3% of the respondents have helpless information to give the primary milk (colostrum) to the infant, while 54.7% have great information about it. The larger part 65.1% realized that breast milk alone is sufficient for babies under a half year yet 25.8% addressed that breast milk alone isn't sufficient for the Infant under a half year. In view of the attitudinal score, 24% of the investigation members were ordered as having negative disposition towards EBF and 76% were sorted as having uplifting mentality towards EBF. From study members, 28.4% and 33.9% of them firmly differ and differ to the feeling disposing of colostrums (first milk), respectively. For the assessment that beginning complementary nourishments before a half year is significant, 12% emphatically agree, 15.9% agree, 44% differ and, 28.1% firmly disagree (26).

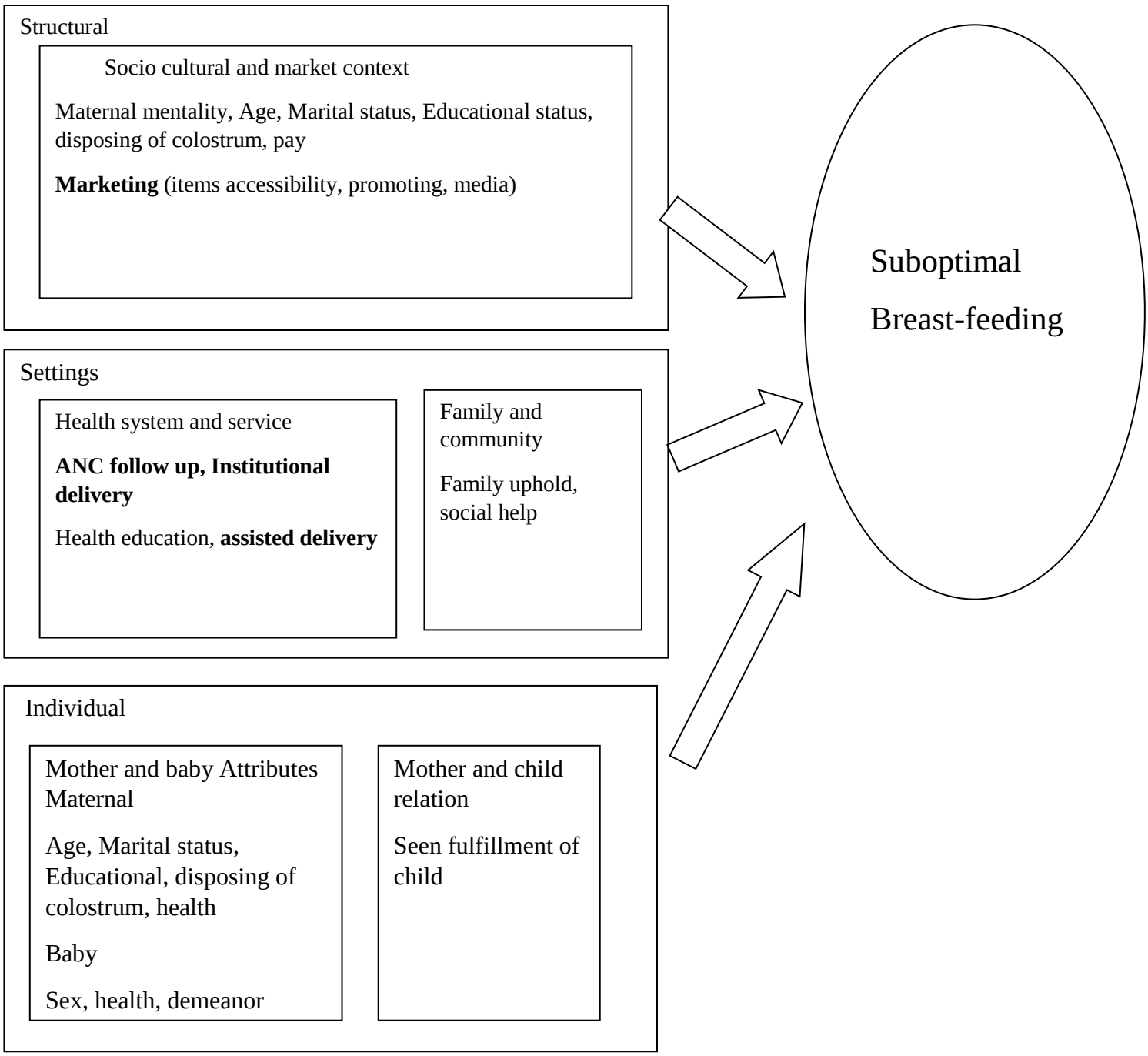
Study in Vietnam show that the commonness of looseness of the bowels and Acute Respiratory Infection among babies 0–5 months was 5.3% and 24.5%, respectively. Despite the fact that half of all babies were breastfed inside one hour of birth, 73.3% were given pre-lacteal nourishments in the initial three days after birth. Just 20.2% of kids 0–5 months old were solely breastfed, while 32.4% were prevalently breastfed and 47.4% partially breastfed. Early commencement of breastfeeding was related with lower predominance of looseness of the bowels [adjusted chances proportion (AOR) = 0.74), while pre-lacteal taking care of was related with higher commonness AOR = 1.53. Contrasted with newborn children who were only breastfed babies who were prevalently AOR = 1.52 or partially breastfed AOR = 1.55 were bound to have looseness of the bowels. Prelacteal taking care of [AOR = 1.16 (95% CI 1.01, 1.33)] and halfway breastfeeding AOR comparative with select breastfeeding = 1.24 were related with higher

commonness of ARI. While the defensive impacts of exclusive breastfeeding against loose bowels declined with youngster age, this impact for ARI seems to have remained constant (27).

From the above examinations we discovered that the majority of them performed by cross-sectional study and the discoveries are generally; the greatness size of the issue is huge, there is high weight of non-exclusive breast-feeding, prelacteal feeding and postponed inception of Breast Feeding. They are related with various socio-demographic and behavioral factors. There are various variables viewed as related with suboptimal breast-feeding are: maternal age, education, recurrence of ANC visit, institutional delivery, parity, method of delivery, social help, supportive workplace (lactation Room, flexibility), duration of maternity leave, and employment. The greater part of the investigations were done on general population, which didn't give proper concern to look at weight of suboptimal breast-feeding among employed portion of population. The study will help the leaders to comprehend the difficult well and to settle on proof based choice to limit suboptimal breast-feeding.

Further investigation is significant, particularly with respect to proceeding with breast-feeding with appropriate complementary feeding, and employed fragment of population since they experience issues to continue breast feeding after they come back from maternity leave. Analytical and behavioral study will be critical to plainly comprehend quality of relationship between thwarting variables of optimal breast-feeding practice.

Conceptual framework on suboptimal breast-feeding practice



Conceptual framework created by exploring various articles and model created by lancet breast-feeding series (15, 16, 20, 21, 22, 23).

3. Objectives

3.1 General objective

- To assess suboptimal breast-feeding practice among mothers with children under 6 months, in Nefas Silk Lafto sub-city Addis Ababa, Ethiopia.

3.2 Specific objectives

- To measure the magnitude of sub optimal breast-feeding practices among mothers in public sector in Nefas Silk Lafto sub-city Addis Ababa, Ethiopia.
- To describe factors associated with suboptimal breast feeding.

4. Methods

4.1 Study Area

The study was conducted in Addis Ababa, which is the capital and biggest city of Ethiopia. Addis Ababa is situated in the Central piece of Ethiopia. All side of the capital city is circumscribed by Oromia Regional State, and covers a territory of 530 sq. km. The capital city, Addis Ababa is divided into ten sub cities and into 121 woredas (28). Addis Ababa City Administration has an expected populace of 3,559,997 at 2016 G.C from this, males account 1,628,140 and females account 1,931,857 of the population (29). Addis Ababa city has 40 Hospital, 99 Health Center and 359 clinics. There is higher rate of women literacy (87.8%), higher median number of women years of education (8.1years), and 97% ANC coverage and 97% institutional delivery than different areas. Near half (52%) of urban ladies are employed when contrasted with 28% provincial (5). Nifas Silk Lafto is one of the ten sub cities, found south west of Addis Ababa, made out of 13 woredas, populace of 335,740 of which males account 158,126,females 177,614.There are 10,429 permanently employed workers in public sector, among them ladies workers account 5,859, and the rest are males.

4.2 Study Design

Cross-sectional study was conducted among employed women in the public sector with children less than 6 months in Nifas Silk Lafto sub-city, Addis Ababa.

4.3 Study period

Study was conducted from September to November, 2019.

4.4 Source population

All employed public sector worker moms with children under a half year who were presently living in Addis Ababa.

4.5 Study population

Study populations were contained public service worker moms with children under half year, who were at present working in Nifas silk lafto sub-city, Addis Ababa at the time of study.

4.5.1 Inclusion and rejection rules

Incorporation rules

- Public worker mothers with Children under a half year.
- Mothers living in the city permanently at least for one year.
- Permanently employed mothers with under 6month child.

4.6. Sample size determination

Sample size was calculated by using single population proportion formula, 5% level of significance, and 95% confidence level taken and 10% non- response rate.

$$n = \frac{Z^2_{\alpha/2 \times P(1-P)}}{d^2} = 1.96^2 \times 0.209(1-0.209) / (0.05)^2 = 0.6350/.0025 = 254$$

When 10% non- response rate was added it became 279.

Where:

P_1= the prevalence of exclusive breast feeding among employed mothers (23).

d =margin of error considered to be 5%

$Z_{\alpha/2=}$ Z-value for 95% confidence level which was 1.96

n = the required sample size

4.7 Sampling procedures

Those public servant mothers with children under a half year who were at present working in Nefas Silk Lafto sub city were included in the study. Probability proportional to size sampling strategy was utilized to apportion required number of ladies with youngster from each sector. Moms with kids under a half year were chosen purposively until the necessary quantities of ladies were incorporated by number designated for the sector utilizing probability proportional to number of ladies working in the sector.

Table 1: Sampling table of study population in N/S/L sub-city, A.A 2019

No.	Sectors in Public sector	No. women in the sector	No. women with under 6months children included in the study	No. Sample allocated for the sector according to Probability proportional to size.
1	Capacity building	154	4	7
2	CEO office	196	5	9
3	Land management	197	9	9
4	Woredas administration office	2,300	106	110
5	Health office	35	2	2
6	Education office and schools	1896	87	90
7	Health Center	1081	52	52
	Total	5859	265	279

4.8 Data collection techniques

Information was gathered utilizing self-administered structured questioner prepared by using 24 hours nutritional recall technique via trained data collectors. Six information gatherers and one supervisor were utilized in information assortment every one of them were Nurses. Information gatherers and supervisor were given two days training on information assortment instrument, by principal investigator. The questioner contains socio demographic, and suboptimal breast-feeding practice parts. The PI was coordinating information assortment process, causes information gatherers to take care of issues in the event that they confronted challenge and checks completeness of questioner on every day base. Information entry and cleaning in to EPI-info version7 and analysis by utilizing SPSS Version 25 was the job of PI.

4.9 Study variables

4.9.1 Dependant variable:

Sub optimal breast-feeding practice of mothers (Yes, No)

4.9.2 Independent variables

Socio-demographic factors

- Maternal employment
- Age
- Marital status
- Education
- Occupation
- Income

Health related factors

- ANC follow up
- Health education about breast-feeding during ANC visit
- Method of delivery
- Place of delivery
- Mothers health condition

4.10. Operational definitions

Suboptimal breastfeeding practice: taking care of the youngster extra food and liquids other than breast milk before child reached at 6months in the first 24 hours before study information were gathered.

Permanent living arrangement: those ladies with kids living in Addis Ababa at least one year.

Income: month to month pay produced inside house hold, either spouse's salary or picked up by ladies working in formal work.

Public servant: individual who is employed in governmental organization and directed by public service rules.

4.11. Data quality management

The principal investigator who was the study facilitator assumed the liability for the altering/coding and entry of the information to the Computer. Computer information cleaning additionally was done to check for the consistency of information and distinguish mistakes that will happen during information assortment or coding process. Training was given for both information gatherers, and supervisors concerning on data collection tool for 2 days by the PI. Pretesting 5% of sample size was performed before genuine information assortment.

In the genuine information assortment measure, the PI was carefully guaranteed that the information gathered satisfies the normal techniques and keep each question reacted appropriately by the respondent, through spot checking. At the point when data collectors experienced issues during interview, the pi was effectively supporting them.

At first the questionnaire and the educated assent was created in English language for simplicity of understanding and afterward made an interpretation of into Amharic to guarantee consistency of comprehension among data collectors and respondents.

4.12 Data Analysis strategies

Information were entered and cleaned utilizing Epi-info7 programming at that point was sent out to SPSS version25 by pi and analysis were finished utilizing SPSS version 25. Descriptive statistics were figured for all factors. Frequency, mean, and standard deviation were performed for continues variables. Categorical variables were evaluated by computing frequency and percentage. Significance were surveyed by crude and adjusted OR with 95% C.I. the associations among dependent and independent factors were evaluated by binary logistic regression and that

variable qualified for multivariable logistic regression was assessed by multinomial logistic regression.

4.13 Ethical Considerations

The study was conducted after endorsement was gotten from research Ethics committee at School of Public Health, Addis Ababa University and Addis Ababa health research ethical review directorate. An authorization letter was gotten from Addis Ababa health office and N/S/L sub city to get the important data. Educated assent was looked for from all study members; privileges of members to pull back from the research were regarded. Before information assortment members were educated about the reason for the study and significance, and afterward were welcome to take part. Protection and secrecy were kept up utilizing codes rather than individual identifiers. Those Participants who were found to have suboptimal breastfeeding were directed.

4.14 Dissemination of results:

Aftereffects of this study will be dispersed through seminar presentation to School of Public Health and Addis Ababa health research ethical review directorate, connection by email to separate governmental organization.

5. Result

5.1. Socio-demographic characteristics of mothers with infant less than 6 month

Out of 279 mothers with youngsters 265 were included in study making reaction rate of 95%. The mean age of moms was 29.19 years (SD ± 4.36) and run from 19 to 48 years. The mean age of children were 4.86month (SD ±1.072) and extend from 1 to 5month. With respect to marital status 220 (83%) are married, 24 (9.1%) single. At the point when we look at occupation, Health workers 64 (24.2%), teachers 59 (22.3%), accountants 23 (8.7%), cleaners 21 (7.9%), managers 15 (5.7%) and secretaries 13 (4.9%) were common. Concerning month to month pay mean were 3787.51br (SD±1723.55) and reaches somewhere in the range of 1000 and 9500br. Larger part of moms had advanced education 229 (86.4%) trailed by the individuals who accomplished grade 7 to 10, 20 (7.5%), secondary school 12 (4.5%) and the rest 4 (1.5%) went to elementary school.

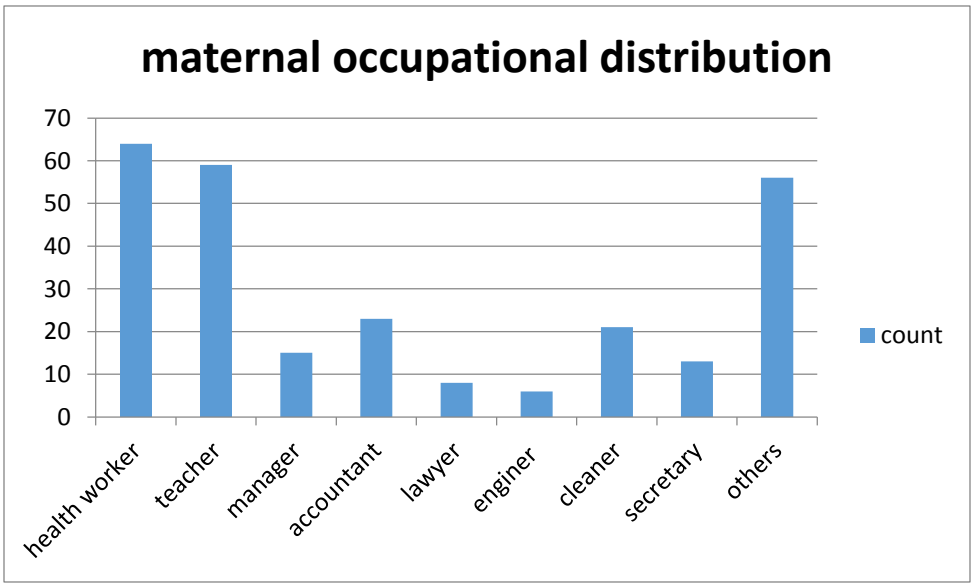


Figure 1: Maternal occupational distribution in N/S/L sub city.

Table 2: Socio demographic attributes of mother and children in N/S/L sub city

Variables n=265	Number	Percentage
Marital status		
Single	24	9.1
Married	220	83
Separated	11	4.2
Divorced	9	3.4
Widowed	1	0.4
Sex of child		
Female	131	49.4
Male	133	50.2
Educational status		
1to 6	4	1.5
7to10	20	7.5
9to12	12	4.5
higher education	229	86.4

Attributes of moms with youngsters from birth to under half year; in this investigation 97.4% had ANC follow up and among them 41.1% had ≥4 visits, 76.6% got Health education about breast feeding. Concerning of methods of delivery 186 (70.2%) give birth by Spontaneous Vaginal Delivery, 64 (24.2%) by Caesarian Section and the rest 14 (5.3%) by the assistance of instrument. Greater part of moms delivered their youngster at either Health Center 52.1% or Hospital 44.5% and the rest 3.4% had delivered at home.

5.2. Mothers Breast- feeding practice

Majority of 256 (96.6%) mothers had ever breast fed, 231 (87.2 %) were currently breastfeeding and 34 (12.8 %) not breast feeding currently among them 153 (57.7%) initiated breast feeding timely, 68 (25.7 %) discarded colostrum 69 **(**26%) gave prelacteal feeding. 154 (58.1%) of mothers breast fed sub optimally, 141 (53.2%) breast fed <8times/day. Almost all public organizations in Nefas Silk Lafto sub city 99.2% had no separated breast feeding place or no onsite child care center at their work place, and only 11.3% of mothers had received managerial support to breast fed their children.

Regarding breast feeding option after maternity leave, half of mothers (52.5%) breast fed their child out of working hours, 9.4% used half day leave until child turned 6 months, 7.9% breast fed by expressing breast milk and 8.7% stopped breast feeding after returning from maternity leave. There was difference in breast feeding practice among mothers with different educational status and the sector in which they were involved; chi square test =2.973 with degree of freedom=3,suboptimal breast feeding practice was higher among those who completed higher education and lowest for those with primary level education. Suboptimal breast feeding was lower in mothers employed as managers, accountant, lawyer, cleaner and secretaries but higher in health worker and teachers.

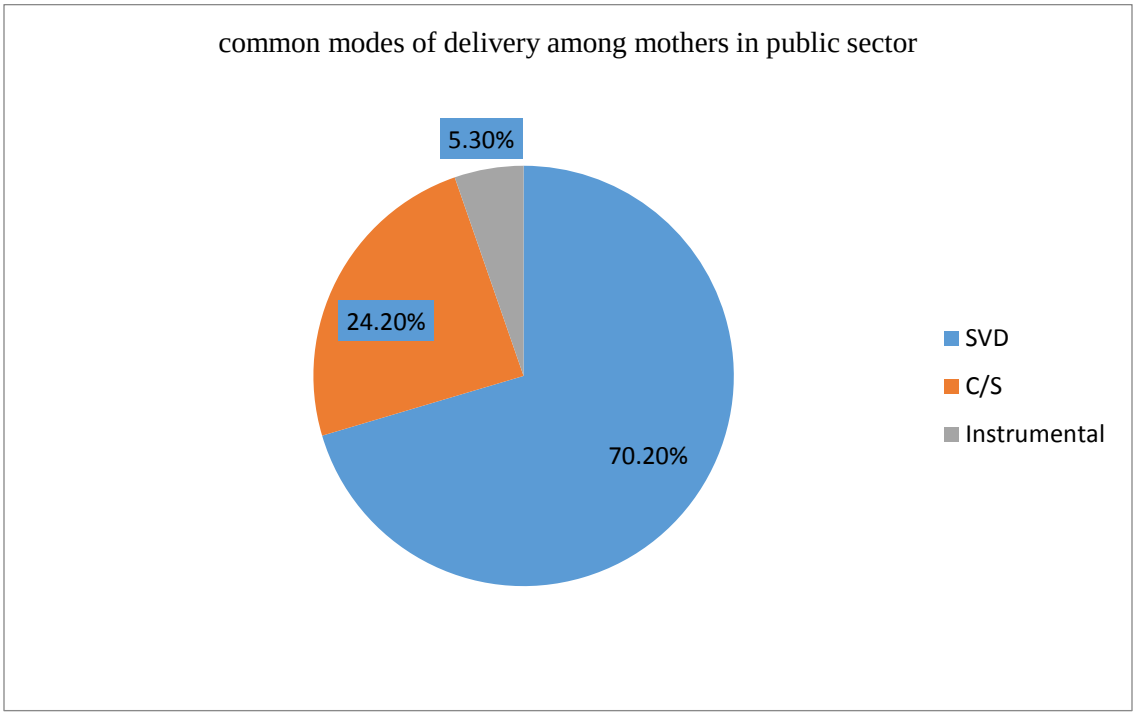


Figure 2: Modes of delivery among mothers working in N/S/L sub city public sector.

Table 3: breast feeding practice of mothers with child employed in N/S/L sub city public sector from September 23-November 30, 2019.

Variables(n=265)	frequency	percent
Ever breast fed		
no	9	3.4
yes	256	96.6
Breast feeding initiation		
within 1hr	153	57.7
>1hour	103	38.9
Discarding colostrum		
No	68	25.7
Yes	195	73.6
Prelacteal feeding		
No	194	73.2
Yes	69	26
Currently breast feeding		
No	34	12.8
Yes	231	87.2
Breast feeding frequency(last 24hr)		
<8times	141	53.2
>8times	123	46.4
Did your child receive anything other than breast milk in the last 24hrs?		
No	111	41.9
Yes	154	58.1

Title mothers occupation and breast feeding practice

Count

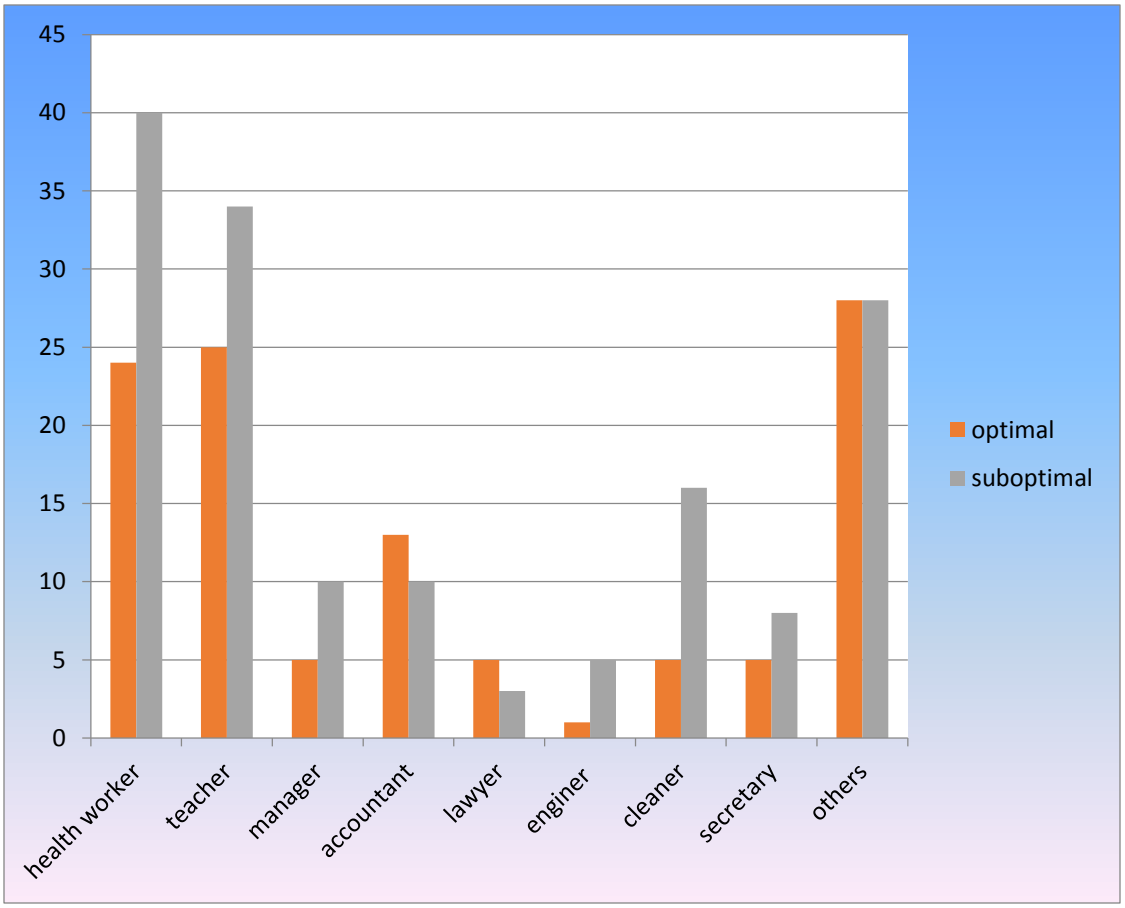


Figure 3: Maternal occupation and breast feeding practice among different profession in public sector.

All variables which were assessed by this study were fitted into binary logistic regression model and those variables identified by bivariate analysis with p-value ≤ 0.2 were selected for multivariable analysis. Based on the analysis maternal occupation (health worker), method of delivery (SVD), breast feeding frequency, and breast feeding after maternity leave were found statistically significant with p value less than 0.05.

Table 4: Variables associated with suboptimal breast feeding practice.

Variables(n=265)	suboptimal breast feeding		COR		AOR with 95%CI	P-Value
Mothers occupation	No	Yes				
Health worker	24	40	1.552	(0.749,3.215)	6.87(1.45,32.57)	0.015
Teacher	25	34	1.358	(0.649,2.84)	2.6(0.69,9.95)	0.152
Manager	5	10	1.862	(0.564,6.149)	3.44(.61,19.45)	0.162
Accountant	13	10	0.853	(0.323,2.255)	2.83(0.62,12.94)	0.18
Lawyer	5	3	0.559	(0.122,2.565)		0.998
Cleaner	5	16	2.979	(0.96,9.248)	(0.57,177.3)	0.114
Secretary	5	8	1.49	(0.434,5.118)	(0.39,48.3)	0.231
Others	28	28	1.074			
Frequency of breastfeeding			1.44			
<8x	36	105			4.39(1.8,10.5)	0.001
>8x	72	51				
Modes of delivery						
SVD	85	101	0.43	(0.23,0.803)	0.22(0.06,0.83)	0.025
C/S	5	9	0.65	(0.191,2.218)	0.61(0.096,3.9)	0.6
Instrumental breast feeding option	17	47	2.75			
after maternity leave						
by using half day leave	12	13	0.985	(0.308,3.146)	0.47(0.09,2.4)	0.36
out of work	55	84	1.388	(0.553,3.489)	1.1(0.311,3.7)	0.91
expression of breast milk	10	11	1.100			

6. Discussion

Regardless of various advantages of optimal breast feeding, for example, assurance from contamination, growth and development the practice is suboptimal. In this investigation the magnitude of suboptimal breast feeding was found 154 (58.1%) 95%c.i (53.2, 62.9) of infants got food and liquids notwithstanding breast feeding or sub frequently under eight times in the previous 24hour of survey, which is consistent with study in rural community of Hula SNNPRS (56.9%) (8), But lower than study in Gondar (79.1%) (23), Nigeria 86% (30), Limpopo South Africa (92.4%) (13), Efutu Ghana (84%) (31). It was higher than 40.7% (6) And EDHS2016 (42%) (5). The distinction could be because of accessibility of breast milk substitutes and higher extent of maternal work in urban occupants, accessibility of breast milk substitutes and contrast in financial status.

Certain occupations were found rehearsing suboptimal breast feeding higher than others, particularly Health care workers were found rehearsing suboptimal breast feeding 6.87 occasions almost certain, [AOR 6.87 (1.45, 32.57)] Which is unforeseen since they were relied upon to advocate breast feeding being good example to rehearse optimal breast feeding practice, this may be because of relative absence of flexibility at work place and lack of favorable work place supportive of breast-feeding mothers. Since health workers are experts, they are expected to have better information, demeanor and expertise to rehearse optimal breast feeding.

Moreover, spontaneous vaginal delivery were found statically critical [AOR 0.22 (0.06, 0.83)] which is reliable with other comparative studies and they are expected 78% time more averse to rehearse suboptimal breast feeding practice. As consequence of this moms ought to be recommended to deliver vaginally except if C/S is indicated medically. The distinction could be a direct result of moms who give birth to an offspring by C/S will be sick for longer span of time and compelled to take care of formula milk instead of breast feeding.

Also, moms will be compelled to stop breast feeding subsequent to coming back to work from maternity leave had 12.65 occasions practiced suboptimal breast-feeding [AOR 12.65 (1.06, 151.62)]. The conceivable clarification is because of restricted choice accessible to breast feeding moms after came back to work.

7. Conclusion and recommendation

7.1 Conclusion

Suboptimal breast-feeding practice were discovered higher and health workers were among those rehearsing suboptimal breast-feeding and moms thought that it was hard to proceed with breast feeding after they came back from maternity leave. Spontaneous vaginal deliveries were found critical to diminish suboptimal breast-feeding.

7.2. Recommendation

It is imperative to execute optimal breast feeding to pick up health and financial advantages of breast feeding. Public service agency, AARHB and health managers should give due consideration and work together to reduce burden of mother to breast feed in public segment by making work place flexible and favorable for breastfeeding, and availing onsite child care centers. Besides, Health care professionals should focus on counseling about exclusive breast feeding and moms ought to be promoted to give birth to an offspring by spontaneous vaginal delivery.

7.3. Strength and limitation

Strength

Studying public servant mothers suboptimal breast-feeding practice.

It evaluated working environments favorability to practice optimal breast-feeding.

Limitation

Study was directed in one sub city as a result of asset constraint.

Since information assortment tool was self-administered, inclined to missing value and inclination.

It lacks sampling frame.

8. Declaration

I, the undersigned proclaim that this thesis is my unique work, and has not been introduced for a degree in this or another university and that all wellsprings of materials utilized for the thesis and all individuals and institutions that gave help for this work have been properly recognized.

Name: Asnake Kebere
Signature: _____
Place Addis Ababa, Ethiopia.
Date of Submission

This thesis work has been submitted with my approval as university advisor.

Advisor's Name	signature
Dr.Solomon Shiferaw	
Mrs.Yalemwork Getnet	

9. Reference

1. United Nation International Children Emergency Fund (UNIECF).breastfeeding on the worldwide agenda: findings from a landscape analysis on political commitment to protect promote and support breast-feeding. New York 2013[cited 2014 accessed 7 October 2014].
2. World Health Organization. Comprehensive implementation plan on maternal, infant and young child nutrition [internet] Geneva 21-26 May
3. Black RE VC, Walker SP, Bhutta ZA, Christian P,de Onis M, et al. Maternal and child under nutrition and overweight in low –income and middle-income countries. Lancet 2013:382427-51.
4. Elizabeth PP, Ala Shaikhlhhail, Veronique Groleav, Daniel Wendel and Verginia A., editor. Feeding healthy infants, Children, and adolescents.
5. Central Statistics Agency.2016 Ethiopian Demographic health survey final report pdf.2016.
6. Animut Alebel CT, Belisty Temsegen, Aster Ferede and Getiye Dejenu Kiberet. Exclusive breastfeeding practice in Ethiopia and its association with ANC and institutional delivery: systematic review and M eta analysis.
7. Amira El Houfey Ks, Ahemed M.abbas and safaa Rashad. Factors that influence Exclusive breast feeding: A literature review.2017.
8. Shiberu, et al. Suboptimal breastfeeding and its associated factors in rural communities of Hula District, southern Ethiopia: a cross-sectional study.2018 January 1.
9. Federal ministry of health maternal & child health directorate. National strategy for newborn and child survival in Ethiopia. 2015.
10. Kengne Nouemsi AP, Ngondi Judith Laure and Oben Julius Enyoung.factors associated with breast feeding as wellas the nutritional status of infants (0-12) months: an epidemiological study in Yaoundé, Cameroon 2007.
11. Bogale F.exploring breastfeeding practice among employed mothers and perception of employers towards breastfeeding practice of employed mothers: A.A.U; 2017.
12. Nigel c. Rollins NB, Nemat Hajeebhay, Susan Horton, Chessa K Lutter, Jose C. Martines, Ellen G Piwaz, Linda MRitcter. Why invest, and what it will take to improve breast feeding practice? The lancet breast feeding series 2016. January, 30.
13. Mushaphl LF MX, Khoza LB, Amey AKA infant feeding practices of mothers the nutritional status of infants in Vhembe district of Limpopo province.
14. Khan Zhan. Assessment of the nutritional status of bottle fed infants and the prevalence of infection, allergy and diarrhea among bottle fed infants and its comparison with exclusively breast fed infants aged 0-6 month 2017.

15. Eskinder wolka woticha and AMH. Suboptimal breast feeding and associated factors among mothers of children less than 6month in Hargiesa city, Somali Land.2017.
16. Tijen eren BK, Aylin Yetim,Perran Boran,Gulbin Gokcay.brast feeding experience of female physicians and the impact of law change on breast feeding. Turkish archieve pediatrics 2014.
17. Kesly R.Mirkovic CGP,Kelly S.Scanbon,and Laurence M.Grammer-strawn. Maternity leave duration and fulltime /partime work status are associated with US mothers' ability to meet breast feeding intention.2014.
18. YI Chuan Chen YCW and WCC. Effects of work related factors on breastfeeding behavior of working mothers in Taiwanese semi conductor manufacturer.21 June 2006.
19. Chuang CH CP, Chen YC. Maternal return to work and breast feeding: population based cohort study.
20. Ying Tsai S. impact of a baby friendly workplace on employed mothers' intention to continue breast feeding after returning to work.2013.
21. Tilahune Tewabe AM, Tenaw Gualu, Girma Alem, Getnet mekuria and Haymanot Zeleke. Exclusive breastfeeding practice and associated factors among mothers in Motta town, east Gojjam zone Amhara region.2015.
22. Adugna DT. Women's perception and risk factors for delayed initiation of breastfeeding in Arba Minch zuria, Southern Ethiopia.2012.
23. Dawit Ayehu chekol GAB, Yalmemzewed Assefa Gelaw and Yayehirad Alemu Melsew. Exclusive breastfeeding and mothers' employment status in Gondar town Northwest Ethiopia: a comparative cross sectional study October, 2015.
24. Setegn, et al. factors associated with exclusive breast feeding practice among mothers in goba district, south east Ethiopia: cross sectional study. 2010.
25. Legese et al.prelacteal feeding practice and associated factors among mothers of children aged less than 24 months in Raya kobo district, north eastern Ethiopia.2014.
26. Mulugeta wassie alamirew NHB, Niguse Birhan Tebeje, and selam Fiseha kassa. Knowledge and attitude towards exclusive breast feeding among mothers attending antenatal and immunization clinic at dabat health center, north west Ethiopia: across sectional institutional based study.2017,18,September.
27. Nemat hajeebhoy PHN, priya mannava, tuan T Nguyen and Lan Tran Mai. Suboptimal breastfeeding practices are associated with infant illness in Vietnam 2011.
28. Government Ethiopia central statistics agency Ethiopia's facilities and services atlas2011: Addis Ababa city administration. CSA, editor. 2011.

29. Government Ethiopia statistical report on 2016 urban employment, unemployment survey. CSA, editor. 2016.
30. Felix A Ogbo and KE Aap. determinants of suboptimal breastfeeding practice in Nigeria. Evidence from the 2008 demographic and health survey 2008.
31. Nkrumah J. maternal work and exclusive breast feeding practice community based cross sectional study in Efutu municipality, Ghana.2017.

Annex-1 Consent form

Consent form

Hi, my name is Asnake Kebere and I am graduating class Master of (General) Public Health student at Addis Ababa University, school of Public Health conducting research to survey the magnitude of sub optimal breast feeding practice in Addis Ababa among chosen ladies with youngster under a half year employed public servant in this sub-city. You are incorporated as a component of this study on the grounds that your satisfied our choice rules and we are collecting data about breast feeding practice. The interview will take just around 30 minutes. I will guarantee you this doesn't let you to any damage and there is no installment for taking part in this study. Your name won't be recorded, and any recognizing data will be kept secret.

Your participation is willful, and you have right not to partake in this study. Your choice about not to take part in this study is regarded. Be that as it may, your genuine cooperation will have extraordinary commitment towards understanding the difficult well and to look for proper arrangement.

Do you have any inquiry on what we talked about up until now? Is it accurate to say that you will participate?

If yes continue the interview.

Interviewer name	signature	date
Supervisor name	signature	date

Annex-2 English version of structured questionnaire

Structured questionnaire for interview of suboptimal-breastfeeding practice, among mothers' with < 6months children in public sector

Questioner on socio-demographic characteristics

no.	Questions and filters	coding	skip
101	Participant code		
102	Age		
103	Child age		
104	Sex	male……...…1 female…….……2	
105	Name of the facility		
106	Marital status	single.……1 Currently married.……2 separated.…….3 Divorced.…….4 widowed.……..5	
107	Occupational status		
108	Monthly income		
109	Educational status	Cannot read and write.……1 1-6…….2 7-10……..3 11-12.……4 Higher education.…….5	

Part2 Questionnaire on suboptimal breast-feeding practice.

No.	Questions and filters	Coding classification	skip
201	Did you breastfeed your child?	Yes…….……..….1 no.…….2	If No skip to Q208
202	How long after birth did you initiated breastfeeding?	<1hr……..1 <24hr…….2 Within days.……...3 Within weeks.…….4	
203	Did you feed your child the colostrum?	yes.……..…1 No.…….2	
204	In the first 3days after birth was the child given anything other than breast milk?	yes……..…...1 No.……..…2	
205	Are you currently breast-feeding?	yes……..…..1 No……..…...2	
206	When did you returned from maternity leave?		
207	How many times you breast feed your child per day in the last 24 hour?	upito5x……..1 5_7x……...…2 >8x……..…3 None.……..….4	
208	Did your child receive anything from bottle with nipple?	yes……..…1 No.……2	If noQ213
209	When did you start additional food and drinks?	At 6 months……..…1 At 9 month……...2 at18 month……3 at 2 year.……..….4	
210	Do you continue breast feeding after initiation of additional food?	yes.……..…..1 No.……2	

211	When will you wean breast feeding?	At 6 months……..1 at1year……..….2 at 18 months……..3 at 2years……..4 Before 6 month……...…5 After 2 years.……...6	
212	Did you give your child other than breast milk in the last 24 hours?	yes.……..…..1 No.……2	
213	What additional food did you initiated complementary feeding?	Water……1 Cow milk……2 Formula milk……..….3 Soups……4 Porridge……..…5 Fruits juice……...…..6 Others……....7	
214	Did you attend ANC?	Yes…….1 No……2	
215	How many times?	1x……..a 2x…….b 3x…….c 4x……d >4x……..e	
216	Did you receive health education about breast feeding at ANC follow up?	Yes……1 No…….2	
217	Where did you delivered your last child?	At home……1 At H.C…….2 At hospital…….3	

218	What was the mode of delivery?	Spontaneous vaginal delivery……..1 Instrumental delivery……..2 Cesarean section……...……3	
219	How many children did you give birth?	1……a 2……b 3……c >3……d	
220	What is the birth order of the child?		
221	How are you breast-feeding your child after returning from maternity leave?		
222	Is there separated breast feeding space in your workplace?	Yes……..1 No……....2	
223	Do your managers in your workplace help you to breast-feed? If yes elaborate?	Yes……..……1 No……2	
224	Is there onsite child care center?	Yes……....1 No……2	

Annex-3 Amharic version questioner

<u>በአማርኛ የተተረጎመ መጠይቅ</u>

ጤና ይስጥልኝ፡ አስናቀ ከበረ፡ እባላለሁ፡፡ የአዲስ አበባ ዩኒቨርሲቲ የህብረተሰብ፡ ጤና፡ አጠባበቅ፡ ተማሪ፡ ስሆን፡ በመንግስት፡ ስራ፡ የተሰማሩ፡ ሴቶች፡ ልጆቻቸውን፡ ምንያህል፡ በተገቢዉ፡ መንገድ፡ እንደ፡ ማያጠቡ፡ ለማወቅ፡ በንፋስ፡ ስልክ፡ ላፍቶ፡ ክፍለ፡ ከተማ፡ በሚገኙ፡ የመንግስት፡ መስሪያ፡ ቤቶች፡ በማጥናት ፡ላይ ፡እገኛለሁ፡ እርሶም፡ በዚህ፡ የምርምር፡ ጥናት፡ ለመሳተፍ፡ የሚያበቃዉን፡ መስፈርት፡ በሚሚላትዎ፡ ተመርጠዋል፡፡ ስለዚሁም፡ በዚህ፡ ጥናት፡ ልጆትን፡ ጡት፡ እንዴት፡ እያጠቡ፡ እንደሆነ፡ መረጃ፡ ይሰጡኛል፡፡ ይህንም፡ ለማድረግ፡ 30ደቂቃዎች፡ ብቻ፡ የሚፈጅ፡ ሲሆን፡ እርሶንሊጎዳዎት፡ እንደማይችል፡ እያሳወኩ፡ በዚህ፡ ቃለ፡ መጠይቅ፡ ላይ፡ ስምዎትም፡ ሆነ፡ ማንንነቶን፡ በሚስጥር፡ እንደሚጠበቅ፡ ላረጋግጥልዎ፡ አወዳለሁ፡፡

ተሳትፍዎም፡ በገዛ፡ ፍቃድዎ፡ላይ፡የተመሰረተ፡ሲሆን፡በማንኛው፡ምሰዓት፡ ተሳትፎውን የማቋረጥ፡መብት፡ያለዎት፡መሆኑን፡እየገለፅኩ፡ተሳትፎውን፡ማቋረጥዎ፡የሚያመጣዉ፡ ምንም፡ አይነት፡ ተፅዕኖ፡ እንደ፡ ማይኖረው፡ ላረጋግጥልዎ፡ እወዳለው ፡፡

እስከ፡ አሁን፡ በተነጋገርነው፡ ላይ፡ጥያቄ፡አለዎት?_____

ለመሳተፍ፡ፍቃደኛነዎት?ፍቃደኛ አይደለሁም ☐ **ፍቃደኛ ነኝ** ☐

ፍቃደኛ፡ከሆኑ፡ይሳተፉ ☐

ፍቃደኛ፡ ካልሆኑ፡ አመስግኗቸው!! ☐

የጠያቂ፡ስም ፊርማ ቀን

ተቆጣጣሪ፡ስም ፊርማ ቀን

ክፍል1፡ማህበራዊ፡እና፡ስነ-ህዝብ፡ባህሪያት፡መለያ፡መጠይቅ

ተ.ቁ.	ጥያቄዎች	መለያ	skip
101	የተሳታ፡ፊመለያ		
102	የእናት፡እድሜ		
103	የልጁ፡እድሜ		
104	ፆታ	ወንድ……1 ሴት……2	
105	የተቋመ፡ስም		
106	የጋብቻ፡ሁኔታ	ያላገባ……1 ያገባ……2 የተለያየ……3 የተፋታ……4 በሞት፡የተለየ……5	
107	የስራ፡አይነት		
108	የወር፡ገቢ		
109	የትምህርት፡ደረጃ	ማንበብ፡እና፡መፃፍ፡የማይችል.1 1-6……2 7-10……3 11-12……4 ከፍተኛ፡የትምህርት፡ደረጃ…..5	

ክፍል2:ተገቢ፡ያልሆነ፡የጡት፡አጠባብ፡ተግባር፡ላይ፡ያተኮረ፡መጠይቅ

No.	ጥያቄዎች	የመለያ፡ባህርያቶች	ምርመራ
201	ልጅሽን፡ጡት፡አጥብተሽዋል?	አዎ……..1 አይ…….2	መልሱ፡አይ፡ከሆነ፡ወደ፡ጥያቄ207 ይሂዱ
202	ከተወለደ፡ከስንት፡ጊዜ፡በኋላ፡ልጅሽን፡ጡት፡ አስጀመርሽው?	በአንድ፡ሰዓት፡ውስጥ…..1 በሃያ፡ አራት፡ ሰዓት ….2 በቀናት፡ ውስጥ……..3 በሳምንታት፡ውስጥ…….4	
203	እንገሩን፡አስወግደሽዋል፡ ወይ?	አዎ……..1 አይ…….2	
204	በተወለደ፡በሶስት፡ቀናት፡ውስጥ ከእናት፡ጡት፡ወተት፡ወጪ፡የወሰደው፡ነገር፡አለ?	አዎ……....1 አይ…….2	
205	በአሁን፡ሰዓት፡ጡት፡እያጠባሽ፡ ነው?	አዎ……..1 አይ…….2	
206	በቀን፡ምን፡ያህል፡ጊዜ፡ጡት፡ታጠቢዋለሽ?	እስከ 5 ጊዜ……..1 ከ5_7ጊዜ……..2 ከ8፡ጊዜ፡በላይ……..3 ምንም……4	
207	ልጅሽ፡ጡጦ፡ጠብቶ፡ያውቃልን?	አዎ……..1 አይ…….2	መልሱ፡አዎ፡ከሆነ፡ወደ፡ጥያቄ311ይሂዱ
208	ተጨማሪ፡ምግብ/መጠጥ፡የምታስጀምሪው፡መቼነው?		
209	ተጨማሪ፡ምግብ፡ካስጀመርሽ፡በኋላ፡ጡት፡ማጥባትሽን፡ታቆሚያለሽ?	አዎ……..1 አይ……2	
210	እናት፡ጡት፡ወተትን፡ማጥባት፡የምታቆሚው፡ መቼ፡ ነው ?	6ወር፡ላይ…….1	

		1ዓመት፡ላይ……2 18ወር፡ላይ……..…..3 2ዓመት፡ላይ……..4 ከ6ወር፡በፊት……5 ከ2ዓመት፡በኋላ…….6	
211	አሁን፡ምንድን፡ነው፡ለልጅሽ፡ እየሰጠሽው፡ ያለሽው?	ውሃ……1 የላም፡ወተት……2 የወተት፡ዱቄት……..….3 ሾርባ……4 ሌሎች……5 ምንም……6	
212	ባለፉት፡24ሰአት፡ውስጥ፡ከጡት፡ወተት፡ውጪ፡ለልጅሽ፡የሰጠሽው/ሻት፡ነገር፡አለ?	አዎ……..1 አይ……..2	
213	የቅድመ፡ወሊድ፡ክትትል፡ አድረገሻል?	አዎ……1 አይ……..……..2	
214	ስንት፡ጊዜ የቅድመ፡ ወሊድ፡ ክትትል፡ አድርገሻል?	1x…….a 2x……..b 3x……..c 4x……..d >4x…….e	
215	የቅድመ፡ወሊድ፡ክትትል፡ወቅት፡ ስለጡት፡አጠባብ፡ትምህርት፡ ተሰጥቶሻል?	አዎ አይ	
216	የመጨረሻ፡ልጅሽን፡የት፡ወለድሽ ?	ቤት……1 ጤና፡ጣቢያ……..2 ሆስፒታል…….3	

217	በየትኛው፡የመዉለጃ፡ዘዴ፡ነበር፡የ ወለድሽዉ?	በምጥ……..1 በመሳሪያ፡ታግዞ……..2 በቀዶ፡ጥገና፡……3	
218	ስንተኛ፡ ልጅሽ፡ ነው?	1ኛ--------A 2ኛ-------B 3ኛ------C >3ኛ------D	
219	ስንት፡ልጆች፡ ወልደሻል?	1……a 2……b 3……c >3……..d	
220	ከወሊድ፡ ፈቃድሽ፡ ወደ፡ስራ፡ ከተመለስሽ፡ ሰንት፡ ጊዜ፡ ሆነሽ?		
221	ከወሊድ፡ፈቃድሽ፡ወደ፡ስራ፡ ከተመለስሽ፡በኃላ፡ልጅሽ፡አንዴት፡ እያጠባሽው፡ነው?		
222	የስራ፡ቦታሽ፡ጡት፡ለማጥባት፡ የተዘጋጀ፡ቦታ፡አለው?	አዎ……..1 አይ……..2	
223	የስራ፡ኃላፊዎችሽ፡ልጅሽን፡ጡት፡ አንድታጠቢ፡የሚያደርጉልሽ፡ድ ጋፍ፡አለ?አዎ፡ከሆነ፡ቢብራራ?	አዎ……1 አይ……2	
224	መስሪያቤቱ፡የልጆች፡ማቆያ፡ ማዕከል፡ አለው?	አዎ……1 አይ……2	

Annex -4 Curriculum Vitae (CV)

1.General Profile	
Name	Asnake Kebere Mekuria
Address	Addis Ababa
Telephone	+251 910 66 0921/+251 913 02 7053
E-mail	asne2.cool@gmail.com
Nationality	Ethiopian
Date of birth	May 5,1987
Marital status	Married

2. Education

Education	❖ BSc in Public Health, July 5, 2011, Hawassa University, Hawassa, Ethiopia.

3. Professional Experience

Date	Dec.1, 2014 to date
Occupation or position held	Comphernsive HIV prevention, Care and Treatment provider, Coordinator of Family Health Team, Coordinator of PHCG implementation, CHTCT and IMNCI(<5OPD) at Nifas silk Lafto Sub City,W5H.C
Main activities and responsibilities	❖ Providing HIV care and Treatment ❖ Coordinating implementation of Primary Health Care Guideline at W5HC. ❖ Facilitation of Family Health Team ❖ Providing Comphernsive HIV /AIDS Test and Counseling ❖ Managing common mental Health problems in HIV care ❖ Working in IMNCI clinic ❖ Giving clinical service at OPD
Date	June 5, 2011 to Nov.30,2014
Occupation or position held	Clinical care provider at Wujigra H.C OPD case team facilitator
Total work experience	9 years and 4 months

4.Trainings

- Integrated management of new born childhood illness (IMNCI).
- Regional training of trainers on TB&HIV Modules of integrated refresher Training (IRT).
  - Training on Nutritional assessment, Counseling & support for PLHIV, VOC &Patient with TB (NACS).
  - MOH integrated management of adolescent illness (ART).
  - Comprehensive HIV Counseling &Testing (CHTC).
  - Common Dermatologic disease at ALERT Hospital.
  - Childhood TB
  - Modules of DM&HTN management.
  - Emergency case management.
  - Basic continuous Quality improvement training.
  - Basic computer skills and Data management (Microsoft word, Microsoft excel, SPSS, Microsoft power point, Epi-info
  - Practical working skill in COVID-19 RRT under N/S/L Sub City Health Office.

5. **Language proficiency**

Language	Speaking	Reading	Listening	Writing
Amharic and English	Excellent	Excellent	Excellent	Excellent

6. **Reference**

Mr. Amelo Bolka (BSc, MPH) Lecturer at Yirgalem Hospital Medical college, SNNPRS, Hawassa, Ethiopia(0916052205)

Mr. Firew Tadese (BSc, MPH) N/S/L sub-city coordinator of key population HIV testing and counseling at CDC project, Addis Ababa, Ethiopia (0921618681)

S/r Tiruwerk kidane(BSc) Sub coordinator of disease prevention and health promotion process owner (0913187264)

SHORT CURRICULUM VITAE

Solomon Shiferaw (MD MPH, PhD) Associate Professor	School of Public Health, College of Health Sciences, Addis Ababa University E-mail: soloshi@yahoo.com Tel No: +251 911 40 68 45 P.o.Box: (1000) 9086 Addis Ababa, Ethiopia

Nationality – Ethiopian

Date of birth: Nov 29, 1975

Education

▪ Mar 2012 – Oct 2018: PhD from Maastricht University, the Netherlands.

▪ Sept 2002 – July 2004: Masters Degree in Public Health from Addis Ababa University, Ethiopia.

▪ Sept 1994 – July 2000: Doctor of Medicine from University of Gondar, Ethiopia.

Professional Experience

▪ Sept 28, 2017 – Present: Associate Professor, School of Public Health, and Addis Ababa University

▪ Jan 2006 – Sept 27, 2017: Assistant Professor in the School of Public Health, Addis Ababa University.

▪ Current responsibilities: teaching public health nutrition to undergraduate medical students as well as graduate students in Public Health. Advising students of health Informatics and MPH on various public health issues. Conducting a research project for PhD training on, "The role of Phone-based applications and Client centered communication in improving maternity services".

Selected Publications

1. Designing mHealth for maternity services in primary health facilities in a low-income setting – lessons from a partially successful implementation. Solomon Shiferaw, Andualem Workneh, Robel Yirgu, Geert-Jan Dinant and Mark Spigt. BMC Medical

Informatics and Decision Making (2018) 18:96. https://doi.org/10.1186/s12911-018-0704-9.

2. Using a mentorship model to localize the Practical Approach to Care Kit (PACK): from South Africa to Ethiopia. Yibeltal Mekonnen, Charlotte Hanlon, Solomon Emyu, Ruth Vania Cornick, Lara Fairall, Daniel Gebremichael, Telahun Teka, Solomon Shiferaw, et al. BMJ Glob Health 2018;3: e001108. doi:10.1136/ bmjgh-2018-001108.
3. Measuring family planning quality and its link with contraceptive use in public facilities in Burkina Faso, Ethiopia, Kenya and Uganda. Timothee Fruhauf, Linnea Zimmerman, Simon Peter Sebina Kibira, Fredrick Makumbi, Peter Gichangi, Solomon Shiferaw, Assefa Seme, Georges Guiella and Amy Tsui. Health Policy and Planning, 2018, 1–12. doi: 10.1093/heapol/czy058.
4. Is small play area in schools associated with overweight among students? A comparative cross-sectional study in Addis Ababa, Ethiopia? Tsedey Moges, Bereket Gebremichael, Solomon Shiferaw, Robel Yirgu. Epidemiology and Health 2018; Volume: 40, Article ID: e2018017, 8 pages. https://doi.org/10.4178/epih.e2018017
5. Adherence to diabetic self-care practices and its associated factors among patients with type 2 diabetes in Addis Ababa, Ethiopia. Zeleke Bonger, Solomon Shiferaw, and Eshetu Zerihun Tariku. Patient Prefer Adherence. 2018; 12: 963–970. doi: 10.2147/PPA.S156043.
6. Does proximity of women to facilities with better choice of contraceptives affect their contraceptive utilization in rural Ethiopia? Shiferaw S, Spigt M, Seme A, Amogne A, Skrøvseth S, Desta S, et al. (2017) PLoS ONE 12(11): e0187311. https://doi.org/10.1371/journal.pone.0187311
7. Underreporting of high-risk water and sanitation practices undermines progress on global targets. Sridhar Vedachalam, Luke H. MacDonald, Solomon Shiferaw, Assefa Seme, Kellogg J. Schwab, On behalf of PMA2020 investigators (2017) PLoS ONE 12(5): e0176272.https://doi.org/10.1371/journal. pone.0176272.
8. Diarrhea management in children under five in sub-Saharan Africa: does the source of care matter? A Countdown analysis. Liliana Carvajal-Vélez, Agbessi Amouzou, Jamie Perin, Abdoulaye Maïga, Hayalnesh Tarekegn, Akanni Akinyemi, Solomon Shiferaw,

Mark Young, Jennifer Bryce and Holly Newby. BMC Public Health 2016. DOI: 10.1186/s12889-016-3475-1

9. Overweight and obesity and its sociodemographic correlates among urban Ethiopian women: evidence from the 2011 EDHS. Solomon Abrha, Solomon Shiferaw and Kedir Y. Ahmed. BMC Public Health (2016) 16:636 DOI 10.1186/s12889-016-3315-3.
10. Prevalence of Rheumatic Heart Disease among school children in Ethiopia: a Multisite Echocardiography-based screening. Dejuma Yadeta, Abrha Hailu, Solomon Shiferaw et al. Int J Cardiol. 2016 Jul 1; 221:260-263. doi: 10.1016/j.ijcard.2016.06.232.
11. The Effects of a Locally Developed mHealth Intervention on Delivery and Postnatal Care Utilization; A Prospective Controlled Evaluation among Health Centres in Ethiopia. Solomon Shiferaw, Spigt M, Tekie M, Abdullah M, Fantahun M, Dinant G-J (2016) PLoS ONE 11(7):e0158600.doi:10.1371/journal.pone.0158600.

Reference Persons

▪ Fikre Enqusellassie (PhD)

Professor, School of Public Health, College of Health Sciences

Addis Ababa University, Ethiopia

E-mail: fikreense@yahoo.com

Telephone No: +251 912459707

Fax No: +251 15517701

Addis Abeba, Ethiopia

▪ Amy Tsui, PhD

Professor and Senior Scholar, Gates Institute

Population, Family and Reproductive Health

615 N. Wolfe Street, Room W4041, Baltimore, Maryland 21205

Telephone No: 443-850-0500

Email: atsui1@jhu.edu