ADDIS ABABA UNIVERSITY
COLLEGE OF HEALTH SCIENCES
SCHOOL OF PUBLIC HEALTH

ASSESSMENT OF KNOWLEDGE, ATTITUDE AND INTENTION TO BREASTFEED AMONG PREGNANT WOMEN FOLLOWING ANC IN ADDIS ABABA, ETHIOPIA

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Declaration

I, the undersigned, declare that this thesis is my original work, has not been presented for a degree in this or another University and that all sources of materials used for this thesis have been fully acknowledged.

Signature _____

Date _____

This thesis work has been submitted for examination with my approval as University advisor.

Name: Dr Jemal Haidar (MD, MSc, DRM)

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Date _____

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ACRONYMS

AACHB	Addis Ababa City Health Bureau
AAU	Addis Ababa University
ANC	Ante Natal Care
CSA	Central Statistical Authority
EBF	Exclusive Breast Feeding
EC	Ethiopian Calendar
EDHS	Ethiopian Demographic Health Survey
FMOH	Federal Ministry of Health
HC	Health Center
KAP	Knowledge Attitude Practice
LMP	Last Menstrual Period
ORS	Oral Rehydration Salt
RH	Reproductive Health
SPSS	Statistical Package for Social Sciences
UNICEF	United Nations Children's Fund
WHO	World Health Organization
B/F	Breast Feeding
B/M	Breast Milk

ABSTACT

Background: Optimal infant and young child feeding includes initiation of breastfeeding within the first hour of life, exclusive breastfeeding for six months, supplementary diet started besides breast milk is 6 month and continued breastfeeding for two years and beyond. However, in reality many mothers are unable to practice as advocated among mothers who did not receive antenatal education.

Objective: To assess the knowledge, attitude and intention to breastfeeding among pregnant women attending antenatal care (ANC).

Methods: Facility based cross- sectional study was carried out during January -February 2011 among randomly selected pregnant women who were attending ANC service in Addis Ababa. A total of 420 respondents participated in the study. Data were collected using interviewer administered Amharic version structured questionnaire. The data were entered in epi info version 3.3.2 and analyzed using SPSS for windows version 15.0.

Results: Adequate knowledge of breastfeeding, favorable attitude and intention to breastfeed were 53.8%, 80.5% and 96.1% respectively. Majority, of respondents (47.1%) heard breastfeeding information from mothers with previous breastfeeding experience. Pregnant women's older age ($p<0.05$), high house hold income ($p<0.05$), educational status ($p<0.01$), previous breastfeeding experience ($p<0.01$) and breastfeeding counseling ($p<0.01$) were predictors of adequate knowledge of breastfeeding. In addition, middle and high house hold income ($p<0.05$), educational status ($p<0.01$) and previous breastfeeding experience ($p<0.05$) were predictors of favorable attitude toward to breastfeed. Whereas, socio demographic, RH factors and attitude toward to breastfeed did not associate with intention to breastfeed. But, having adequate knowledge of breastfeeding was associated with favorable attitude toward to breastfeed ($p<0.01$).

Conclusion: Almost-all' prevalence of intention to breastfeed and high level of favorable attitude towards breastfeeding among pregnant women in the study area. However, the knowledge of breastfeeding was found to be at lower level than studies done before in other areas. This is influenced by age and breastfeeding counseling. In addition, house hold income, educational status and previous breastfeeding experience of pregnant women were the major factors affecting knowledge of breastfeeding and attitude toward to breastfeed.

Recommendations: Targeting younger age, low family income, none education and those who were pregnant for the first time is needed in order to promote the initiation and duration of breastfeeding. In addition, combined approaches of one to one education, group education including media campaigns are important.

1. INTRODUCTION

1.1 Back ground

Currently there are 9 million infant deaths a year with 4.5 million deaths of under five in Sub-Saharan Africa. Up to 55 percent of infant deaths from diarrheal disease and acute respiratory infections may result from inappropriate feeding practices (1, 2).

Breastfeeding plays a crucial role in reducing child mortality especially in developing countries particularly sub-Saharan Africa where health status is poor due to inadequate access to clean water, sanitation, essential drugs and healthcare facilities. Increasing optimal breastfeeding practices could save an estimated 1.5 million infant lives annually. The risk of neonatal mortality is 2.4-fold increased with increasing delay in initiation of breastfeeding (1-3).

Despite the many advantages of breastfeeding, very few of the world's infants are actually fed according to WHO/UNICEF recommends. As more and more women join the workforce, they think it is more convenient to them to bottle feed their babies with formula milk. In addition, Cultural attitudes and norms are recognized as important determinant factors of infant and child feeding behavior (5).In appropriate child feeding practices is commonly seen among severe acute malnutrition and major (57%) factor for infant &child mortality. In addition to this, inadequate breastfeeding practices contribute to 70,000 infant deaths every year in Ethiopia (6-9).

The Ethiopian Demography and Health Survey (EDHS) results indicate that, only one in three Ethiopian children aged 4-5 months is exclusively breastfed and complementary foods are not introduced timely. Moreover, bottle-feeding is higher among mothers with educational background above senior high school, Government employees and those with relatively higher monthly family income. And the proportion of mothers who breast feed their child is considerably low among urban women from Addis Ababa (10-12).

Informing all pregnant women about the benefits and management of breast feeding is one of the ten steps to successful breast feeding and is associated with longer duration and incidence of breast feeding (6, 13).

Although opportunities exist during antenatal visits, counseling mothers regarding breastfeeding is often not done. Studies in India showed that nearly half of the pregnant women did not receive information regarding breastfeeding, breastfeeding technique and concept of continuing breastfeeding during illness. Thus, the risk of stopping breastfeeding among mothers who did not receive antenatal education is higher than in those who had antenatal education within the first 6 months of infant life (14, 15).

Maternal infant feeding attitudes are often stronger predictors of both choice of feeding method and duration of breastfeeding. Moreover, in Palestinian Knowledge gained had positively affected mothers ' attitudes towards breast feeding as well as practiced exclusive breastfeeding with a rate of 96.4%. Also, they believe more that breast milk alone is enough to the baby for the first six months of age (16, 17). Contrary to this, researches conducted among adolescents in southwest Ethiopia indicated that attitudes and expectations deviate widely from current international child feeding guidelines. These suggest that suboptimal information will reproduce poor health across generations (5).

1.2 Rational of the Study

To the investigators best knowledge, there are no studies which better to say the importance of knowledge, favorable attitude & intention taking pregnant women as possible predictor of optimal breastfeeding after birth.

The existing literature, indicate that breastfeeding is sub optimal in Ethiopia in general and in Addis Ababa in particular. Therefore, this study will be important to have a good understanding of pregnant mothers' knowledge, attitude and their intention to meet the breastfeeding recommendations which contributes much for inappropriate breastfeeding problems. Thus,

- The outcome of this study will increase our knowledge on the importance of Nutrition.
- Counseling (breastfeeding) during ANC will help decision maker to improve the practice of optimal feeding.

2. LITRATURE REVIEW

2.1 Overview of Breastfeeding

Research has established that breast milk is perfectly suited to nourish infant and contains just the right amount of nutrients for the development and growth of the child, protection against infection and psychological benefits for the infant. The benefits for the mother includes birth spacing, less postpartum bleeding, earlier return to pre pregnant weight, decrease in chronic illnesses that include diabetes ,osteoporosis, ovarian cancer and save consumer money spent on infant formula and health care (18, 19).

The promotion of breastfeeding is a key component of child survival strategies. If all infants were breastfed exclusively during the first six months of life one and a half million deaths among infants could be avoided each year and has the capability to prevent 13 percent of all under five deaths in developing countries (2, 20)

Optimal feeding for sustained child health and growth includes initiation of breastfeeding within the first hour of life, exclusive breastfeeding for six months, supplementary diet started besides breast milk is 6 month and continued breastfeeding for two years and beyond (2).Nevertheless, the advocate of breastfeeding have noticed, a global decline in the behavior among nursing mothers. As more and more women join the workforce, they think bottle feeding/formula milk is more convenient to them to feed their babies. In addition, Cultural attitudes and norms are recognized as important determinant factors of infant and child feeding behavior (1, 5, and 21).

The EDHS 2005(Ethiopian Demography and Health Survey) results indicate that, only one in three Ethiopian children age 4-5 months is exclusively breastfed and complementary foods are not introduced timely (10). Similarly, inappropriate infant and young child feeding practices were commonly seen in children with severe acute malnutrition. These are prelacteal feeds, lack of exclusive breastfeeding in the first six months of age, late initiation of complementary diet and bottle feeding(8). Also in Agaro, bottle-feeding found to be higher among mothers with educational background above senior high school, Government employees and those with relatively higher monthly family income (11).

Rates for exclusive breastfeeding under 4 months of age are very low in number of African countries, such as Benin (16%), Mali (12%), Zambia (23%), and Zimbabwe (17%)(23). Study conducted in Kumasi, Ghana showed that most mothers know benefits of breastfeeding (80%-100%). However weaning were found to be done at very early ages of 2-4 months and giving water (38%). The reason for early weaning is fear of adequate milk supply (56%) breast and nipple soreness (56%) (18).

2.2 Awareness and Knowledge of Breastfeeding among Pregnant Mothers.

Breastfeeding does not come naturally to most mothers. It is a skill that needs to be learned and for which physical problems are often associated. Interventions aimed at changing mothers' knowledge and attitudes are usually important that prenatal education, that provide appropriate knowledge and skills to increase the rate of breastfeeding (24).

The quasi-experimental Study conducted in Taiwan to evaluate the effectiveness of a prenatal breastfeeding education programme during the 20th–36th weeks of pregnancy showed that higher knowledge women in the experimental group had a significantly higher mean scores (25.73 for experimental group and 20.34 for the control group, T=9.61, P= 0.001) and had higher attitude scores (mean scores were 80.11 for the experimental group and 75.65 for the control group, T=2.69, P=0.008). Also the higher rates of exclusive breastfeeding at both three days and one month after delivery identified (24).

A randomized controlled trial was carried out in Singapore found that Mothers receiving individual counseling and educational material practiced exclusive and predominant breastfeeding more often than mothers receiving routine care alone at 3 months (OR=2.6, 95% CI=1.2-5.4) and 6 months (OR=2.4,95%CI=1.0 -5.7) (25).

Study conducted in Pondicherry, India regarding health information pertaining to breastfeeding among pregnant mothers identified higher awareness. But awareness regarding to correct breastfeeding technique and concept of continuing breastfeeding during illness in the baby was low. Therefore antenatal counseling on breastfeeding was inadequate in the population studied (15).

Study conducted to assess knowledge, Attitudes and Sources of Information on breastfeeding among pregnant mothers in hospital of Malaysia identified that almost all the respondents (96.8%) intended to breastfeed their newborns. Most of them (74.8%) were knowledgeable about breastfeeding and (83.9%) responded positively towards breastfeeding. Only 56.9% of the mothers believed they could breastfeed their babies with modesty anywhere. The main sources of information were attained from the mass media (34.9%), antenatal class (32.1%) and other mothers with breastfeeding experiences. Thus the two main misconceptions were mothers would stop breastfeeding when infant or mother was sick, and giving clear fluid to the exclusively breastfed infants to prevent dehydration (26).

A qualitative study of the promotion of exclusive breastfeeding by health professionals in Niamey, Niger is almost non-existent. The field observation results indicate that health professionals do not discuss and encourage systematically exclusive breastfeeding with mothers, or they mention it only briefly and without giving any explanation (27).

According to study conducted in Morogoro ,Tanzania erroneous beliefs and suboptimal practices regarding breastfeeding exist due to insufficient knowledge on the part of the mothers and lack of efficient systems of informing them on breastfeeding issues were observed (28).

The assessment in Farta district of Amhara Region, Ethiopia identified that, the overall optimal breastfeeding were more likely practiced among rural women than urban. Rural women and those attended education were found less likely to give prelacteal foods than urban and not attended education (29).

2. 3 Knowledge, Attitude and Intention to Breastfeed

Theory of Reasoned Action focuses on an individual's behavioral intention, positioning that intention is the direct precursor of voluntary action. Behavioral intention mediates all other factors influencing behavior. Antecedent's behavioral intentions are the attitudes to the behavior and the subjective norms (30).

Study conducted in Georgia, USA among minority pregnant women (80%African American) to examine the influence of breast-feeding attitudes, social norms, and prior experience on predicting breastfeeding intention. The result revealed that Attitudes were more predictive of breast-feeding intention than were norms, regardless of parity or prior behavior. Among multiparious women, amount of prior breastfeeding experience contributed independently to predicting breastfeeding intention and rendered norms insignificant (31).

Study conducted among first time mothers or primipara (24 to 34 pregnancies) in Sydney, Australia found that Among the mothers who knew the recommendation, 61% intended to meet the recommendation, compared to only 11% among those mothers who were not aware of the recommendation. The only factor associated with awareness was mother's level of education i.e.

Mothers who had a tertiary education were 1.5 times more likely to be aware of the recommendation than those who had school certificate or less. Mothers who were aware of the recommendation were 5.6 times more likely to intend to breastfeed exclusively to six months (32).

The study conducted to identify factors affecting to intention to breast feed among Syrian and Jordanian pregnant women found that Intention to breastfeed was similarly reported by Syrian and Jordanian pregnant women (77.2% and 76.2% respectively). In both countries, women with a more positive attitude to breastfeeding, women with previous breastfeeding experience and women with supportive partners were more likely to intend to breastfeed (33)

Studies have described many factors associated with the intention to breastfeed. These factors include maternal age, mother's education level, family household income, number of children, mother's knowledge about the benefits of breastfeeding, previous breastfeeding experience, attitude towards breastfeeding and the mother's social support network. Similarly, several studies have indicated that positive maternal breastfeeding attitudes are strongly correlated with maternal age, level of education, income, and marital status (34).

Study conducted to evaluate the impact of breastfeeding promotion and support program on mothers (of infants less than 6 months old) knowledge, attitudes and practices (KAP) in the Gaza Strip (GS) showed that the improvement of participants' knowledge about BF by 36.08%, Knowledge acquired has improved mothers' attitudes by 15% towards exclusive breast feeding . Exclusive breast feeding was found to be associated with increased level of mothers' knowledge (17).

A study conducted among adolescents in southwest Ethiopia indicate that attitudes and expectations deviate widely from current international child feeding guidelines among soon to be parents from urban settings. Youth overwhelmingly endorsed items related to early introduction of non-breast milk liquids and foods. These suggest that youth enter into parenthood with suboptimal information about infant and child feeding, will reproduce poor health across generations as the largest cohort of adolescents ever become parents (5).

Study conducted in Jimma, Ethiopia showed that, 67.2% of the mothers have satisfactory knowledge about benefits of breast feeding. Furthermore, those who have attended antenatal follow-up have 2.1 times and mothers who have attended formal education have 2.2 times chance of having satisfactory knowledge compared to not attend follow up and not attended formal education respectively. In addition, mothers who have satisfactory health education have 2.3 times more chance of having satisfactory knowledge about the benefits of breast feeding as compared to those who have unsatisfactory health education (36).

Study done in Northern Ireland, indicated that mothers educated to the postgraduate level had more favorable attitudes to breast-feeding than those educated to secondary level. Also, attitudes became more favorable towards breast-feeding as household income increased. Differences in attitude scores indicated that those intending to breast-feed the highest scores, those who were undecided had intermediate scores and those electing to feed artificially tended to have the lowest scores. These findings suggest that both infant-feeding intention and outcome can be predicted from attitudes to infant feeding (37).

Study in USA, showed that Provider encouragement significantly increases breast-feeding initiation among American women of all social and ethnic backgrounds. It increased the likelihood of breast-feeding more than threefold among young, low income and less educated women, nearly fivefold among black women, and nearly 11-fold among single women (38).

3. OBJECTIVES

3.1 General Objective

To assess knowledge, attitude and intention to breastfeeding among pregnant women in Addis Ababa, Ethiopia.

3.2 Specific Objectives

- To assess the knowledge of optimal breastfeeding among ANC attendants in Addis Ababa.
- To assess the attitude towards breastfeeding among ANC attendants in Addis Ababa.
- To determine the proportion of ANC attendants who have the intention to breastfeed among ANC attendants in Addis Ababa.
- To examine the relationship between knowledge, attitude and future intention to breastfeed.

4. METHODOLOGY

4.1 Study area

Addis Ababa City Administration is one of the two councils and the capital city of the country. The total projected population estimate is 2,975,608 and administratively sub-divided into 10 sub-cities and 203 woredas. The city has 5 public hospitals, 26 public health centers and 8 clinics that have delivering services. In addition, there are a total of 72 health institutions rendering ANC in Government, NGO's and privates sectors. The Governments health centers were preferred because they are the first level of care facilities and mainly engaged in preventative services. Also, these facilities are becoming improved system with functional flow of many patients and clients particularly family health (ANC) attendants. The study considered pregnant women who were following antenatal care in health centers in Addis Ababa. It is estimated that 71,415(2.4%) women be pregnant in the year of 2010/11(35).

4.2 Study design

A cross-sectional facility based study was conducted among pregnant women following ANC in Government health centers of Addis Ababa in 2011.

4.3 Data collection Period

Data was collected from January 2011 to February 2011 in Addis Ababa.

4.4 Source Population

The source population was all pregnant women following ANC in government health centers of Addis Ababa.

4.5 Study population

All eligible pregnant women attending ANC in selected health centers during time of data collection.

Inclusion criteria

The respondents to study were pregnant women in their second and third trimester of pregnancy, with no complications or medical problems anticipated attending ANC clinic during data collection period.

Exclusion criteria

The 1st trimester pregnant women (in this period women more than usually emotional and sensitive due to hyper emesis gravidium), those refereed to hospitals, and those absent on the day of data collection.

4.6 Sample size determination

The sample size required for the study was calculated based on the formula to estimate a single population proportions**.**

$$n = \frac{Z_{\alpha/2}^{2} P(1 \quad P)}{d^2} \; ; \qquad n = \frac{1.96^2 \times 0.5 \times 0.5}{0.05^2} = 384$$

Where

- n is the required sample size
- $(Z\alpha/2)2$ critical value at 95% certainty (1.96)
- Proportion (P) = anticipated proportion of mothers having optimum breast feeding knowledge, or intention to breast feed after delivery and 50 % is taken due to absence of reliable previous study.
- d = margin of error (0.05)
- Level of significance = 0.05
- The 10% of non response rate was considered, and the overall

Sample size was = 384 + 38 (10 % non-response rate) = 422

4.7 Sampling procedure technique

In the city administration there are 26 government health centers which are currently functioning. Simple random sampling technique was used to select one target health center from each sub city as it was difficult to include all the centers caring out antenatal care. Also, the sample was divided into ten sub cities according to population of pregnant women size. Therefore, from Bole subcity-,BoleH.C(n=47),Yeka-kotobeH.C(n=53),Kirkos-KirkosH.C(n=34),Nefas-SilkLaftoN1H.C(n=48) ,Lideta-LidetaH.C(n=31),Arada-GuleleH.C(n=36),AddisKetema-AddisKetemaH.C(n=39),Gulele-ShiromedaH.C(n=40,),KolfeKeraniyo-KolfeH.C(n=66),andAkakiKality-Akaki H.C (n=28) pregnant mothers included in the study.

4.8 Data Collection Methods

Instrument: Structured interviewed were employed by using standard questionnaires prepared for this purpose. It consisted of 4 components as shown below.

- Information about socio demographic characteristics -16 items
- Knowledge of breast feeding -17 items
- Attitude towards breastfeeding -11 items
- Intentions to breastfeeding 2 question. A question developed by Humphreys and Colleagues was adopted to assess the stages of change for breastfeeding and breastfeeding intention (30).

Using a structured anonymous questionnaire, the sampled pregnant women who gave verbal consent to participate in the study was interviewed. The questionnaire was initially prepared English and translated to the local Amharic language and checked for its consistency by three different individuals.

Selection and training of data collectors: As a first step, the researcher communicated the chief of Addis Ababa City Health Bureau (AACHB) office to get permission and briefly described the aim of this study.

- A letter was sent to the head of all of the health centers under AACHB to inform them about the aim of this study.
- After obtaining permission from the leaders, 10 midwifery nurses from minilikII health sciences college and 2 supervisors (1from sub city&1 from health center) selected for data collection. And the researcher provided 2 days training for all data collectors and supervisors. In the first day the researcher briefly explained study objectives, methodology and research questionnaires. Every question was discussed in detail until a clear understanding of the interviewer was made. The second day concentrated on practical session of interviewing technique.
- Each interviewer conducted face to face interviewing from the sample population of their respective health centers. After collecting data the questionnaire immediately checked by supervisors for its completeness and accuracy.

Pre testing: One week prior to the main fieldwork, a pre test conducted on twenty pregnant mothers from 5 health centers (woreda 24,Beletshachew ,Meshualekia, Entoto Number 1 and Kaliti) that were not enrolled in the study.. Following the analysis of the pilot study data, ambiguous or unclear questions were rephrased to make it more understandable and some more variables (e.g. residence area) were included in the study.

4.9 Operational Definitions

Intention to breast feeding: is defined as a pregnant women who has planned or more likely to breastfeed, after delivery or gives birth according to the recommendations. Based on this definition, respondents were categorized as intention to breast feed and no intention to breast fed.

Knowledge: A pregnant women is considered knowledgeable if she currently knows to start breastfeeding within1 hour of delivery, exclusive breastfeeding for 6 months and introduction of semi solid & or solid food within 6-9 months of age in addition to breastfed. Also respondents who answered at least 70% of the questions correctly perceived as having high knowledge (26). In addition recorded as "Yes "for correct answer, do not know recorded as "No "for incorrect answers. When the correct answer is "No ", do not know recorded as "Yes".

Attitude: The favourable or unfavourable predisposition of pregnant mothers towards to the recommended breastfeed. In addition respondents who answered at least 70% of the questions correctly perceived as having favorable attitude (26). Also recorded as "Yes "for correct answer, do not know recorded a "No "for incorrect answers. When the correct answer is "No ", do not know recorded as "Yes".

The period of pregnancy: is referred to a period of pregnancy with calculate from last menstrual period (LMP) and divided into three trimesters.

- First trimester: onset of pregnancy until 14 weeks of pregnancy period.
- Second trimester: up from 14 weeks to 28 weeks of pregnancy period.
- Third trimester: Up from 28 weeks until 40 or give birth

Parity: is defined as pregnant women who give birth.

- Primi- parity: is defined as pregnant women who will give birth for the first time.
- Multi parity: is defined as pregnant women who are going to give birth for the second time or more.

Exclusive breastfeeding: is defined by the World Health Organization (WHO): as infant only receives breast milk without any additional food or drink, not even water, is breastfeeding on demand – that is as often as the child wants, day and night, with no use of bottles, teats or pacifiers" (WHO, 2001).

Timely breastfeeding initiation: is defined as the start of breastfeeding within1 hour of delivery.

Predominant breastfeeding: the infants' predominant nourishment has been breast-milk. However, the infant may have received water and water based drinks such as fruit juice, plain water, salt-solution, sugar-solution, ORS, vitamins and minerals. The infant predominated breast-fed; however, take food-based fluids (like cereal gruel) or solid foods.

Full term breastfeeding: An exclusive breast-feeding and predominant breast-feeding constitute together full term breast-feeding.

4.10 Variables

Dependent variables

- Knowledge on optimum breastfeeding.
- Attitude towards to breastfeed.
- Intention to breastfeed.

Independent variables

- Age <20
  20-30
  >30
- Residence area
- Marital status
- Ethnicity ,
- Religion, ,
- Family income
- Level of education
- Occupational status
- Number of ANC visits
- Number of live births,
- Previous breastfeeding experience
- Duration of previous B/Experience

4.11 Data Management

Data were edited manually, then coded and entered into epi-info and analyzed using SPSS. Descriptive statistic i.e. percent, mean, and median and SD were used to describe the data. To indicate the strength and statistical significance of association selected independent and dependant variables, Odds ratio and 95% C.I were used. Also multivariate analysis used to control the confounding factors. For all of statistical test used in this study, the significant level were set at p-value <=0.05.

4.12 Ethical Considerations

The proposal was submitted to Research Ethics Committee at the school of Public Health and then to the Institutional Review Board (IRB) of Addis Ababa University, College of Health Sciences. Following approval of research project, Addis Ababa Health Bureau (AACHB) was informed about the objective of the study through a support letter from the School of Public Health, AAU. Then, written permission was obtained from AACHB. Informed consent was obtained from respondents who happened to be in the health centers during data collection. Moreover, no personal identifiers were used on data collection form. Information (data) were kept firm and has never been accessed by a third person except the data collectors, supervisors and the principal investigator.

5 RESULTS

Of the total 422 pregnant women enrolled in the study, 420 of them responded making a total response rate of 99.5 %.The mean age of participates was 25.6 ranging from 15 to 45 years. The majority (77.8%) belong to the age group 20-30 years and urban (92.9%) areas. Majority was married (93.3%) and most was house wives (56.9%). Eighty two percent of the respondents had attended formal education, 61% were orthodox Christian and over one third (35.2%) earn income less than 700 ETB per month. Amhara, Guragaie,Oromo and Tigrie, constituted 34.5% , 24%, 19.3%, 9.3%, respectively(Table 1).

Table1: Socio demographic characteristics of pregnant women attending ANC in Government health centers of Addis Ababa, Jan-Feb2011.

Variables	Frequency	Percent
Age of mothers		
<20	36	8.6
20-30	327	77.9
>30	57	13.6
Residence of mothers		
Urban	390	92.9
rural	30	7.1
Religion of mothers		
Orthodox	256	61
Muslim	97	23.1
Protestant	59	14
Catholic	6	1.4
Others	2	0.5
Ethnicity		
Amhara	145	34.5
Guragaie	104	24.8
Oromo	81	19.3
Others	51	12.1
Tigrie	39	9.3
Marital status		
Married	392	93.3
Not married	28	6.7
Occupational status		
House wife	239	56.9
Private	64	15.2
Business	44	10.5
Daily laborer	32	7.6
Government employed	31	7.4
Others	10	2.4
Income		
Low income=150-700	148	35.2
Middle income=701-1300	136	32.4
High income=1301-8000	136	32.4
Educational status		
Primary school	175	41.7
Secondary school	121	28.8
None	75	17.9
College diploma &above	49	11.7

Forty two point one respondent visited 1or 2 times, 40.7% visited 3 times and 17.1% visited 4 and above times for ANC. Above half of the respondents (51.9%) were pregnant for the 1st time (Primiparous),27.1% for the 2nd time,14.8 for 3rd time and 6.2% were pregnant 4 and above times. Most (53.3%) did not have previous breastfeeding experience while the rest (46.7%) were experienced. majority (76%) did not get breastfeeding counseling during visits and only about one fourth(24%) were counseled(Table 2).

Table 2: Reproductive health characteristics of pregnant women following ANC in Government health centers of Addis Ababa, Jan-Feb, 2011.

Variables	Frequency	Percent
Visit for ANC		
1 or 2 times	177	42.1
3 times	171	40.7
4 and above times	72	17.1
Number of live births		
Primiparrous	218	51.9
1 child	114	27.1
2 children	62	14.8
3 children and above	26	6.2
Previous breastfeeding experience		
Yes	196	46.7
No	224	53.3
Breastfeeding Counseling		
Yes	101	24
No	319	76

As illustrated in table 3, majority (92.1%) respondents new that breast milk is best food for infants, good for infant resistance (92.6%) , increases maternal and child bonding (93.3%), easy and economical (86.4%), well balanced nourishing food (90.2%) and fill the stomach more easily (76.2%). Breastfeeding within one hour of delivery (62.1%), do not stop breast milk when mother or baby sick (58.6%), supplementary diet started at the age of 6 month (91.9%), not to give prelacteal feed for new born (74%), and breastfeeding continued up to 2 years and beyond (74.5%).

Conversely, the proportion of mothers who mentioned breastfeeding does not help mother to recover from child birth, no help mother to reduce weight, clear fluid be given in inclusive breast feeding, colostrums is no good for infants and continuous and frequent practice of breastfeeding cannot delay conception was 78.8%, 61.9%, 74.3%,57.2% and 66.5% respectively.

Over all above half of the respondents 226 (53.8%) correctly scored whereas nearly half (46.2%) had inadequate knowledge.

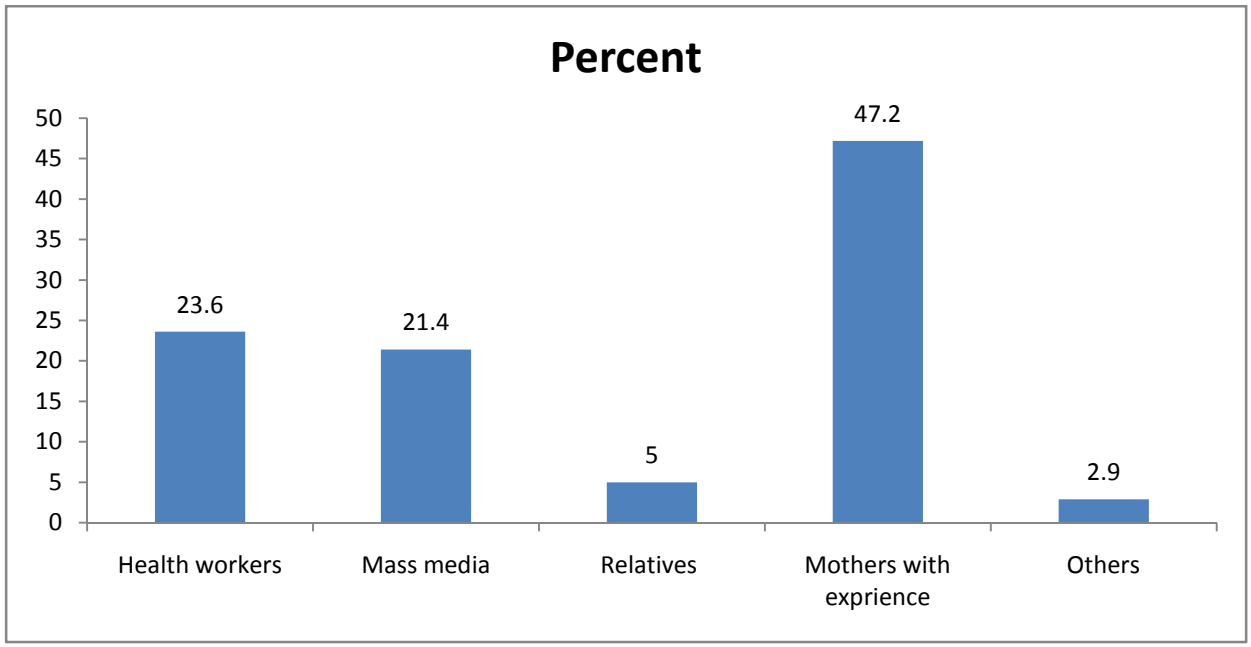
Table 3: Knowledge of breastfeeding among pregnant women following ANC in Government health centers of Addis Ababa, January-February 2011.

Variables	Frequencies	Percent
Best food for infant <6months		
Breast milk	387	92.1
Formula milk	17	4.0
others	3	0.7
donot know	13	3.1
Breast milk is good for infant resistance		
Yes	389	92.6
No	9	2.1
Donot know	22	5.2
Breast milk increases maternal child binding		
Yes	392	93.3
No	5	1.2
Donot know	23	5.5
Breast milk is economical		
Yes	363	86.4
No	24	5.7
Donot know	33	7.9
B/F helps mother to recover from child birth		
Yes	89	21.2
No	87	20.7
Donot know	244	58.1
B/M is well balanced nourishing food		
Yes	379	90.2
No	12	2.9
Do not know	29	6.9
B/M fill the stomach more easily		
Yes	320	76.2
No	72	17.1
Do not know	28	6.7
B/F helps mother to reduce weight		
Yes	160	38.1
No	100	23.8
Do not know	160	38.1
Start B/F within one hour of delivery		
Yes	261	62.1
No	36	8.6
Do not know	123	29.3

Stop B/M when baby or mother sick	143	34.0
Yes	246	58.6
No	30	7.1
Do not know		
Clear fluid should also be given in inclusive B/F		
Yes	288	68.6
No	108	25.7
Do not know	24	5.7
Colostrums is good		
Yes	179	42.6
No	120	28.6
Do not know	121	28.6
Age at supplementary diet started is 6 month		
Yes	386	91.9
No	21	5.0
Do not know	13	3.1
Continuous &frequent B/F can delay conception		
Yes	141	33.6
No	125	29.8
Do not know	154	36.7
Prelacteal feed be given for newborn		
Yes	55	13.1
No	311	74.0
Do not know	54	12.9
B/F continued up to 2 years and beyond		
Yes	313	74.5
No	93	22.1
Do not know	14	3.3

The majority of respondents (47.1%) heard about breastfeeding benefit from mothers with experience, seconded by health workers (23.6%),followed by mass media (21.4%), relatives (5.0%) and others 2.9% (Figure 1).

Figure 1: Sources of breastfeeding information among pregnant women following ANC in Government health centers of Addis Ababa, January-February, 2011.



The study participants asked about their attitude towards breastfeeding and their response were breastfeed is easier than infant formula (92.1%), B/M alone is enough in the 1st 6 months, (67.9%), B/F babies healthier than formula fed (89.8%), B/F mother is not difficult in taking care of family (78.6%), women can breastfeed in public places(72.1%), start BF straight after delivery (68.8%), formula is not as healthy for an infant as B/M(91%), community encourages B/F(79.8%), do not stop B/F if husband discourage(88.8%) and do not agree to the banning of bottles & teats(62.6%)(Table 4). The overall proportion of pregnant women with favorable attitude towards to BF was 80.5%.

Table 4: Attitude towards breastfeeding among pregnant women following ANC in Government health centers of Addis Ababa, January-February, 2011.

Variables	Frequency	Percent
Breast feed easier than infant formula		
Yes	387	92.1
No	23	5.5
Do not know	10	2.4
B/M alone is enough in the 1st 6months		
Yes	285	67.9
No	117	27.9
Do not know	18	4.3
B/F babies healthier than formula fed		
Yes	377	89.8
No	28	6.7
Do not know	15	3.6
B/F mother is difficult in taking care of family		
Yes	83	19.8
No	330	78.6
Do not know	7	1.7
Women should not breast feed in public places		
Yes	109	26
No	303	72.1
Do not know	8	1.9
Start B/F straight after delivery		
Yes	289	68.8
No	51	12.1
Do not know	80	19.0
Formula is as healthy for infant as B/M		
Yes	17	4.0
No	382	91.0
Do not know	21	5.0
Ban the use of bottles and teats		
Yes	154	36.7
No	263	62.6
Do not know	3	0.7
Community encourages B/F		
Yes	335	79.8
No	21	5.0
Do not know	64	15.2
Stop B/F if husband discourages		
Yes	35	8.3
No	373	88.8
Do not know	12	2.9

Majority of participants (96.1%) were intended to breastfeed (B/F plans 3,4,5) whereas only(3.9%) have no intention to breastfeed (B/F plans 1,2) based on questionnaire developed by Humphreys and Colleagues to assess the stages of change for breastfeeding and breastfeeding intention (Table 5). In addition, among the major reasons for not to breastfeed were I have to go to work/study (75%), I will give for institution (19%) and due to HIV positive (6%).

Table 5: Stages of change and breastfeeding intention among pregnant women following ANC in Government health centers of Addis Ababa, January-February, 2011, A.A, Jan-Feb 2011.

Breast feeding plan	Frequencies	Percent
1. I am going to bottle feed my baby, I don't want to breast feed at all .	3	0.7
2. I am thinking about breast feeding, but I am not sure I want to do it.	13	3.1
3. I plan to try breast feeding, but I am not sure, how long I will do it.	106	25.2
4. I plan to breast feed my baby for at least 1 month, but probably not a full 6 months.	15	3.6
5. I plan to breast feed my baby for at least 6 months.	283	67.4

Determinants of breastfeeding knowledge, attitude and intention.

In order to investigate the association of selected socio demographic variables with knowledge attitude and intention to breastfeed results, both bivariate and multivariate analysis were used .In the bivariate models, knowledge of pregnant women about breastfeeding recommendations was associated significantly with women age greater than 30 years, household income greater than 700 birr, formal education, previous breastfeeding experience and breastfeeding counseling.

In the multivariate analysis age of pregnant women greater than 30 years, household income of 1301-8000 birr, formal educational status, previous breast feeding experience and breastfeeding counseling were retained as determinant factors for knowledge of breastfeeding recommendations. As displayed in the Table 6, women's age greater than 30 were 3 times [AOR=3.04; 95% CI(1.02, 9.01)] more likely having knowledge of breastfeeding recommendations than age of mothers less than 20 years. Pregnant women household of high income 1301-8000 birr were 2 times [AOR= 1.82; 95% CI(1.03, 3.22)], previous breastfeeding experience 4 times likely [AOR=4.36; 95% CI(2.64,7.19)] and breastfeeding counseling 3 times [AOR=3.10; 95% CI(1.78, 5.40)] more likely having knowledge of breastfeeding recommendations than their respective referent groups. Likewise pregnant women having knowledge of breastfeeding recommendations significantly increased by educational status.

As compared to those none educated, pregnant women with primary education [AOR=2.48;95% CI(1.27, 4.82)], secondary school [AOR=3.58; 95% CI(1.71, 7.48)], and college diploma and above [AOR=6.21;95% CI (2.36,16.31)] were 2, 3, and 6 more likely knowledgeable respectively. Whereas, age less than 30, residence, low and middle family income and visits for ANC were not associated with breastfeeding knowledge when adjusted with other factors.

Table 6: Knowledge of breastfeeding of pregnant women by Socio demographic characteristics, Addis Ababa, January-February, 2011.

Characteristics	Breast feeding Knowledge of pregnant mothers		Crude OR 95%&CI	Adjusted OR 95%CI
	Yes	No		
Age of pregnant women				
<20	13	23	1.00	1.00
20-30	168	159	1.86(0.91,3.81)	1.20(0.54,2.67)
>30	45	12	6.63(2.61,16.84)**	3.04(1.02,9.01)*
Residence pregn women				
Urban	215	175	2.12(0.98, 4.57)	1.45(0.57, 3.67)
Rural	11	19	1.00	1.00
Income				
Low 150-700	60	88	1.00	1.00
Middle 701-1300	81	55	2.16(1.34,3.47)**	1.56(0.91,2.68)
High 1301-8000	85	51	2.44(1.51,3.94)**	1.82(1.03,3.22)*
Educational status				
None	28	47	1.00	1.00
Primary school	91	84	1.81(1.04,3.16)*	2.48(1.27,4.82)**
Secondary school	70	51	2.30(1.27,4.16)**	3.58(1.71,7.48)**
College diploma &above	37	12	5.17(2.32,11.53**	6.21(2.36,16.31)**
Visit for ANC				
1&2 visit	184	164	1.00	1.00
3,4&above visit	42	30	1.24(0.74,2.08)	0.91(0.50,1.66)
Previous breastfeeding experience				
Yes	141	55	4.19(2.77,6.33)**	4.36(2.64,7.19)**
No	85	139	1.00	1.00
Breastfeeding counseling				
Yes	75	26	3.20(1.95,5.27)**	3.10(1.78,5.40)**
No	151	168	1.00	1.00

*significant at p<0.05 **significant at p<0.01.

As displayed in Table 7, pregnant women's age, residence, income, educational status and previous breastfeeding experience were associated with favorable attitude toward breastfeeding in bivariate analysis. However, family income of middle and above, educational status and previous breastfeeding experiences were associated with favorable attitude toward breastfeeding in multiple regression analysis. Women's education of primary school nearly 3 times [AOR=2.74; 95% CI (1.03,3.52)], secondary school 5 times [AOR=5.09;95% CI (2.28, 11.39)] and college diploma and above nearly 11 times [AOR=10.9; 95% CI (2.29, 51.73)] more likely to have favorable attitude toward breastfeeding than the referent group. Also, women's family income of middle (701-1300birr) 2 times [AOR=1.90; 95% CI (1.03, 3.52)] and high income (1301-8000birr) 2 times [AOR= 2.39; 95% CI (1.18, 4.85)] more likely to have favorable attitude toward breastfeeding than the income of low (150-700birr). In addition, pregnant women who had previous breastfeeding experience 2 times [AOR= 1.92; 95% CI (1.05, 3.53)] more likely to have favorable attitude toward breastfeeding than those who had no previous breastfeeding experience.

Table7: Attitude towards breastfeeding of pregnant women by Socio demographic characteristics Addis Ababa, January-February, 2011.

Characteristics	Pregnant mothers Attitude toward B/F		Crude OR 95%&CI	Adjusted OR 95%CI
	Favorable	Unfavorable		
Age of pregnant women				
<20	24	12	1.00	1.00
20-30	266	61	2.18(1.03,4.60)*	1.84(0.80, 4.24)
>30	48	9	2.66(0.98,7.20)	1.94(0.60, 6.38)
Residence preg women				
Urban	319	71	2.60(1.18,5.70)*	1.41(0.57, 3.48)
Rural	19	11	1.00	1.00
Income				
Low 150-700	101	47	1.00	1.00
Middle 701-1300	115	21	2.54(1.42,4.55)**	1.90(1.03,3.52)*
High 1301-8000	122	14	4.05(2.11,7.78)**	2.39(1.18 ,4.85)*
Educational status				
None	44	31	1.00	1.00
Primary school	140	35	2.81(1.56,5.08)**	2.74(1.43,5.23)**
Secondary school	107	14	5.38(2.61,11.08)**	5.09(2.28,11.39)**
College diplo &above	47	2	16.55(3.73,73.30)**	10.90(2.29,51.73)**
Visit for ANC				
1&2 visit	279	69	1.00	1.00
3,4&above visit	59	13	1.12(0.58,2.16)	0.90(0.43, 1.88)
Previous breastfeeding experience				
Yes	167	29	1.78(1.08,2.94)*	1.92(1.05, 3.53)*
No	171	53	1.00	1.00
Breastfeeding counseling				
Yes	88	13	1.86(0.98,3.54)	1.67(0.83, 3.38)
No	250	69	1.00	1.00

*significant at p<0.05. **significant at p<0.01.

Table 8,displays that only pregnant women's age 20-30 years were associated with breastfeeding intention in bivariate analysis[COR=3.59; 95% CI (1.08, 11.93)]. On the other hand socio-demographic and reproductive health factors were not associated with breastfeeding intention.

Table8: Intention of pregnant women to breastfeed by Socio demographic characteristics, Addis Ababa, January-February, 2011.

Characteristics	Intention to breast feed		Crude OR 95%&CI	Adjusted OR 95%CI
	Yes	No		
Age of pregnant women				
<20	32	4	1.00	1.00
20-30	316	11	3.59(1.08,11.93)*	3.16(0.86,11.59)
>30	56	1	7.00(0.75,65.35)	4.71(0.39,57.03)
Residence pregn women				
Urban	374	16	.00(0.00)	.00(0.00)
Rural	30	0	1.00	1.00
Income				
Low 150-700	60	88	1.00	1.00
Middle 701-1300	81	55	2.53(0.65,9.75)	2.19(0.54, 8.87)
High 1301-8000	85	51	1.49(0.47,4.69)	1.82(0.48, 6.89)
Educational status				
None	71	4	1.00	1.00
Primary school	171	4	2.40(0.58,9.89)	3.05(0.69,13.43)
Secondary school	116	5	1.30(0.34,5.02)	1.66(0.37, 7.38)
College diploma &above	46	3	0.86(0.18,4.03)	0.790(0.13, 4.76)
Visit for ANC				
1&2 times	334	14	1.00	1.00
3&4 times	70	2	1.47(0.33, 6.60)	1.39(0.28, 6.80)
Previous b/f experience				
Yes	192	4	2.72(0.86, 8.57)	2.15(0.58,7.94)
no	212	12	1.00	1.00
Breastfeeding counseling				
Yes	96	5	0.69(0.23, 2.02)	0.71(0.22, 2.23)
no	308	11	1.00	1.00

Significant at p<0.05.

Although, pregnant women's having adequate knowledge of breastfeeding were 6 times [COR= 6.20; 95% CI (3.48, 11.03)] more likely to have favorable attitude towards breastfeeding than those inadequate knowledge in bivariate analysis (Table 9). Whereas, pregnant women's attitude towards breastfeeding were not associated with intention to breastfeed [COR=0.95; 95% CI (0.26, 3.41)] (Table 10).

Table 9: Knowledge of breastfeeding of pregnant women by attitude toward to breastfeed, Addis Ababa, January-February, 2011.

Characteristics	**Pregnant women attitude toward breastfeed.**		**Crude OR 95&CI**
	Favorable	**Unfavorable**	
Adequate knowledge	209	17	6.20 (3.48, 11.03)
Inadequate knowledge	129	65	1.00

* Significant at p<0.01.

Table:10 Attitudes toward breastfeeding of pregnant women by intention to breastfeed, Addis Ababa, January-February, 2011.

Characteristics	**Pregnant women's intention to breastfeed**		**Crude OR 95&CI**
	yes	**no**	
Favorable attitude	325	13	0.95 (0.26, 3.41)
Unfavorable attitude	79	3	1.00

6 DISCUSSION

In the current study, knowledge of pregnant women about breastfeeding recommendation was 53.8% which is lower than the study finding in Jimma (67.2%)(36) and in Malaysia (74.8% (26). It was understandable because this study conducted in area which had difference population, culture, using difference questionnaires and target population compare to previous studies. Most mothers in this study were found to be knowledgeable regarding breastfeeding benefits were, breast milk is best food for infants, good for infant's resistance, increases maternal and child bonding, well balanced nourishing food.etc. This finding is consistent with the study in Ghana, showed that breast milk as being nutritious(100%),healthier for children (97%) ,protecting their children from diseases(80%) and promoting bonding between mother and children(99%)(18). Mothers having such knowledge are an encouraging point which contributes much to reduce morbidity and mortality among infants and children.

However, the wrong perceptions bearded in this study regarding to breastfeeding promotion were, colostrums is no good for infants, clear fluid be given in inclusive breastfeeding, breast feeding no help mother to recover from child birth and continuous and frequent practice of breastfeeding cannot delay conception. Similarly, a study in Vietnam showed that mothers were less aware of the advantages of BF in helping the mother to recover from childbirth (26). In addition study in Kumasi, Ghana, identified only 32% agreed breast feeding had contraceptive benefit whereas 38% disregard and 30% had no idea about it (18). Hence, in order to overcome such barriers to B/F, it is not sufficient only to focus education and promotion programs during antenatal period. Because, these misconceptions could be influenced by social and cultural beliefs'. Therefore, public education or breastfeeding campaigns should be directed at societal level to modify these misconceived issues appropriately which contributes much to change behaviors.

This study showed that the higher maternal education was found to be associated with adequate knowledge of pregnant mothers about breast feeding benefits. This finding is in agreement with the study in Jimma, that mothers who attended formal education have 2 times more chance of having satisfactory knowledge about the benefits of B/F compared to those who have not attended formal education (36). Similarly, in south west Sydney, Australia, mothers who had completed university/tertiary education were more likely to be aware of the breastfeeding recommendation than those who had less schooling (32). Therefore, an action to empower and educate women contributes much to aware breastfeeding recommendations, because educated women have better understanding of breastfeeding benefits from multiple sources of information as compared to uneducated ones.

In this study, awareness related to breastfeeding among pregnant mother in the counseled group was 3 times more likely having breastfeeding knowledge than those in the none counseled group. This result is consistent with study pond cherry, the Indian study showed that in the counseled group 87% were aware that breastfeeding should be initiated immediately after birth and 78% knew that exclusive breast feeding should be continued for 6 months(15) .

Similarly, the study in Singapore, mothers receiving individual counseling and educational material practiced exclusive and predominant breast feeding more often than mothers receiving routine care alone at 3 months and 6 months post partum (25). Thus where breastfeeding practices are suboptimal, provision of printed or audiovisual educational material is not enough. During antenatal visits, health care providers should make every effort to have face-to-face encounter to give accurate information on breastfeeding and clarify misconceptions among expectant mothers.

In the current study, about half of the respondents (47%) heard about breastfeeding benefit from mothers with experiences, while the contribution of health workers and mass media was low. When we compare to the other study findings there was a room for improvement to disseminate breastfeeding information. For example in study conducted in Jimma, mothers who have attended antenatal clinic and received health education on breastfeeding were found to be more likely of having satisfactory knowledge about the benefit of breastfeeding(36).

Similarly, study in Malaysia showed that most mothers (34.9%) gathered BF information from the mass media, antenatal class (32.1%) and mothers with BF experience (27.5%) (26). Study conducted in Tanzania showed that having knowledge and being informed about breastfeeding issues by healthcare workers had a positive association with feeding practices (28). One study also showed, the absence of antenatal education increases the risk of weaning before 6 months, 1.67 times (14).

This study found that most (80.5%) showed favorable attitude towards breastfeeding which is consistent with the study finding in Malaysia (83.90%) had positive attitude towards B/F (26). Although, in this study the attitude towards breastfeeding was generally favorable, (62.6%) respondents do not agree to the banning of bottles & teats. This is probably due to more & more women join the work force and they would not spent their time with the child at home and the possibility that they leave their child with relatives or others and prefer to use bottle-feed (with formula).

In this study, pregnant women's with formal educational status showed favorable attitude towards breastfeeding than non educated. Also, pregnant women's family income of middle and high 2 times more likely have favorable attitude towards breastfeeding than the referent group. This is consistent with what had been found by the study conducts in Northern Ireland, indicated that mothers educated to the postgraduate level and increased household income had more favorable attitudes to breastfeeding than referent groups(38).

In the current study almost all respondents (96%) intended to breastfeed their new born. This is similar to Malaysia findings showed that 96.8% of respondents intended to breast feed (26). However, in this study only variable pregnant mother's age 20-30 years were 3 times more likely to intend to breastfeed compared to age less than 20 years in bivariate analysis. Other socio-demographic and RH characteristics such as income, educational status, visit for ANC, previous breastfeeding experiences and breastfeeding counseling showed no statistical significant effect on intention to breastfeed in bivariate and multivariate analysis. This finding reverse to the study from Syria where mothers age≤ 25 years, family income per month, number of live births, previous breastfeeding experience and breastfeeding partner support were significant predictors(33). However, socio-demographic and RH variables are important research consideration in the region. In addition, this study used the Tran theoretical Model and the Theory of Reasoned Action to assessing the stages of change for breastfeeding and breastfeeding intention. Among questions developed by Humphreys and Colleagues the statement 'I am thinking about breastfeeding, but I am not sure I want to do it' in the measure of intention not to breastfeed may reflect breastfeeding ambiguity, having both positive and negative feelings towards breastfeeding. Hence, further research needs to validate it and for future research a separate yes/no item assessing breastfeeding intention rather than combining the measurement of intention and stages together.

In this study, pregnant women having adequate knowledge of breastfeeding were 6 times more likely to have favorable attitude than those with inadequate knowledge. This is consistent with what had been found by the study conducts in Taiwan showed that, higher mean scores of knowledge and attitude scores with higher rates of exclusive breastfeeding (24). Similarly, in Palestinian attitudes toward EBF for 6 months of age have been found to be significantly associated with knowledge of BF (17). Therefore, our study suggest that efforts aimed at improving breastfeeding rates should continue to focus on improving knowledge of mothers about breastfeeding is most likely will increasing rates of breastfeeding recommendations.

On the other hand, attitudes toward breastfeeding of pregnant women were not associated with intention to breastfeed in the current study. This seems to indicate that pregnant women's attitude did not come to predict future intention to breastfeed in the study area. However, this finding contradicts those of Northern Ireland which demonstrated that both infant-feeding intention and outcome can be predicted from attitudes to infant feeding (37).

Based on the finding from this study knowledge, attitude & intention of pregnant women for the first time scored insufficiently compared to pregnant women who has borne more than one child. Among 194 respondents scored inadequate knowledge, 82 unfavorable attitude and 16 with no intention to breastfeed the contribution of pregnant women for the first time were 71%, 64.6% and 75% respectively. The finding of this study is consistent with the study conducted in south west Ethiopia that indicates, attitudes and intentions deviated widely from the current international recommendations among adolescents. Youth overwhelmingly endorsed items related to early introduction of non breast milk liquids and food (5). On the other hand study in USA found that provider encouragement significantly increased the likelihood of breast-feeding more than threefold among young, low income and less educated women (38). Therefore, provider encouragement may influence her knowledge, attitudes, and beliefs and enhance self-efficacy which increases woman's intention to breastfeed.

7 STRENGH AND LIMITATION OF THE STIDY

Strength

This study is the first in exploring breastfeeding knowledge, attitude & intention to breastfeed among pregnant women following ANC using the Tran theoretical Model and the Theory of Reasoned Action.

The findings of this study can be used as base line information for other researchers**.**

Limitation

The study employed cross sectional study design, therefore it might have its own limitation in detecting the major determinants of the knowledge, attitude and intention to breastfeed.

Majority of study participants were from urban setting which can affect the generalizablity of the finding from the study.

In order to obtain more information from the study subjects it was good if qualitative data collection approach were considered besides the quantitative information.

8 CONCLUSION

Almost-all' prevalence of intention to breastfeed and high level of favorable attitude towards breastfeeding among pregnant women in the study area.

Breastfeeding knowledge was relatively lower in this study than studies done before in other areas.

Wrongly perceived by study participants were, colostrums is no good for infants, clear fluid be given in inclusive breastfeeding, BF does not help mother to recover from child birth and breastfeeding cannot delay conception.

Breastfeeding knowledge was influenced by women's age less than 30 years, low and middle house hold income, none educated those who did not get breastfeeding counseling and those who were pregnant for the first time.

Pregnant women's attitude towards to breastfeed was influenced by women's low house hold income, none educated and those who were pregnant for the first time.

Association was observed between knowledge of breastfeeding and attitude towards to breastfeed. However, pregnant women's attitude did not come to predict future intention to breastfeed.

The role of health workers and mass media as source of breastfeeding information were low.

9 RECOMMENDATION

Younger age, low family income, non formal education and those who were pregnant for the first time should be targeted

In order to promote the initiation and duration of breastfeeding, a combined approach of one to one education, group education and media campaigns are important.

This study did not test whether knowledge, attitude and intention to breastfeed translates into practice. Therefore it needs longitudinal prospective studies in this aspect.

Qualitative studies can be helpful in providing more insight about barriers to breastfeed among pregnant women.

10 REFERENCES

1. Menon, Lakshmi; Holla, Radha; towards healthy mothers and children: a gender and rights approach to breastfeeding promotion Women's Health Journal Jan 1, 2008
2. Breastfeeding just 10 steps-towards a Baby-Friendly way: http:// WWW.Worldbreastfeedingweek.org. 1 to 7 August 2010.
3. Edmond, K.M, et al. Delayed Brest Feeding initiation Increases Risk of Neonatal Mortality. Pediatrics Official Journal of the American Academy of Pediatrics 2006. 117(3): p. 380-386.
4. Division of Child Health and Development; Indicators for Assessing Breast Feeding Practices. General WHO/CDD/SER, 1991. 91(14).
5. Craig H, David L, Belachew T, Tessema F. Ethiopia Adolescents' Attitudes & Expectations Deviate from Current Infant and Young Child Feeding Recommendation. J Adolesc Health. 2008 September; 43(3): 253–259.
6. Federal MOH. National Strategy for Infant and Young Child Feeding. Addis Ababa, Ethiopia 2004.
7. Federal MOH. National Strategy for child survival in Ethiopia. Addis Ababa, Ethiopia; July 2005.
8. Amsalu S, Tigabu Z. Risk factors for sever acute malnutrition in children under the age of five. Ethiop J Health Dev, 2008; 22(1): p. 21-25.
9. FMOH/UNICEF. Guidelines for the Enhanced Outreach Strategy (EOS) for child survival interventions. Revised version-March 2006.
10. Ethiopia Demographic and Health Survey 2005, September 2006. Central statistical Agency Addis Ababa, Ethiopia, ORC Macro Calverton, USA.
11. Andea F, Nida H, Jira C. Infant Bottle-Feeding Practice, Agaro Towen, Southwest Ethiopia. Ethiop J Health Sci 2003; 13(1): p. 51-58.
12. Ketsela T, Kebede D. Pattern of Infant Feeding in Addis Ababa Ethiopia.Ethiop. J. Health. Dev, 1992(6): p. 55-7.
13. Prenatal Breastfeeding education; Mediline 1997 Med (R) 1/95- 1/97
14. Hayriye E, Suphi V , Gülbin G. A Study of the Factors Affecting the Duration of Exclusive Breast feeding. Nobel Med, 2009. 5(3): p. 53-57
15. Dhandapany,G.et al. Antenatal counseling on breastfeeding, descriptive study from Pondicherry, India. International Breastfeeding Journal, 2008.3(5).

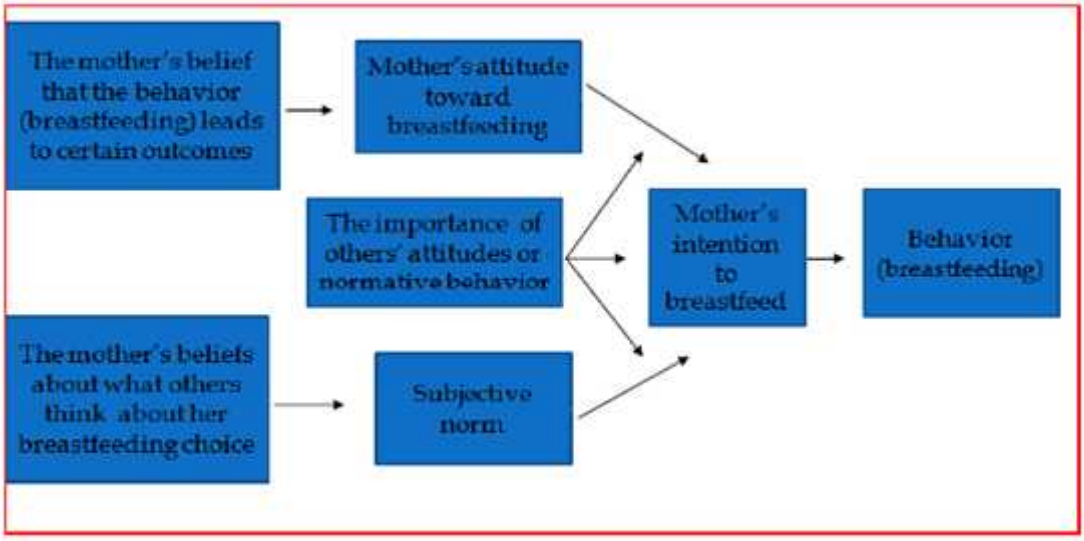
16. Scott J, Shaker I, Reid M. Parental Attitudes toward Breast Feeding. Black well Publishing 2004. **31**(2).
17. Mohamed K, Abu Hamad B. Effects of the Breast Feeding Promotion Program on mothers KAP. www.ardelinsan.org. Gaza 2006
18. Bhavana Singh. Knowledge,Attitude and Practice of Breast Feeding. EuroJournals Publishing, 2010. 40(3): p. 404-422.
19. Carlberg C. Attitude of young adults about breast feeding and the association of breast feeding exposure. A thesis submitted in partial fulfillment of the requirements for the Master of Science in Nursing. University of Nevada, Las Vegas. May 2010: p. 6
20. Privacy Policy, Child Survival. Global Action for Children, Washington DC 20005
21. Adeyinka T.et al. A hospital based assessment of breast feeding behavior and practices among nursing mothers in Nigeria &Ghana. Pakistan Journal of Nutrition, 2008. **7**(1): p. 165-171.
22. Alemayehu T, Haider J, Habte D. Determinants of exclusive breast feeding Practices in Ethiopia. Ethiop J Health Dev. 2009. 23(1): p. 12-18
23. Drmawan H. Intention to breast feeding among pregnant women in north minahasa, Indonesia. A thesis submitted in partial fulfillment of the requirement for the degree of master of PHC management faculty of graduate studies mahindol university; march 2005
24. Lin S et al. Effectiveness of prenatal education programme on breast feeding out comes in Taiwan. Journal of Clinical Nursing; 2008(17): p. 296-303.
25. Matter C et al. Simple Antenatal Preparation to improve breast feeding practice. Obstet Gynecol ,National University Hospital ,Singapore :2007; 109(1):73-8027.
26. Tan A et al. Knowledge, Attitudes and Sources of Information on Breastfeeding among Pregnant Mothers .Med & Health, 2008. 3(1): p. 30-37
27. Abba A etal. A qualitative study of the promotion of exclusive breastfeeding by health professionals in Niamey, Niger. International Breastfeeding Journal 2010.
28. Shirima R etal. Information and socioeconomic factors associated with early breastfeeding practices in rural and urban Morogoro, Tanzania. Acta Paediatr 2001. 90: p. 936- 942.
29. Birara T etal. Assessment of optimal breast feeding practices; Ethiopian Public Health Association XVIII Annual Public Health Conference, October 2007: p. 58.

30. Amy S etal. Assessment of breastfeeding intention using the Tran theoretical Model and the Theory of Reasoned Action. Health education research theory & practice 1998 13(3): p.331-341
31. Amy S etal. The Impact of Attitudes, Norms, Parity, and Experience .Am J Health Behav 2002: 26(3): p. 182-187.
32. Wen Li Ming et al. Intention to breastfeed and awareness of health recommendation. International breastfeeding journal 2009. 4(9): p. 20 of 8
33. Nemeh A et al. Factors affecting intention to breastfeed among Syrian and Jordanian mothers. International breastfeeding journal 2010. 5(6).
34. Scott J etal. Parental Attitudes toward Breastfeeding: their association with feeding out comes at hospital discharge. Black well publishing june, 2004. 31(2).
35. Federal Democratic Republic of Ethiopia MOH, HSDP IV Woreda base annual core plan 2003(2010/2011).
36. Biruk K.T/selassie .The status of breastfeeding among mothers of children age less than two years and implications for the occurrence of acute diarrhea Jimma, south west Ethiopia,march,2002,Addis Ababa.
37. Sittlington J, etal. Infant-feeding attitudes of expectant mothers in Northern Ireland. Advance Access publication. 2006, Vol.22 (4) 561–570.
38. C.Michael,etal. Provider encouragement of breast-feeding: Evidence from a national survey. Elsevier Science Inc. vol. 97, No. 2, February 2001

11 Annexes

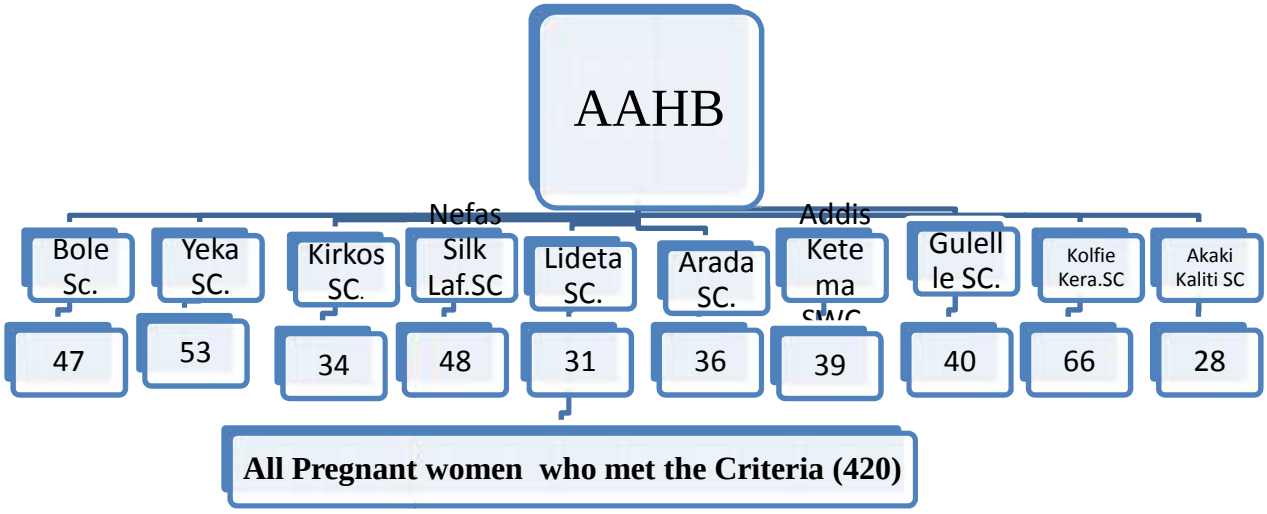
Annex I: Conceptual Frame Work to assess knowledge, attitude and intention to breastfeed among pregnant mothers following ANC.

Figure 1 The Conceptual Framework - The Theory of Reasoned Action



Adapted, from Ajzen and Fishbein (1980)

Annex II: Sampling chart of data collection of knowledge, attitude and intension to breastfeed among pregnant women following ANC in Government Health Centers of Addis Ababa.



Annex III Participant Information Sheet (English)

Description of the study

Title of the study: Knowledge, attitude and Intention to breastfeed among pregnant mothers following antenatal care in government health centers of Addis Ababa.

Objective of the study: To Assess the knowledge, attitude and intention to breastfeeding in Addis Ababa.

Introduction: Breast milk is perfectly suited to nourish infant and contains just the right amount of nutrients for the development and growth of the child as well as the psychological and health benefit to the mother and children including societal benefits are well known. Breastfeeding plays a crucial role in reducing child mortality especially in developing countries particularly sub-Saharan Africa where health status is poor due to inadequate access to clean water, sanitation, essential drugs and healthcare facilities. The current World Health Organization (WHO) recommendation includes initiation of breastfeeding within the first hour of life, exclusive breastfeeding for six months, timely complementary feeding with appropriate foods, and continued breastfeeding for two years and beyond. However, advocate of breastfeeding have noticed, there has been a global decline in the behavior among nursing mothers.

Rationale of the Study and its benefits: Despite breastfeeding is a universal practice in Ethiopia, Exclusive breastfeeding for the first six months is not widely practiced. Studies identified diverse factors influence initiation and duration of breastfeeding. Hence breastfeeding problems can be overcome if the woman is informed the benefits during antenatal visits. More over no study has assessed the knowledge and intention to breast feed among pregnant mothers following ANC .Therefore this study will have paramount importance for planning and evaluation of the program also to fill the aforementioned gaps. Information which is necessary for the study will be taken from pregnant mothers following ANC in the health centers of Addis Ababa. The individual patients will not be subjected to any harm as far as the confidentiality is kept. Moreover, no personal identifiers will be used on data collection form. The recorded data will never be accessed by a third person except the principal investigator, and will be kept with a firm confidentiality in much secured place plus it will not be used for other purposes

Consent Form

My name is ……. who recently graduated as a midwife by profession. Currently I am collecting data from pregnant mothers following ANC about knowledge, attitude &intention to breastfeed, for study conducted by Ato Sheleme Humnessa who is the Master of public Health student in Addis Ababa University. You are selected as one of study subject by chance. The investigator employed me for this data collection to maintain your data strictly confidential, i.e. not to let others outside of this health center to access your name and other identifiers. We believe that the findings of this study will have paramount importance for evaluation of breast feeding programs and to initiate breast feeding promotion among pregnant mothers following ANC.

Information which is necessary for this study will be taken from you. The study will be conducted through interview and it will not inflict any harm as far as the confidentiality is kept. The information will be taken when you give permission, participation is totally voluntary. Your willingness for your breast feeding information to be utilized in this study will help us achieve the stated benefits of the study. Your name and other personal identifiers will not be recorded on data collection form and the information that you give us will be kept confidential and will also be used for this study purpose alone. You have full right not to let your information about breast feeding on to be consumed for this study. But the information that would be taken will be quite useful for the study. You will not face any problem if you do not allow the information to be taken from your records and you will not also be denied of getting any medical services from the health center. If you have any questions about this study you may ask me or the principal investigator Sheleme Humnessa(Tell 0911850818or E-mail:hsheleme@yahoo.com).

Are you willing to let your information to be utilized for this study?

1. Yes 2. No

Signature of the interviewer which shows that the respondent has consented (verbally) to take part in the study _____

Annex IV Participant Information Sheet (Amharic)

የጥናቱ መግለጫ

የጥናቱ ርዕስ፡- በአዲስ አበባ ከተማ በመንግስት ጤና ጣቢያዎች ውስጥ የቅድመ ወሊድ ምርመራ ተከታታዮች ስለመሰረታዊ የጡት ማጥባት እውቀታቸውን፣ አመለካከታቸውንና እንዲሁም ከመውለዳቸው በፊት ስለጡት ማጥባት እቅዳቸውን አስመልክቶ የዳሰሳ ጥናት ማድረግ፡፡

የጥናቱ ዓላማ፡- በአዲስ አበባ ከተማ ነፍስጡር እናቶች ስለጡት ማጥባት እውቀታቸውን፣ አመለካከታቸውንና እንዲሁም ከመውለዳቸው በፊት እቅዳቸው ላይ ያተኮረ የዳሰሳ ጥናት ማድረግ፡፡

መግቢያ፡- የጡት ወተት አቻ የሌለው ተመጣጥኖ የተዘጋጀ፤ ለህፃናት እድገት ምቹ የሆነ ምግብና እንዲሁም ከበሽታ የመከላለክ ብቃት አለው፡፡ ጡት ማጥባት ለታዳጊ አገሮች በተለይም ከሰሀራ በታች ለሚገኙ አፍሪካ አገሮች የህፃናትን ሕመምና ሞትን በመቀነስ ከፍተኛ አስተዋጽኦ ያበረክታል፡፡ የአለም ጤና ጥበቃ እንደደነገገው ለማንኛውም ህፃን እንደተወለደ በ1ሰዓት ውስጥ ጡት ማጥባት ማስጀመር፣ እስከ 6 ወር ድረስ ሌላ ነገር ሳይጨመርበት የጡት ወተት ብቻ እንዲያጠቡ ማድረግ፣ በ6ተኛ ውር ላይ ለህፃኑ ከጡት ማጥባት በተጨማሪ ለህፃናት ምቹ የሆኑን የተመጣጠኑ ተጨማሪ ምግብ ማስጀመርና እንዲሁም ህፃኑ 2 ዓመት እስኪሞላውና ከዚያም በላይ ጡት ማጥባቱን እንደሚያስፈልግ ያዝገነዝባል፡፡ ነገር ግን በአግባቡ ጡት የሚያጠቡ እናቶች ቁጥር እየቀነሰ ይገኛል፡፡

የጥናቱ አስፈላጊነት፡- በአገራችን ጡት ማጥባት በስፋት እንደሚከናወን ይታወቃል፡፡ ሆኖም ግን ህፃናት ተወልደው ስድስት ወር እስኪሞላቸው ድረስ በሚፈለገው ሁኔታ በማጥባት ላይ የሚገኙ እናቶች ቁጥር ዝቅተኛ ነው፡፡ በርካታም ምክንያቶች ትጽዕኖ እንደሚያሳድሩ በጥናት ተረጋግጧል፡፡ ስለሆነም የነፍሰጡር እናቶች የጡት ማጥባት ጥቅምን አስገንዝቦ ችግሮችን ለማቀለል የሚቻለው በቅድመ ወሊድ ጊዜ በቂ የጡት ማጥባት መረጃ እንዲያገኙ ሲደረግ ነው፡፡ ሆኖም ግን በዚህ ዙሪያ የእናቶች ጡት ማጥባት እውቀታቸውን፣ አመለካከታቸውንና ከመውለዳቸው በፊት ጡት የማጥባት እቅዳቸውን አስመልክቶ ጥናቶች ባለመኖራቸው የመረጃ እጥረት ይታያል፡፡ ስለሆነም ይህን የመረጃ እጥረትን በማሟላት እንዲሁም ፕሮግራሙን ለማጠናከር እቅድ ለማውጣትና ለመገምገም የዚህ ጥናት ውጤት ከፍተኛ አስተዋጽኦ ይኖረዋል፡፡ ስለዚህ ለጥናቱ አስፈላጊ የሆኑ መረጃዎችን አዲስ አበባ ከተማ ከሚገኙ የመንግስት ጤና ጣቢያዎች ይሰበስባል፡፡ ጥናቱ በግለሰቦች ላይ ምንም አይነት ጉዳት የለውም፡፡ የጥናቱ ተሳታፊዎች ፈቃደኝነት ተጠይቆ በተጨማሪም ሚስጥራዊነቱ በመጠበቅ የተሳታፊዎችን ማንነት የሚገልጽ በመጠይቅ ላይ አይሞላም፡፡ የተወሰደው መረጃ ሙሉ ለሙሉ ጠቀሜታው ለምርምር ስራው ብቻ ይውላል፡፡

በጥናቱ ተሳታፊዎች የፈቃደኝነት መጠየቂያ ቅጽ

ስሜ _____ይባላል፡፡ እኔም በሙያዬ አዋላጅ ነርስ ስሆን አሁን ነፍስጡር እናቶች ስለመሰረታዊ ጡት የማጥባት መረጃዎች ማወቃቸውን፣ አመለካከታቸውን እንዲሁም ከመውለዳቸው በፊት ጡት የማጥባት እቅዳቸውን መዳሰስ በሚል ርዕስ የአዲስ አበባ ዩኒቨርስቲ ድህረ-ምረቃ ተማሪ የሆኑት አቶ ሸለመ ሁምኔሳ ለሚሰሩ ጥናት የቅድመ ወሊድ ምርመራ ክትትል በማድረግ ላይ ከሚገኙት እናቶች መረጃ እየሰበሰብኩ ነው፡፡ እርሶዎም የጥናቱ አካል እንዲሆኑ ተመርጠዋል፡፡ አጥኚው ለነፍሰጡር እናቶች ለመረጃ ሰብሳቢነት ሲመርጠኝ የመረጃውን ምስጢራዊነት ለመጠበቅ ብሎ ነው፡፡ ማለትም በመረጃ ስብሰባ ወቅት ሌሎች ስምዎንና መረጃዎን እንዳያዩ ሲባል ነው፡፡ ጥናቱ ሳይንሳዊ ሂደቱን በመከተል ነፍሰጡር እናቶች ስለ መሰረታዊ የጡት ማጥባት መረጃዎች እውቀታቸውን፣ አመለካከታቸውን እንዲሁም ጡት የማጥባት እቅዳቸው ውጤት ፕሮግራሙን ለመገምገም የጎላ አስተዋጽኦ እንደሚኖረው ይታመናል፡፡ ስለሆነም ለጥናቱ አስፈላጊ የሆኑ መረጃዎች ከርስዎ ይወሰዳል፡፡ ጥናቱ የሚደረገው በቃለ መጠየቅ ሲሆን የሚወስደውም እርስዎ ፈቃደኛ ሲሆኑ ብቻ ነው፡፡ መረጃው ሲወሰድ የርስዎን ማንነት የሚገልጽ ስምና ሌላ ምንም ዓይነት ነገር መጠይቁ ላይ አይሞላም፡፡ በርስዎ ላይም ምንም ዓይነት ጉዳት አያስከትለም የተወሰደው መረጃ ምስጢራዊነቱ ተጠብቆ ሙሉ በሙሉ ለምርምር ሥራው ብቻ ይሆናል፡፡ ስለጡት ማጥባት መረጃዎ ለምረምር ሥራ እንዳይውል የማድረግ መብት አለዎት፡፡ ነገር ግን መረጃዎ ለምርምር ሥራ ቢውል ጠቀሜታው የጎላ ነው፡፡ በጥናቱ ለመሳተፍ ፈቃደኛ ባይሆኑ በቅድመ ወሊድ ክትትለዎ ላይ ምንም አይነት ጉዳት አያስከትልም፡፡ በሌላ በኩል መረጃዎን በመስጠትዎ የሚያገኙት የተለየ ጥቅም አይኖረም፡፡ ጥናቱን በተመለከተ ጥያቄ ካለዎት እኔን ወይም አጥኚውን አቶ ሸለመ ሁምኔሳን በስልክ ቁጥር 0911-85 08 18 ወይም በኢሜል አድራሻ hsheleme@yahoo.com መጠየቅ ይቻላል፡፡

መረጃው ለምርምር ሥራ ቢውል ፈቃደኛ ነዎት?

1/ አዎ 3/ አይደለም

መረጃውን ለጥናቱ ሥራ እንዲውል ፈቅደዋል፡፡

የመረጃ ሰብሳቢ ስምና ፊርማ _____

Annex V Questionnaires (English)

Section-1: General Instruction: All questions in this paper are based upon maternal recall. It is very important that you ask each question exactly as it is written on the questionnaires. When you ask a question, you should listen to the mother's response/answer, and then circle the code next to the category that best matches her answer/response.

Identification: Sub-city……..Woreda(kebele)……Record number……

Name of interviewer----------
Date of visit----------

Result: 1 = completed

2= refused

9 = other (specify) ---------

Section-2: Respondent's Socio demographic characteristics.

Number	Question	Coding categories
101	Age in complete years	…….
102	Where is your residence area?	1.Urban 2.Rural
103	What is your religion?	1. Orthodox 2.Muslim 3.Protestant 4.Catholic 5.Other (specify)…….
104	What is your ethnic group?	1. Amhara 2.Oromo 3. Tigrie 4. Guragie 5. Other (specify)……...
105	What is your current marital status?	1.Married 2.Not married
106	What is your current occupational status?	1. House wife 2.Gov'tal employee 3.Business women 4.Daily laborer 5. Private 6.Other (specify)……...
107	What is the average monthly income of the household?	…….
108	What is your anticipated time back to work after giving birth?	1. <3months 2. 4-6 months 3. 7-12 months 4. Do not plan to go back to work. 5. Do not know.

109	What is the highest grade you completed?	1.Illiterate 2.Primary school 3.Secondary school 4.collage diploma and above 5. Other (specify)…….
110	How many times did you visit for ANC?	1=1&2times 2=3times 3.4&above times
111	What is your number of live births?	1=0(primiparous) 2=1child 3=2childern 4=>3childern
112	Have you ever had previous breast feeding experience?	1=Yes 2=No
113	If "Yes'' for question 111, how long did you breast feed your baby? If "No'' skip to question 113	1=<6months 2=7-23months 3=>24months
114	Does your husband support breast feeding?	1=Yes 2= No 3=do not know
115	Are you living with family in law?	1= yes 2= No
116	Do your family/peer support breast feeding?	1=Yes 2=No 3=do not know

Section3: Knowledge of breast feeding among respondents.

Number	Questions	Coding categories
201	What is the best food for infant (<6months)?	1.Breast milk 2.Formula milk 3.Others…… 4.Do not know
202	Does breast milk is good for infant's resistance towards diseases?	1.Yes 2.No 3.Do not know
203	Does breast milk increases maternal and child bonding?	1.Yes 2.No 3.Do not know
204	Does breast milk is easy and economical	1.Yes 2.No 3.Do not know
205	Breast feeding helps mother to recover from child birth?	1.Yes 2.No 3.Do not know

206	Does breast milk is well balanced nourishing food?	1.Yes 2.No 3.Do not know
207	Does breast milk fill the stomach more easily?	1.Yes 2.No 3.Do not know
208	Does breast feeding helps mother to reduce weight?	1..Yes 2.No 3.Do not know
209	Does breast feeding started within one hour of delivery?	1.Yes 2.No 3.Do not know
210	Should breast milk stop when baby or mother sick?	1.Yes 2.No 3.Do not know
211	Should clear fluid also be given in inclusive breast feeding?	1.Yes 2.No 3.Do not know
212	Does colestrum good for infants?	1.Yes 2.No 3.Do not know
213	The age at offering supplementary diet started besides breast milk is 6 month?	1.Yes 2.No 3.Do not know
214	Do you think that a continuous and frequent practice of breast-feeding can delay conception (pregnancy)	1.Yes 2.No 3.Do not know
215	Should prelacteal feed be given for newborn?	1.Yes 2.No 3.Do not know
216	Do you think that breast feeding continued up to 2years and beyond?	1.Yes 2.No 3.Do not know
217	Did you get breast feeding counseling during your visits?	1.Yes 2.No

Section-4: Attitudes towards breast feeding among respondents

Number	Questions	Coding categories
301	In your opinion breast feed is easier than infant formula?	1.Yes 2.No 3.Do not know
302	Do you think that breast milk alone is enough to a baby in his 1st 6 months?	1.Yes 2.No 3.Do not know

303	In your opinion breastfed babies are healthier than formula-fed babies?	1.Yes 2.No 3.Do not know
304	Do you think that breast feeding mother is difficult in taking care of family?	1.Yes 2.No 3.Do not know
305	Do you think that women should not breastfeed public places such as restaurants?	1.Yes 2.No 3.Do not know
306	Do you think that to start breast feed straight after delivery?	1.Yes 2.No 3.Do not know
307	Do you think that formula is as healthy for an infant as breast milk?	1.Yes 2.No 3.Do not know
308	Do you think that ban the use of bottles and teats?	1.Yes 2.No 3.Do not know
309	Do you think community encourages breast feeding?	1.Yes 2.No 3.Do not know
310	Do you stop breast feeding if husband discourages?	1.Yes 2.No 3.Do not know
311	From where did you hear about breastfeeding benefits?	1.Health workers 2.Mass media 3. Relatives 4.Mothers with experience 5.Others…….

Section-5: Questionnaire developed by Humphreys and Colleagues to assess Breast feeding Intention

1. I am going to bottle –feed my baby ,and I don't want to breast feed at all
2. I am thinking about breast feeding, but I am not sure I want to do it.
3. I plan to try breast feeding but, I am not sure, how long I will do it.
4. I plan to breast feed my baby for at least 1 month but probably not a full 6 months
5. I plan to breast feed my baby for at least 6 months

Instruction: Women will be defined as not having the intention to breastfeed if they reported any of the items 1or 2 and women will be defined as having the intention to breastfeed if they reported any of the items 3, 4, 5.

Number	Questions	Coding categories
401	Brest Feeding Intension	1. Yes 2. No

Number	Questions	Coding categories	
402	If not breast feed what is your reason?		
	➢ Bottle feed is more convenient	1.yes	2.No
	➢ I have go to work/study	1.yes	2.No
	➢ Husband disapprove	1.yes	2.No
	➢ To maintain beauty	1.yes	2.No
	➢ Others(specify)…….	1.yes	2.No

Thank you

Checked by supervisor:

Name----------

Signature ----------

Date----------

Annex VI Questionnaires (Amharic)

በአማርኛ ቋንቋ የተዘጋጀ ቃለመጠይቅ

ክፍል - 1 **አጠቃላይ** በዚህ ቃለመጠይቅ የተዘጋጁት ጥያቄዎች በሙሉ ነፍሰጡር ሴቶች የሚያውቁትን ነገር በማስታወስ የሚመለሱት ነው፡፡ ስለሆነም በጥያቄው ላይ በሰፈረው መሰረት በትክክል መጠየቅ ያስፈልጋል፡፡ ቃለመጠይቅ በምናደርግበት ጊዜ የነፍሰጡርዋን ሴት መልስ በጥሞና ማዳመጥና ከነኑ ከተዘረዘሩት ምርጫዎች ጋር የሚገጥመውን መልስ መምረጥ፡፡

አድራሻ፥ - ክፍለ ከተማ ..... ወረዳ (ቀበሌ)..... ተራ ቁጥር .....

ቃለመጠይቁን አድራጊው ስም .....

ቀን .....

ውጤት 1. ተሟልቷል.....

2. ፈቃደኛ አይደለችም .....

3. ሌላ ካለ (ይዘርዘር) .....

ክፍል 2. የቃለመጠይቅ ተደራጊዎች የማህበራዊና ዲሞግራፊያዊ ሁኔታዎች

ተ.ቁ	ጥያቄዎች	ኮድ (መለያ)
101	ዕድሜ በዓመት	_____
102	የመኖሪያ አድራሻሽ የት ነው?	1. ከተማ 2. ገጠር
103	የምትከተይው እምነት ምንድን ነው?	1. ኦርቶዶክስ 2. ሙስሊም 3. ፕሮቴስታንት 4. ካቶሊክ 5. ሌሎች (ይዘርዘር)
104	ብሄረሰብሽ ማነው?	1. አማራ 2. ኦሮሞ 3. ትግሬ 4. ጉራጌ 5. ሌሎች (ይዘርዘር)
105	በአሁኑ ወቅት የጋብቻ ሁኔታሽ ምንድን ነው?	1. ያገባች 2. ያላገባች
106	በአሁኑ ወቅት የሥራ ሁኔታሽን ግለጭልኝ ?	1. የቤት እመቤት 2. የመንግስት ሰራተኛ 3. ነጋዴ 4. የቀን ሰራተኛ 5. በግል ድርጅት 6. ሌላ (ይዘርዘር)

107	አማካይ የቤተሰብ የወር ገቢ ስንት ነው?	_____
108	ከወሊድ በኃላ ወደ ሥራ የምትመለሽው መቼ ነው?	1. ከ ሦስት ወር በታች 2. ከአራት እስከ ስድስት ወር 3. ከሰባት እስከ አስራ ሁለት ወር 4. ወደ ስራ ለመመለስ ዕቅድ የለኝም 5. አላውቀውም
109	አሁን የደረስሽበት ከፍተኛው የትምህርት ደረጃሽን ግለጭልኝ?	1. ያልተማረች 2. የመጀመሪያ ደረጃ 3. ሁለተኛ ደረጃ 4. የኮሌጅ ዲፕሎማና ከዚያ በላይ 5. ሌላ (ይዘርዘር)
110	ለቅድመ ወሊድ ምርመራ ምን ያህል ጊዜ ምልልስ አድርገሻል?	1. አንድና ሁለት ጊዜ 2. ሦስት ጊዜ 3. አራትና ከዚያ በላይ
111	የወሊድ ሁኔታሽን ግለጭልኝ?	1. ለመጀመሪያ ጊዜ እርግዝና 2. አንድ ልጅ የወለደች 3. ሁለት ልጅ የወለደች 4. ከሦስት ልጅ በላይ የወለደች
112	ከአሁን በፊት ጡት የማጥባት ልምድ አለሽ?	1. አዎ 2. አይደለም
113	በ112 ጥያቂ መልስዎ 'አዎ' ከሆነ በምን ያህል ጊዜ ጡት አጥብተሻል? መልስዎ ‹አይደለም› ከሆነ ወደሚቀጥለው ጥያቄ ይሽጋገሩ?	1. ከስድስት ወር በታች 2. ከሰባት እስከ ሃያ ሦስት ወር 3. ከሃያ አራት ወር በላይ
114	ባለቤትሽ ጡት እንድታጠቢ ያበረታታሻል?	1. አዎ 2. አይደለም 3.አላውቀውም
115	በጋብቻ ከምዛመድያቸው ሰዎች ጋር አብረሽ ትኖሪያለሽ?	1. አዎ 2. አይደለም 3.አላውቀውም
116	ቤተሰቦች ወይም ጓደኞችሽ ጡት እንድታጠቢ ያበረታቱሻል ?	1. አዎ 2. አይደለም 3.አላውቀውም

ክፍል 3 ስለጡት ማጥባት አስመልክቶ እውቀታቸውን (Knowledge) ለመዳሰስ የተዘጋጀ ቃለመጠይቅ

ተ.ቁ	ጥያቄዎች	ኮድ (መለያ)
201	ህፃናት (ከአንድ አመት በታች) ለመመገብ ተመራጭ ምግብ ምንድነው?	1. የጡት ወተት 2. ተዘጋጅቶ የሚሸጥ ወተት (formula milk) 3. ሌሎች 4. አላውቀውም
202	የጡት ወተት ህፃናትን ከበሽታ ለመከላከል ይጠቅማል ?	1. አዎ 2. አይደለም 3. አላውቀውም

203	የጡት ወተት የእናትና ልጅ ፍቅርን ይጨምራል?	1. አዎ 2. አይደለም 3. አላውቀውም
204	የጡት ወተት ቀላልና ወጪ ቆጣቢ ነው?	1. አዎ 2. አይደለም 3. አላውቀውም
205	ጡት ማጥባት እናት ከወሊድ በኃላ በቶሎ እነድታገግም ሊረዳት ይችላል ?	1. አዎ 2. አይደለም 3. አላውቀውም
206	የጡት ወተት ህፃናትን ለመመገብ ተመጣጥኖ የተዘጋጀ ነው?	1. አዎ 2. አይደለም 3. አላውቀውም
207	የጡት ወተት የህፃናትን ሆድ በቀላሉ ሊሞላ (ሊያጠግብ) ይችላል?	1. አዎ 2. አይደለም 3. አላውቀውም
208	ጡት ማጥባት የእናትን ክብደት ለመቆጣጠር (ለመቀነስ) ይረዳል?	1. አዎ 2. አይደለም 3. አላውቀውም
209	ከወሊድ በኃላ በአንድ ሰዓት ውስጥ ጡት ማጥባት መጀመር አለባት?	1. አዎ 2. አይደለም 3. አላውቀውም
210	እናት ወይም ህፃን ሲታመሙ ጡት ማጥባትን ማቋረጥ ያስፈልጋል?	1. አዎ 2. አይደለም 3. አላውቀውም
211	ህፃናት ተወልደው 6 ወር እስኪሞላቸው ድረስ የጡት ወተት ብቻ ለሚጠቡ ህፃናት ንፅህ ውሃ በተጨማሪ መስጠት ያስፈልጋል?	1. አዎ 2. አይደለም 3. አላውቀውም
212	እንገር (የመጀመያ ወተት) ለህፃን መስጠት ያስፈላጋል?	1. አዎ 2. አይደለም 3. አላውቀውም
213	ለህፃን ከጡት ወተት ሌላ ተጨማሪ ምግብ የሚጀመረው ዕድሜው 6ወር ሲሞላ ነው?	1. አዎ 2. አይደለም 3. አላውቀውም
214	በተከታታይ እና ቶሎ ቶሎ ጡት ማጥባት ዕርግዝናን ለማዘግየት (ለመከላከል) ሊረዳ ይችላል?	1. አዎ 2. አይደለም 3. አላውቀውም
215	ህፃናት እንደተወለዱ ጡት ከማጥባት በፊት ሌላ ነገር መስጠት ያስፈልጋል?	1. አዎ 2. አይደለም 3. አላውቀውም
216	ጡት ማጥባት እስከ ሁለት ዓመትና ከዚያም በላይ መቀጠል ያስፈልጋል?	1. አዎ 2. አይደለም 3. አላውቀውም
217	በቅድመ ወሊድ ክትትል ጊዜ ስለጡት ማጥባት ምክክር አግኝተሻል?	1. አዎ 2. አይደለም 3. አላውቀውም

ክፍል 4: - ስለጡት ማጥባት አስመልክቶ አመለካከታቸውን (Attitude) ለመዳሰስ የተዘጋጀ ቃለመጠይቅ

ተ.ቁ	ጥያቄዎች	ኮድ (መለያ)
301	በአንቺ አመለካከት ጡት ማጥባት ተዘጋጅቶ ከሚሸጠው ወተት (formula milk) ይልቅ ቀላልና የሚመች ነው?	1.አዎ 2.አይደለም 3.አላውቀውም
302	ህፃን ተወልዶ ስድስት ወር እስኪሞላው ድረስ የጡት ወተት ብቻ መስጠት የሚበቃ ይመስልሻል?	1.አዎ 2.አይደለም 3.አላውቀውም
303	ባንቺ አመለካከት ጡት የሚጠቡ ህፃናት ጤናማነታቸው በጡጦ ከሚመገቡ (formula milk) ህፃናት የሚበልጥ ይመስልሻል?	1.አዎ 2.አይደለም 3.አላውቀውም
304	ጡት የምታጠባ እናት የእለት እንቅስቃሴ በማድረግ ቤተሰቧን መንከባከብ የሚከብዳት ይመስልሻል?	1.አዎ 2.አይደለም 3.አላውቀውም
305	ባንቺ አመለካከት አንድ እናት ሰዎች በተሰበሰቡበት ቦታ ለምሳሌ በምግብ ቤት ጡት ማጥባት የለባትም?	1.አዎ 2.አይደለም 3.አላውቀውም
306	እናት እንደወለደች ወዲያው ከጥቂት ደቂቃዎች በኋላ ጡት ማጥባት መጀመር አለባት ?	1.አዎ 2.አይደለም 3.አላውቀውም
307	በአንቺ አመለካከት በጡጦ የሚመገብ ህፃንና ጡት የሚጠባ ህፃን የጤናማነታቸው ሁኔታ ተመሳሳይ ይመስልሻል?	1.አዎ 2.አይደለም 3.አላውቀውም
308	ህፃናትን በጡጦ መመገብ ጨርሶ አያስፈልግም?	1.አዎ 2.አይደለም 3.አላውቀውም
309	በአንቺ አመለካከት በማህበረሰብ ውስጥ ጡት ማጥባት ይበረታታል?	1.አዎ 2.አይደለም 3.አላውቀውም
310	ባለቤትሽ ጡት ማጥባትን ቢቃወምሽ ማቆም አለብሽ?	1.አዎ 2.አይደለም 3.አላውቀውም
311	ስለ ጡት ማጥባት ጠቀሚታ የሚገልፁ መረጃዎችን ከየት ሰማሽ?	1.ጤና ባለሙያዎች 2.መገናኛ ብዙኃን 3.ጡት የማጥባት ልምድ ካላት እናት

		4.ሌሎች /ይዘርዘር/…….

<u>ክፍል 5: -</u> በሀም ፍሬይ እና ጓደኞቹ ተዘጋጅተው ነፍሰ ጡር እናቶች ስለጡት ማጥባት እቅዳቸው (Intention) ለመዳሰስ የተዘጋጀ ቃለመጠየቅ

1. እንደወለድኩ ልጄን በጡጦ እመግበዋለው፤ጡት ማጥባት ጨርሶ አልፈልግም ።
2. ጡት የማጥባቱን ጉዳይ አስብበታለው። ነገር ግን የማደርገው መሆኑን እርግጠኛ አይደለሁም።
3. ልጄን ጡት ለማጥባት አቅጃለሁ። ነገር ግን ለምን ያህል ጊዜ እንደማጠባ እርግጠኛ አይደለሁም ።
4. ልጄን ቢያስ ለአንድ ወር ጡት ማጥባት አቅጃለሁ ። ነገር ግን ምን አልባት ለስድስት ወር ላይሆን ይችላል።
5. ልጄን ቢያንስ ለስድስት ወር ጡት ለማጥባት አቅጃለሁ።

***<u>መመሪያ</u>* :-** በተ.ቁ 1 ወይም 2 ላይ የተገለፁትን የመረጠች ጡት የማጥባት እቅድ (intention) የላትም ። በተራ ቁጥር 3 ወይም 4 ወይም 5 የመረጠች እናት ጡት የማጥባት እቅድ (intention) አላት ።

ተ.ቁ	ጥያቄ	ኮድ/መለያ/
401	ጡት የማጥባት እቅድ	1.አዎ 2.አይደለም
402	ጡት ለማጥባት እቅድ ከሌለሽ ምክንያቶችሽ ምንድን ናቸው?	
	በጡጦ መመገብ ስለሚመች	1.አዎ 2.አይደለም
	ወደ ሥራ ወይም ትምርት ስለምመለስ	1.አዎ 2.አይደለም
	ባለቤቴ ስለማይደግፍ	1.አዎ 2.አይደለም
	ውበቴን ለመጠበቅ	1.አዎ 2.አይደለም
	ሌሎች /ይዘርዘር/……	1.አዎ 2.አይደለም

አመሰግናለው።

የተቆጣጣራው ስም ……

ፊርማ ……

ቀን ……