

**Exclusive Breast Feeding Intention Among Pregnant Women
Seeking ANC Services In Governmental Health Institutions:
The Case Of Dire Dawa Town.**

Using The Theory Of Planned Behavior

BY: Temesgen Geleta (BSC)

**A Thesis Submitted To School Of Graduate Studies, Jimma
University Department Of Health Education And Behavioral
Science; In Partial Fulfillment Of The Requirement For
Master Of Public Health In Health Education And Promotion.**

May, 2011

JIMMA

Exclusive Breast Feeding Intention Among Pregnant Women Seeking ANC Services In Governmental Health Institutions: The Case Of Dire Dawa Town. Using The Theory Of Planned Behavior Model.

By: Temesgen Geleta (BSC)

Advisors:

Tsion Assefa (Bsc, Mph)

Eshetu Girma (Bsc, Mph)

Lakew Abebe (Bsc, Mph)

May, 2011

JIMMA, ETHIOPIA

Abstract

Back ground: World Health Organization (WHO) and United Nations Children's Fund (UNICEF) recommend that all mothers should breastfeed their children exclusively for the first 6 months; however a report in Ethiopia revealed that only one in three Ethiopian children age 4-5 months is exclusively breastfed. This study seeks to identify some of the modifiable factors which affects pregnant women's prenatal intention to exclusively breast feed their child by using the theory of planned behavior mode components.

Objectives: To assess exclusive breast feeding intention among pregnant women who were seeking ANC service and factors affecting their decision for exclusive breasts feeding.

Methods: cross-sectional study design was utilized on pregnant women who were seeking ANC services in governmental health institutions in Dire - Dawa town from February 13 – march 13/2010. Face to face interview between trained nurse and the client were employed to collect data.

Result: majority (78.3%) of pregnant women had behavioral intention to exclusively breast feeding. The three components of TPB explained 28.7% of the variance in mothers' behavioral intentions to exclusively breast feeding. Pregnant women's Attitude was found to be the most significantly important factor in the prediction (22.2%). subjective norm and perceived behavioral control explained only 4.5% and 2.5% of the variance respectively. Past breast feeding experience and smoking habit were Factors external to the components of TPB made significant contributions to the prediction of mother's behavioral intentions.

Conclusion: Attitude, subjective norm and perceived behavioral control did prove to be predictors of intention in this sample of pregnant women. Which indicate that the possible utility of theory of planned behavioral to promote exclusive breast feeding behavior.

ACKNOWLEDGMENT

First and foremost I would like thank Almighty GOD for his protection and blessings. My acknowledgement also goes to my parents for their love and support.

My heartfelt gratitude and thanks goes to my advisors Tsion Assefa (Bsc, Mph), Eshetu Girma (Bsc, Mph) and Lakew Abebe (Bsc, Mph) for their constructive comments and suggestions throughout this thesis work.

I wish also to acknowledge my friends for their motivation and support.

Table of Content

Acknowledgment	II
Table Of Content	IV
List Of Figures	V
Abbreviations.....	VII
Chapter1. Background	
1.1 Introduction.....	1
1.2 Statement Of The Problem.....	3
Chapter 2. Literature Review	5
2.5 Prenatal Breastfeeding Intention And Breast Feeding Duration.....	8
2.7 Conceptual Frame Work.	10
2.8 Significance Of The Study.....	11
Chapter 3: Objective Of The Study.....	12
Chapter 4. Method And Material	13
4.1 Study Area And Period	13
4.2. Study Design.....	13
4.3. Population	13
4.3.1. Source Population	13
4.3.2. Study Population.....	13
4.3.3. <i>Inclusion And Exclusion Criteria</i>	14
4.4. Sample Size And Sampling Procedures.....	14
4.4.1. Sample Size Calculation	14
4.4.2. Sampling Procedures.	14
4.5. Data Collection Procedure	15
4.5.1. Questionnaire	15
4.5.2. Data Collection.	16
4.6. Variables Of The Study	16
4.6.1. Dependent Variable	16
4.6.2. Independent Variables	16
Proximal Variables.....	16
Intermediate Variables	16
Distal Variables.....	16
4.7 Operational Definitions.....	17
4.8. Data Quality Control.....	19
4.9. Data Processing And Analysis.....	20
4.10. Ethical Consideration.....	20
4.11. Dissemination Of Results	20
Chapter 5 Result.....	21
Chapter 6 Discussion.....	39
Chapter 7 conclusion and recommendation.....	44
Chapter 8 References	67

List of tables

Table1. Socio demographic characteristics of pregnant women who are seeking ANC in governmental health institution in dire dawa town,2002.	21
Table 2. Knowledge item score of pregnant women following ANC in governmental health institution in dire dawa town,2002.....	22
Table 3 attitude item score of pregnant women following ANC in governmental health institution in dire dawa town,2002.....	25
Table 4 Behavioral belief of pregnant women who are seeking ANC at governmental health institution in dire dawa town, 2002.....	25
Table 5 response of pregnant women on items assessing evaluation of the outcome, Dire Dawa, 2002.....	28
Table 6 Correlation coefficient between direct pregnant women attitude and belief of exclusive breast feeding seeking ANC in governmental health institution in Dire Dawa town, 2002.....	29
Table 7 Opinion of pregnant women, who seeking ANC in governmental health institution in Dire Dawa, on statement assessing referent belief.....	30
Table 8 opinions of the pregnant women on the statement which assess motivation to comply regarding exclusive breast feeding, Dire Dawa, 2002.....	31
Table 9 Correlation coefficient between pregnant women subjective norm and normative belief about exclusive breast feeding, Dire Dawa, 2002.....	32
Table 10 response of pregnant women to items assessing control belief to exclusive breast feeding, Dire Dawa 2002.....	32
Table11. Pregnant women response to statement which assess power of control to exclusive breast feeding, Dire Dawa 2002.....	33
Table 12 opinion of pregnant women, who are attending ANC in governmental health institution in dire dawa, on statement which assess their intention for exclusive breast feeding, 2002.....	34
Table 13 Independent predictors of exclusive breast feeding intention among pregnant women seeking ANC in governmental health institution in Dire Dawa town, 2002.....	35
Table 14correlation coefficient between intention and TPB constructs of pregnant women who is seeking ANC in governmental health institution dire dawa, 2002.....	37
Table 15 linear regression of intention on TPB predictor variables: final model.....	38
Table 16 linear regression of intention on TPB predictor variables, smoking and past feeding experience.....	39.

List of figures

Figure 1 The Conceptual Framework Used For This Study	10.
Figure 2 Schematic Presentation Of The Sampling Procedures.....	14.
Figure3 Breast Feeding Knowledge Level Of Pregnant Women's In Dire Dawa,.....	23.

ABBREVIATIONS

ANC	Antenatal Care.
B.att	Belief based attitude
B.PBC	Belief based perceived behavioral control
B.SN	Belief based subjective norm
EBF	Exclusive Breast Feeding.
PBC	Perceived behavioral control
TPB	Theory Of Planned Behavior.
TRA	Theory Of Reasoned Action.
UNICEF	United Nation's International Children Education Fund.
WHA	World Health Assembly.
WHO	World Health Organization.

CHAPTER 1. INTRODUCTION

1.1. Background

Breastfeeding provides all essential nutrients for the first 6 months of life. Breastfeeding plays an important role in ensuring food security for a large proportion of babies in the world, where food security is defined as having enough food to maintain a healthy and productive life today and in the future [1].

Breast milk contains the long chain polyunsaturated fatty acids which are especially important for the development of the brain and the nervous system. It is also associated with a decreased risk for many early-life diseases [2].

Breast-feeding is critical for sustaining the health and well-being of new born and infants. Infants who are properly breast-fed grow better and experience less sickness and fewer deaths than do infants who are not breast-fed. It saves infants' lives, provides the best nutrition for infants and young children, and also it benefits mothers' health. Breastfeeding provides the best health benefits when started immediately after an infant's birth, continued exclusively (without introducing other foods, liquids, or water) for the first six months of life, and then continued along with suitable complementary feeding through age two or longer[2,3].

The introduction of complimentary foods before the age of 4 months increase the risk of child obesity, cardiovascular diseases, food allergies, and insulin-dependent diabetes in children who may be susceptible [4,5].

The duration of exclusive breast-feeding also has association with cognitive and motor development, intelligence scores in preschoolers (small gestational age) and academic achievement in late childhood and adolescence [6, 7].

In addition to the health benefits, breastfeeding also provides significant social and economic benefits to both the individuals involved and the nation as a whole. Such benefits include reduced health care costs and reduced employee absenteeism for care attributable to child illness, increased time available to the parent for the child's siblings

and family responsibilities because the infant is healthy, and money saved by not having to buy formula for the child [8].

Therefore the need to promote and support breastfeeding is Unquestionable for the health and development of infants. It represents a public health priority everywhere, as confirmed by the Global Strategy on Infant and Young Child Feeding, approved by the 55th World Health Assembly (WHA) in 2003 [9].

So that not to initiate breast feeding and early discontinuation of breastfeeding will have an important adverse effects on health, social and economic implications for women, children, the community, and results in greater expenditure on national health care provision.

This study tried to assess modifiable factors (both internal and external) which affect pregnant women's intention for exclusively breast feeding using theory of planned behavior components.

1.2 Statement of the problem

World Health Organization (WHO) and United Nations Children's Fund (UNICEF) recommend that all mothers should breastfeed their children exclusively for the first 6 months and thereafter they should continue to breastfeed for as long as the mother and child wish, and both appropriate and sufficient weaning food should be added after six months of life [10, 11].

Under nutrition is associated with 50% of all child hood deaths and it also retards child growth and development. Although lack of family resources is an important factor for under nutrition, in many families under nutrition is caused by inappropriate feeding practice that can be improved without increasing the costs substantially. Improving breast feeding practice can reduce the number of child death by more than 10% [12].

The Healthy People 2010 goal is that 75% of women initiate breastfeeding, 50% breastfeed until 6 months postpartum, and 25% continue breastfeeding until at least one year postpartum [13].

WHO estimates that worldwide only 35% of children between birth and their fifth month are breastfed exclusively. Yet infant breastfeeding has been identified as one of the major intervention areas in order to achieve the Millennium Development Goal of reduction of child mortality globally [14, 15].

Within Africa, the greatest declines in breastfeeding duration have occurred in areas where food-distribution programs are most Extensive [16]. Child spacing has also been negatively affected by the introduction of breast milk substitutes. Lactation amenorrhea, as well as taboos that prohibit intercourse during lactation, had traditionally been used for birth control. The decline in exclusive breastfeeding has had a serious and detrimental effect on fertility patterns [17].

Despite its demonstrated benefits, EBF prevalence and duration in many African countries including Ethiopia are lower than the international recommendation of exclusive breastfeeding for the first six months of life. Based on several studies done in

Ethiopia, breastfeeding is nearly universal but the proportion of exclusively breastfed children up to 6 months is less than the optimal recommendations [17-19].

A report in Ethiopia revealed that only one in three Ethiopian children age 4-5 months is exclusively breastfed. And just over two-thirds of children less than 2 months of age are exclusively breastfed. At 6-8 months of age, only 14 percent of children continue to be exclusively breastfed, and the proportion of exclusively breastfed children drops to 1 in 20 by age 9-11 months, and continues to decline thereafter [20].

It is also reported that the median duration of breastfeeding in Ethiopia is 25.8 months, while the mean duration is 25.5 months. Rural children are breastfed for a slightly longer duration than urban children and highly educated mothers breastfeed their children for a shorter duration than mothers with little or no education [20].

The low prevalence of EBF in most developing countries including Ethiopia is attributed to various maternal and child factors such as place of residence, sex and age of the child, mother working outside home, maternal age and educational level, access to mass media and economical status by several researchers [19].

In order to alleviate these breastfeeding related problems different programs and interventions aim to promote breastfeeding or overcome breastfeeding difficulties are being implemented. Among the interventions shown to be beneficial for prolonging breastfeeding duration are, breastfeeding support by skilled peers and professionals is effective when provided to women in a proactive way. A combination of information, support and guidance, as well as unrestricted mother-baby contact and unrestricted feeding are other effective interventions [21-25].

Since there are many influences on a woman's decision to breastfeed, including social, cultural, economic and psychological factors. As a health behavior, the decision is therefore guided not only by women's own underlying attitudes, skills, abilities and beliefs, but also by other external factors which exist within the broader social environment. This study is intending to assess modifiable factors (both internal and external) which affect pregnant women's intention for exclusively breast feeding so that intervention for promoting exclusive breast feeding could be guided by the findings of this study.

CHAPTER 2. LITERATURE REVIEW

Many studies show that Major categories of factors associated with duration of breast feeding are: maternal factors; hospital practices and obstetric factors; and other potential influences [26].

Among maternal Factors which are consistently reported as being positively associated with duration of breastfeeding are an intention to breastfeed; earlier timing of the decision to breastfeed; increasing maternal age; higher maternal education ; not smoking ,or smoking less ; and being married or not being single. There are however, certain groups for whom the evidence is consistent, regardless of culture and ethnicity, and for whom the risk of early breastfeeding cessation (or non-initiation of breastfeeding) is higher, such as younger women who have less education and who are single[26, 27].

Very strong desire to breastfeed and being older are among factors that are positively associated with breast feeding at six months. Like wise having no intention to breastfeed for six months or more, cigarette smoking pre-pregnancy and maternal obesity are among factors negatively associated with feeding any breast milk at six months [28].

Community policies and societal conditions that influence breastfeeding duration include length of maternity leave and workplace flexibility and appropriate conditions for the expression of breast milk [29].

Sources of support for mothers that are related to increased duration include partner's support having other members of mother's social network who breastfed, breastfeeding information from professionals during antenatal care, and peer support for low income women [30].

From the above paragraphs we can see some of The modifiable factors (both internal and external) that can affect pregnant women to breast feed which include: intended length of breastfeeding, lack of confidence, experience of difficulties (especially with pain and attachment) in the first few weeks, factors affecting the way health professionals deliver

services (e.g. their knowledge of and attitude to breastfeeding), and maternal return to work.

2.1 Decision to breastfeeding

There are many influences on a woman's decision to breastfeed, including social, cultural, economic and psychological factors. As health behavior, the decision is therefore guided not only by women's own underlying attitudes, skills, abilities and beliefs, but also by perceptions of what other people think. Many people harbor strong Opinions regarding breastfeeding. Such opinions include evaluations of whether breastfeeding is good or bad for the mother and/or infant, and beliefs about the breastfeeding process, such as for how long women should breastfeed, whether they should feed in public, etc. [31].

Although a large proportion of women have decided on their preferred feeding method well before the last 6 weeks of pregnancy, and after 24 weeks of pregnancy, for some the feeding decision is not made until later in pregnancy, with as many as 14% suggesting that they deferred the decision until late pregnancy/after delivery [32].

2.2 Self-efficacy and breast feeding.

A number of studies have found maternal breast-feeding confidence to be associated with breast-feeding outcomes. Antenatal maternal confidence is among as among the most significant variables influencing breast-feeding adherence and duration. [33]

Another study also found that 27% of mothers with low antenatal maternal confidence discontinued breast-feeding within the first week after birth, compared to 5% of highly confident mothers. [34] And also study conducted to examine five psychosocial variables related to successful breast-feeding outcomes. Of these five variables, only two, social health and maternal confidence were significantly associated with positive breast-feeding outcomes, including initiation and duration [35].

A study conducted on self efficacy in1999 shows that self efficacy in the immediate postpartum period is significantly related to infant feeding outcomes. In particular, the

higher the breast feeding self efficacy scale(BSES) score, the more likely the mother to breast-feed, and doing so exclusively; whereas the lower the mother's BSES score, the more likely she is to be formula feeding. [36]

2.3 Social norms and breast feeding.

The influence of subjective norms on women's decisions may be different for feeding initiation and continuation, Where a woman has not previously had children, subjective norms may be important, as she may be more likely to seek or consider others' opinions in making her initial choice, and may lack confidence in her decision to continue breastfeeding, in comparison with women who have already experienced breast- or bottle-feeding. One study suggested that subjective norms are more important for primiparous than multiparous mothers. [37]

Subjective norms may become more salient when people have personal experience of the target behavior. Some women may not be aware of others' Opinions about infant feeding until faced with the choice, undertaking the behavior and experiencing the reactions of others, or actively seeking opinions from different sources. [38]

Concerning degree of influence which social referents have on the woman in forming her intentions to breast feeding found support for the relationship between subjective norms regarding infant feeding choice and prenatal infant feeding intentions. Further, there is evidence to suggest that for women who initiate breastfeeding, the influence of social referents is stronger than for women who choose bottle feeding [38,39].

2.4 Attitude toward breast feeding.

Attitudes toward infant feeding methods are dominant predictors of infant feeding intentions. In general, women have more positive attitudes toward the feeding method of their choice. There is now a body of research attesting to the idea that a mother's attitude is an even better predictor of breastfeeding initiation than her socioeconomic status.

Other studies indicate that the attitudes of social network members, including partners, also play a critical role in a woman's infant feeding choice [40, 41,42].

2.5 Prenatal Breastfeeding Intention and Breast feeding Duration

A study revealed that the shorter the period the woman intended to breastfeed, the higher the risk for earlier breastfeeding termination. Intended duration remained a risk factor even as the actual duration of breastfeeding increased. Because women who intend not to breastfeed or to breastfeed for a short time are less likely to initiate or continue breastfeeding. Which illustrate the need to continue efforts to understand what influence prenatal breastfeeding intentions, because this is an important predictor of a mother's behavior after delivery [43].

However, breast feeding intention alone cannot predict the actual behavior using TPB because in describing the theory of planned behavior, Ajzen (1988) suggested that internal and external events can alter the intention-behavior relationship. For example, early breastfeeding problems such as breast complaints, insufficient milk, maternal fatigue, and infant difficulty with feeding may disrupt the breastfeeding process and interfere with breastfeeding goals and these experiences may reflect the actual control a woman has over breastfeeding behavior, and as such, may act as **moderators** of the intention-behavior relationship [44-49].

2.6 Rationale to use TPB for this study.

In early breastfeeding studies, variables used to predict breastfeeding initiation and duration were clinically based without theoretical underpinning. In the last 20 years, the theory of reasoned action (TRA) and its elaboration in the theory of planned behavior (TPB) have been used as theoretical frameworks in breastfeeding research. [50]

According to the TPB, three types of beliefs guide human volitional behavior: (a) the outcomes of performing the behavior (behavioral beliefs), (b) the expectations of significant other people in regard to the behavior (normative or referent beliefs or perceived behavioral expectations), and (c) the presence of factors that would help or

hinder implementing the behavior (control beliefs). In addition, behavioral beliefs lead to a favorable or unfavorable attitude toward the behavior, normative beliefs underlie a generalized perception of social pressure (subjective norm), and control beliefs help influence overall perceived control.

Attitude, subjective norm, and perceived control are the most direct determinants of intention (Ajzen, 2001b). Intention is the proximal determinant of behavior, but the strength of the relationship is affected by the amount of volitional control a person has over the behavior and the lapsed time between the measurement of intention and behavior. Perceived control may explain variation in behavior as well as intention [51].

The TPB has proved useful in breastfeeding research. Although investigators have differed somewhat in their precise operational definitions and measurement of TPB variables, they have reported significant associations between predictor variables in the theoretical model and breastfeeding intention, and between intention and breast feeding duration [52, 53].

2.7 Conceptual frame work.

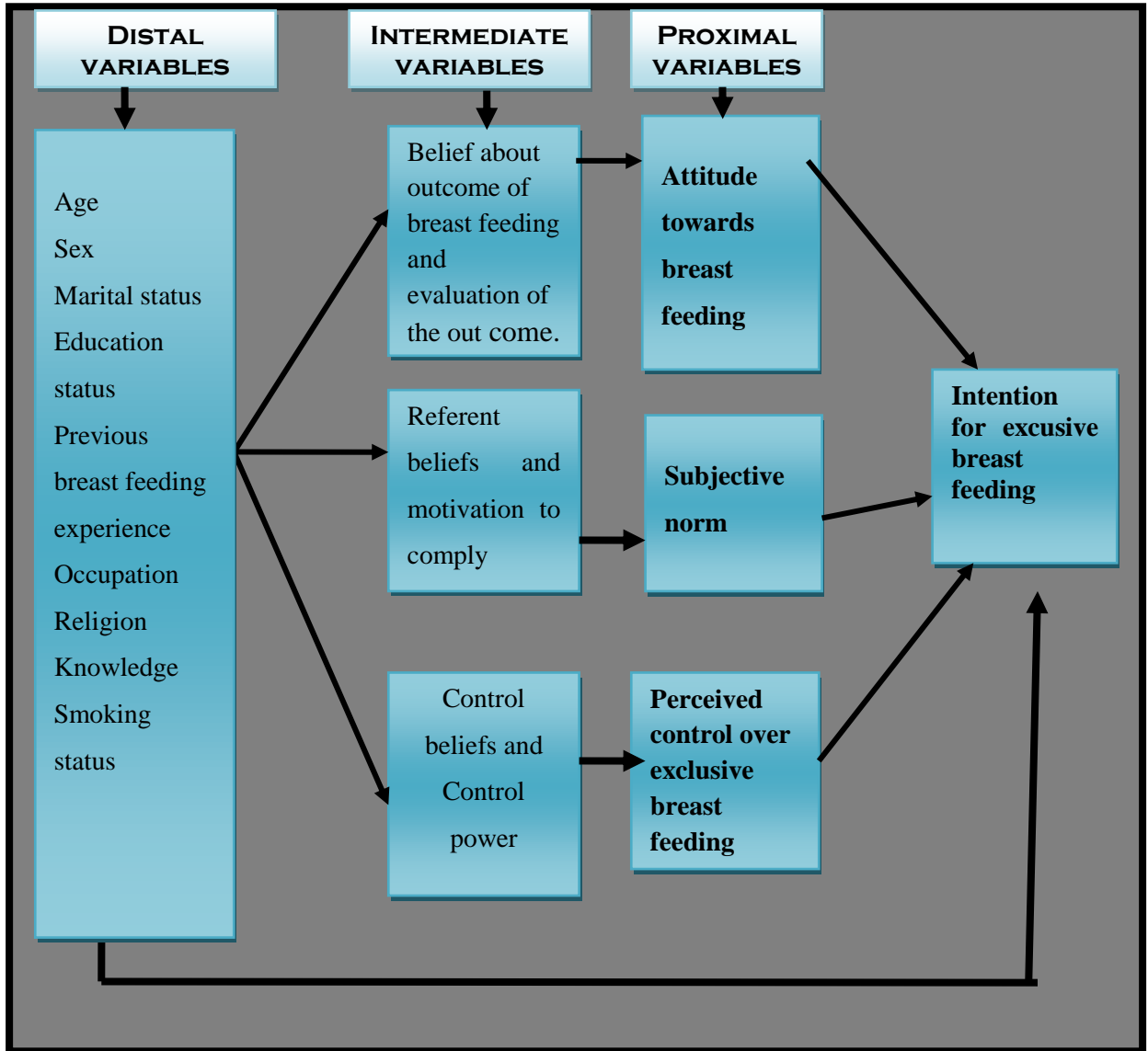


Fig1 conceptual framework of this study, based on Ajzen TPB model.

2.8 Significance of the study

The promotion and support of breastfeeding is a global priority and an important child survival intervention and the World Health Organization advocates exclusive breastfeeding for six months.

Since most behavior change is a dynamic process rather than a static all-or-none occurrence, especially for continuous behaviors Such as breastfeeding over time. Thus, different factors may influence behavioral initiation and behavioral maintenance.

Although some studies conducted on the individual factors associated with breastfeeding are important in identifying mothers not likely to breastfeed or to breastfeed for long, understanding how these factors work together is necessary when we attempt to change breastfeeding behavior. This study will assess this issue by using a behavioral theory framework in our country.

More over health educators and healthcare providers need to predict variables that are amenable to change for enhancing exclusive breastfeeding rates. So that testing of theoretically proposed relationships can advance knowledge and, ultimately, lead to theory-based interventions to promote this complex health promoting behavior.

Previously a theory that has received some attention in the breastfeeding literature was the theory of reasoned action (TRA) which asserts that the most important determinant of one's behavior is one's behavioral intention. But since the TRA is based on an assumption of complete volitional control over behavior, which render it less adequate when attempting to predict behavior that is some-what nonvolitional, such as breastfeeding. Breastfeeding is not completely under volitional control because various infant and maternal factors can alter breastfeeding initiation and continuation.

This study tried to assess level of intention of pregnant women intention using theory of planned behaviors action and the result of this study could help uncover factors affecting pregnant women intention so that intervention to promote this healthy behaviors could be guided by the result of this study.

CHAPTER 3: OBJECTIVE OF THE STUDY

3.1 General objective

To assess exclusive breast feeding intention among pregnant women who were seeking ANC service in governmental health institutions in Dire Dawa town.

3.2 specific objectives

1. To determine level of pregnant women's intention for exclusive breast feeding.
2. To determine to what extent do constructs of the Theory of Planned Behavior explain pregnant women's intention for exclusive breast feeding.
3. To determine factors, external to the TPB constructs, which influence pregnant women's intention for exclusive breast feeding.

CHAPTER 4. METHOD AND MATERIAL

4.1 Study area and period

The study was conducted from February 13 to March 13, 2010 (for one month) in Dire Dawa town. Dire Dawa administration council is located in the eastern part of the country, 525 kilometers away from Addis Ababa. It is bordered by Oromiya region in the north, north east and northwest, and Somali region from south, south east and south west. It has a total land area of 834sq kilometer. The total population of the region in 2007, according to national census, is 342,827. More than half of the population lives in urban and total population of females with in the age group 15-45 is 90,726.

DIRE DAWA is one of the two city administrations in Ethiopia next to Addis Ababa. Dire Dawa is divided in to nine urban administrative kebeles (the smallest administrative unit) and twenty peasant associations. Oromo, Somali, Amhara are the dominant ethnic groups that live in the administrative council. Muslim, orthodox and protestant are the dominant religions of the administrative council.

In Dire Dawa town there are eight health centers and one referral hospital which are owned by the government.

4.2. Study design

This study was institution based descriptive cross sectional study design which utilizes quantitative method.

4.3. Population

4.3.1. Source population

Pregnant women who were seeking ANC service, during the study period, in governmental health institutions in Dire Dawa.

4.3.2. Study population

The study population was pregnant women, attending ANC in governmental health institutions in Dire Dawa during the study period, which were subsequently selected from the source population & included in this study.

4.3.3. Inclusion and exclusion criteria

Inclusion criteria

- Pregnant women, in Dire Dawa town, following their ANC in governmental health facilities.

Exclusion criteria

- Pregnant women who were seriously ill at the time of data collection.
- HIV positive pregnant women who were attending ANC.

4.4. Sample size and Sampling procedures

4.4.1. Sample size calculation

The sample size was determined using a formula for estimating a single population proportion assuming a confidence level of 95%, and 10 % allowance for non- response.

$$n = \frac{(Z_{\alpha/2})^2 P(1 - P)}{d^2}$$

Where: n = the required sample size,

Z = a standard score corresponding to 95% confidence level;

P = proportion of pregnant women having intention for exclusive breast feeding for the first six month which was 50% since the proportion of pregnant women's intention for exclusive breast feeding in similar group of population were not known.

d = margin of error of 5%

Thus, the required sample size calculated would be **422**.

4.4.2. Sampling procedures.

After obtaining the total number of all pregnant women who had attended ANC in the past three months in each health institutions, the proportion of pregnant women to be selected from each health institution was calculated. Finally, pregnant women who came to each health institutions for ANC was interviewed consecutively each day during the study period.

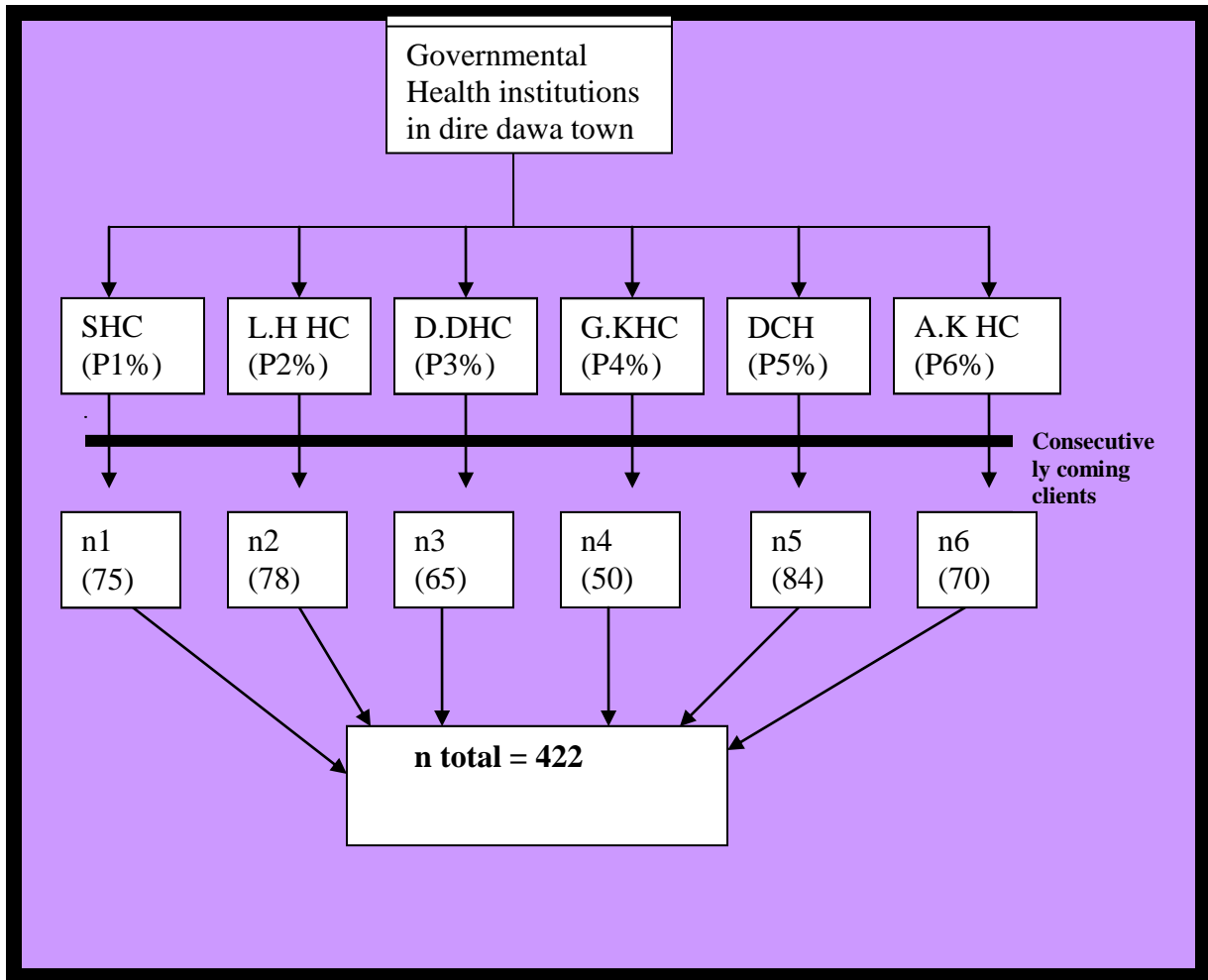


Fig 2 schematic presentation of sampling procedure used in this study,dire dawa town, 2010.

4.5. Data Collection procedure

4.5.1. Questionnaire

Based on the relevance of the existing questionnaires most of the question items in the tools were adopted from previous studies and adapted to the local situation. The construction of a new question for this study was according to the guidelines for the construction of a standard theory of planned behavior questionnaire (Ajzen, 1985).

The face and content validity of the questionnaire was assessed by experts in health professions and health educators so that feedbacks from the revision were incorporated

into the questionnaire for the data collection exercise. The Cronbach Coefficient Alpha for each measure was calculated to assess the reliability.

4.5.2. Data collection.

The data was collected by 10 trained nursing professionals & supervised by the principal investigator & 5 trained Public Health Officers.

4.6. Variables of the study

4.6.1. Dependent variable

Behavioral intention for exclusive breast feeding.

4.6.2. Independent variables

Proximal variables

1. Overall attitude towards exclusive breast feeding.
2. Perceived social norms for exclusive breast feeding.
3. Perceived behavioral control for exclusive breast feeding.

Intermediate Variables

1. Behavioral belief
2. Outcome evaluation
3. Normative belief
4. Motivation to comply
5. Control beliefs
6. Power of control

Distal Variables

1. Socio-demographic characteristics like sex and age.
2. Previous feeding experience.
3. Breast feeding knowledge.

4.7 Operational definitions

Intention for exclusive breast feeding: refers to mother's judgment/thought, during their ANC visit, regarding their breast feeding for the coming six months. It was measured by asking pregnant women three items on a scale containing five options ranging from strongly agree(5) to strongly disagree(1). For convenience of analysis the mothers' intention was divided into two levels: no behavioral intention if the women's intention score was below mean and intended to breast feed her child for six months if intention score was above mean.

Behavioral beliefs (BB) or Beliefs about the outcome of exclusive breast feeding: mother's belief about potential outcomes of exclusive breastfeeding for infant and mother. Respondent was asked 8 questions to indicate their belief about exclusive breast feeding on a five point scale with responses "strongly agree" (= 5), "agree" (= 4), "not sure" (=3), "disagree" (=2) and "strongly disagree" (= 1).

Outcome evaluation (OE): respondents were asked to evaluate 8 salient outcomes of exclusive breast feeding on a five point scale with responses "strongly agree" (= 5), "agree" (= 4), "not sure" (=3), "disagree" (=2) and "strongly disagree" (= 1).

Subjective norms (SN): Subjective norm was the mother's general perception of the degree to which influential persons in her life endorse/support exclusive breastfeeding.

A subjective norm variable was measured on 5 point scales, with end points ranging from "strongly agree" (= 5), "agree" (= 4), "not sure" (=3), "disagree" (=2) and "strongly disagree" (= 1) on significant others' infant feeding expectations (father of the baby, respondent's mother or mother-in-law, close friends and health care provider).

Another set of four 5 point scales evaluate motivation to comply with significant others' expectations and contains end points "disagree" (= 1) to "strongly agree" (= 5).

The subjective norm score was derived by multiplying each expectation by the corresponding compliance items and summing the four products (possible range 1 to 5) and the higher score (above mean score) indicates greater perceived social pressure to breast feed.

Normative beliefs: Perception of whether specific significant other people think pregnant women should exclusively breastfeed or not. Was measured by four items which contains endpoints disagree” (1) to “strongly agree” (= 5).

Motivation to comply: was measured by asking the respondents to rate the extent to which they thought it was important for them to comply with the wishes of their four salient referents. Was measured by four items with end points disagree” (1)to “strongly agree” (= 5).

Control beliefs. was the perceptions of an individual on how much he has control over the behavior It was measured by five items with end points ranging strongly agree (5) to strongly disagree (1).

Power to control: Are perceptions of individual how confident a person feels about being able to perform or not perform the behavior. It was measured by five items with end points ranging strongly agree (5) to strongly disagree (1).

Perceived control: was defined as the degree of perceived ease or difficulty of breastfeeding and confidence in the ability to carry out breastfeeding despite difficulties. The perceived behavioral control was measured by five items derived by combining/multiplying/ each control beliefs with respective power to control scores and then summing the results. Finally mean score is calculated and those individuals above mean score is labeled as having high perceived behavioral control and those with below mean score is was leveled as having lower perceived behavioral control..

Exclusive breast feeding: giving only breast milk for the first six months without additional foods, except vitamins, minerals and medications.

Attitude to breast feeding: Affective/cognitive evaluation about the idea and act of exclusive breast feeding. Attitude towards the behavior was measured by eight items derived by combining/multiplying/ each behavioral beliefs items with respective

evaluation of the outcome and then summing the results. Finally mean score was calculated and those women above mean score was labeled as having positive attitude for breast feeding and those below were labeled as having negative attitude towards breast feeding.

Breast feeding knowledge: Breast feeding knowledge refers to knowledge (advantage or disadvantage of) about exclusive breast feeding for the baby and mother. 14 items were used to assess knowledge with possible answers true false and not sure for each items.

After reverse scoring the false items correctly answered items were summed and then those scores above 10 were leveled as having higher knowledge, between 7-10 were labeled as having moderate knowledge and those below 7 score were labeled as having low level of knowledge.

4.8. Data quality control

The questionnaire was developed based on the guidelines for the construction of a standard theory of planned behavior questionnaire (Ajzen 1985) and also adopting the items from different available instruments. Then the questionnaire was translated into Amharic language. The translated questionnaire was translated back in to English version by another translator.

Prior to actual data collection the questionnaire was pre-tested on 5% of the study subjects which were not included in the study. And the finding of the pre-test was incorporated into the final instrument for the study.

The data was collected by trained nurse professionals who can speak Amharic language. Trained supervisors were inspecting the collected data on daily bases. At the end of each data collection day the principal investigator checked the completeness of filled questionnaires.

4.9. Data processing and analysis

Editing and sorting of the questionnaires was done to determine completeness manually. Data entry and analysis was performed using SPSS version 16.0. The responses in the completed questionnaires was coded, collated and entered into a data entry template. Summary tables and charts was used for describing data. A relationship among the major variables was described by chi-square test and person correlation. Binomial logistic regression was used to examine the relationship between the proposed predictors and behavioral intention of pregnant women for exclusive breast feeding. Behavioral intention was predicted using hierarchical logistic regression (stepwise forward method). For each binomial regression odds ratios (with the accompanying p-values and confidence intervals) of the relationship was reported.

4.10. Ethical consideration

After the proposal was approved by ethical Review Committee of Public Health Faculty of Jimma University, Official letter was obtained from Research and publication Office of the University in order to be delivered to Dire Dawa Administration. And then Permission was obtained from Dire Dawa health beuro to access the health institutions. The letter of approval was presented to the medical director/head of the health institutions to secure his/her consent. Finally, informed oral consent was obtained from each participant before start of data collection.

4.11. Dissemination of results

After accomplishing the study, it was presented to the faculty of public health, Jimma University. Subsequently, attempts will be made to present it on scientific conferences and publish it on scientific journals. And copy of the whole research will be submitted to the Dere -Dewa health bureau.

CHAPTER 5. RESULTS

1. Socio demographic characteristics of the respondents.

From the primary 422 sample intended, 405 participants completed their questionnaire making response rate of 96%. The mean age of the respondents was 25.38yrs (SD±4.93). Of the total respondents 343 (84.4%) were married and 38(9.4%) are single. 143(35.3%), 148(36.5%) of the respondents were Amhara and Oromo by ethnicity respectively. Majority (57.0%) of the respondents were Muslim followed by orthodox (33.8%) religion followers. with regard to the occupation 120(29.6%) of the respondents were house wife and 42(10.4%) were daily laborer. 84(20.7%) of the respondents couldn't read and write; only 40(9.9%) attended higher education. From the total respondents 268(66.2%) of them have had past breast feeding experience and only 35(8.6%) of pregnant women had smoking habit.

Table1. Socio demographic characteristics of pregnant women who are seeking ANC in governmental health institution in dire dawa town, 2002.

s/no	variable	frequency	Percent (%)
Marital status	single	38	9.4
	married	342	84.4
	Divorced	21	5.1
	Widowed	4	1.0
religion	Orthodox	137	33.8
	Muslim	231	57.0
	Protestant	31	7.7
	Catholic	4	1.0
	others	2	0.5
ethnicity	Amhara	143	35.3
	Oromo	148	36.5
	Somali	41	10.1
	Tigre	9	2.2
	Gurage	14	3.5
	Others	50	12.3
occupation	House wife	120	29.6
	Government employee	80	19.8
	Non-governmental employee	65	16.0
	Business man	47	11.6
	Student	51	12.6
	Daily laborer	42	10.4

s/no	variable	frequency	Percent (%)
Educational status	Can't read and write	84	20.7
	Read and write	54	13.3
	1-6	81	20.0
	7-8	53	13.1
	9-10	54	13.3
	11-12	39	9.6
	Higher education	40	9.9
Age of the respondents	15 -19	29	7.2
	20 – 24	175	43.2
	25 – 29	108	26.7
	30 - 34	75	18.5
	35 - 39	15	3.7
	40 - 44	3	0.7

2. Knowledge of the participants about exclusive breast feeding.

14 items were used to assess knowledge of participants. All items had true, false and don't know choices and the mean knowledge score of the participants was 8.7(SD±1.8, 3-12).

Table 2. Knowledge item score of pregnant women following ANC in governmental health institution in dire dawa town,2002

s/no	Knowledge items		frequency	percent
1	Breast milk and bottled milk are the same**.	true	51	12.6
		false	347	85.7
		No sure	7	1.7
2	Babies who are bottle-fed have more illnesses than babies who are breastfed	true	332	82.0
		false	60	14.8
		No sure	11	2.7
3	Breastfeeding helps bonding between mother and baby	true	359	88.6
		false	31	7.7
		No sure	15	3.7
4	Breastfeeding prevents a woman from returning to her pre-pregnancy weight	true	160	39.5
		false	152	37.5
		No sure	92	22.7
5	If breastfeeding a woman cannot return to work.**	true	123	30.4
		false	243	60.0
		No sure	39	9.6
6	Breastfeeding is unhygienic and can spread germs.	true	106	26.2
		false	279	68.9
		No sure	20	4.9
7	Small breasts will not produce enough milk.**	true	99	24.4
		false	234	57.8
		No sure	72	17.8
8	Breastfeeding mums have less risk of breast And ovarian cancer.	true	138	34.1
		false	62	15.3
		No sure	203	50.1
9	Breastfeeding contains antibodies which protect a baby from infection and strengthen his/her immune system.	true	315	77.8
		false	64	15.8
		No sure	26	6.4
10	Most women make enough milk to breastfeed.	true	263	64.9
		false	97	24.0
		No sure	45	11.1
11	Women who breastfeed should avoid certain Foods	true	205	50.6
		false	176	43.5
		No sure	24	5.9
12	Exclusive breastfeeding is recommended for The first 6 months of a baby's life.	true	353	87.2
		false	47	11.6
		No sure	5	1.2
13	Breast milk provides all the nutrients a baby Needs.	true	347	85.7
		false	42	10.4
		No sure	14	3.5
14	Breastfed babies have better mental Development than babies fed on bottled milk.	true	347	85.7
		false	35	8.6
		No sure	22	5.4

**** Items containing this mark are reverse scored for analysis. Crombach alpha for these items is 0.73.**

The overall knowledge level of the participants was high (good).51(12.6%) of the respondents replied true for the statement which says breast milk and bottle milks are the same. Majority 160 (39.5%) of the respondents agreed with the statement that breast feeding prevents a women from returning to pre-pregnancy weight. however; 97(24%) respondents thought that small breasts do not produce enough milk for the baby.

The level knowledge of participants was classified in to three categories after summing the correctly answered items for each respondent. The study revealed that 321(79.3%) and 65(16%) of the participants were moderately knowledgeable and highly knowledgeable about breast feeding respectively and only 19(4.7%) of the respondents are not knowledgeable.

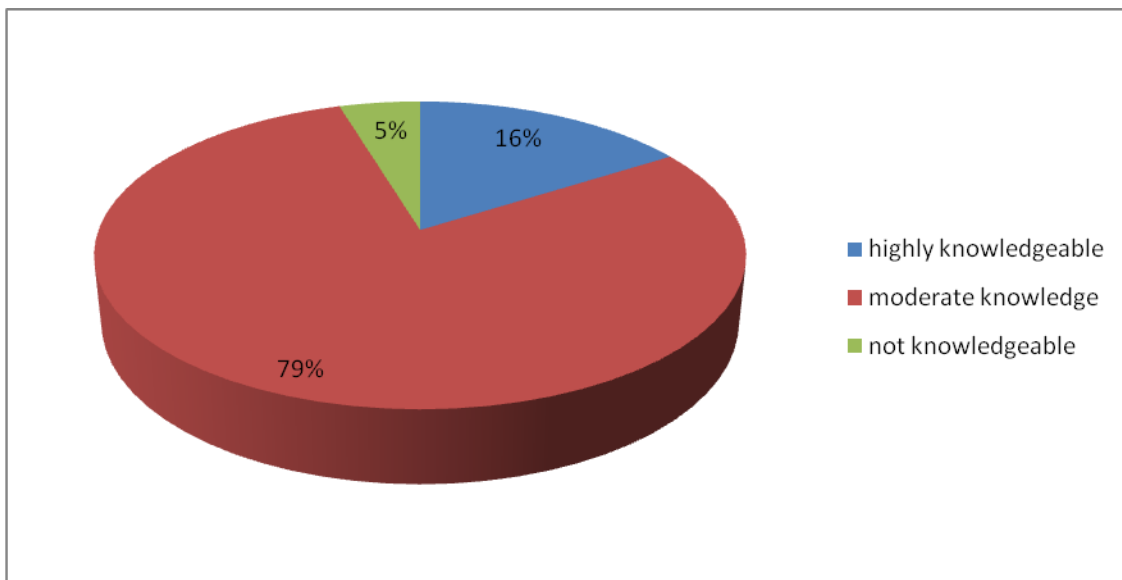


Fig.1 Description of breast feeding knowledge level of pregnant women seeking ANC in the governmental health institution in dire dawa, 2002.

3. Attitude towards exclusive breast feeding.

14 items were used to assess attitude, of which 6 items were reverse scored. Each items consists of 5 likert scale ranging from strongly agree (5) to strongly disagree (1).The score for each items summed together and divided by the total number of items.

Table 3 attitude item score of pregnant women following ANC in governmental health institution in dire dawa town, 2002.

	items		1	2	3	4	5
			s.disagree	disagree	neutral	agree	s.agree
1*	Formula-feeding is more convenient than breast-feeding.	frequency	187	137	14	31	36
		percent	46.2	33.8	3.5	7.7	8.9
2	Breast-feeding increases mother-infant bonding	frequency	20	22	10	112	241
		percent	4.9	5.4	2.5	27.7	59.5
3	Formula-fed babies are more likely to be overfed than are breast-fed babies.	frequency	40	58	99	83	125
		percent	9.9	14.3	24.4	20.5	30.9
4*	Breast milk is lacking in iron.	frequency	64	73	153	62	52
		percent	15.8	18.0	37.8	15.3	12.8
5*	Formula-feeding is the better choice if a mother plans to work outside the home.	frequency	53	64	47	152	89
		percent	13.1	15.8	11.6	37.5	22.0
6	Mothers who formula-feed miss one of The great joys of motherhood.	frequency	66	58	50	138	93
		percent	16.3	14.3	12.3	34.1	23.0
7*	Women should not breast-feed in Public places such as restaurant.	frequency	113	98	9	127	58
		percent	27.9	24.2	2.2	31.4	14.3
8	Babies fed breast milk are healthier Than babies who are fed formula.	frequency	38	28	9	115	215
		percent	9.4	6.9	2.2		53.1
9	Breast milk is the ideal food for babies.	frequency	22	11	10	98	264
		percent	5.4	2.7	2.5	24.2	65.2
10	Breast milk is more easily digested than Formula.	frequency	47	27	43	113	175
		percent	11.6	6.7	10.6	27.9	43.2
11*	Formula is as healthy for an infant as breast Milk.	frequency	140	125	27	61	52
		percent	34.6	30.9	6.7	15.1	12.8

12	Mother who occasionally drinks alcohol should not breast-feed her baby	frequency	65	87	88	71	94
		percent	16.0	21.5	21.7	17.5	23.2
13	Breast milk is less expensive than formula.	frequency	123	92	29	101	60
		percent	30.4	22.7	7.2	24.9	14.8
14*	Fathers feel left if a mother breast-feeds.	frequency	143	135	37	31	59
		percent	35.3	33.3	9.1	7.7	14.6

The overall attitude of the participants were positive towards exclusive breast feeding with mean score of 3.43(SD±0.44) which range from 1.86 to 4.43. This study also revealed that 209(51.6%) of the respondents do have positive attitude towards breast feeding and 196(48.4%) have negative attitude towards exclusive breast feeding.

3.1 behavioral beliefs

The study revealed that 306(75.5%) of pregnant women felt that their child would have health benefit if they exclusively breast fed their child. 240 (59.2%) of the respondents thought that exclusively breast feeding their child would not be convenient for them. Of the total respondents 113(27.9%) responded that exclusive breast feeding would take time and majority (37.8%) of pregnant women believed that exclusive breast feeding would help them prevent breast cancer.

Table4. *Behavioral belief of pregnant women who were seeking ANC at governmental health institution in dire dawa town, 2002*

S/N	items	agree		disagree		Not sure	
		Freq	percent	Freq	percent	Freq	percent
1	If I breast fed my child for six months or more, I feel that my child will have health benefit.	306	75.5	98.8	24.4	-	-
2	If I breast fed my child for six	122	30.12	264	65.1	20	4.9

	months or more, It will limit me from other social activities.						
3	If I breast fed my child for six months or more in public, I feel embarrassed.	122	30.2	270	66.7	13	3.2
4	If I breast fed my child for six months or more, it would be very convenient for me.	240	59.2	138	34	27	6.6
5	If I breast fed my child for six month or more, it will take much of my time.	113	27.9	282	69.6	10	2.4
6	If I breast feed my child for six months or more, it will increase mother –to- child bonding.	305	75.4	90	22.2	10	2.5
7	If I breast feed my child, I will save some money.	241	59.6	130	32.1	34	8.4
8	If I breast fed my child for six month or more, it will prevent me from breast cancer.	153	37.8	110	27.2	142	35.1
Crombach alpha 0.82							

3.2 evaluation of the out come

The study also revealed that having health benefit for their child by exclusively breast feeding were found important 357(88.2%).most (71.3%) of the pregnant women wouldn't worry if they were isolated from other social activities while breast feeding their child. For 331(81.8%) pregnant women it was very important to not feel embarrassed while feeding their baby in public places.

table 5 response of pregnant women on items assessing evaluation of the outcome, Dire Dawa,2002

S/N	items	agree		disagree		Not sure	
		Freq	percent	Freq	percent	Freq	percent
1	having health benefit to my child by exclusively breast feeding is very important to me	357	88.2	44	10.9	4	1.0
2	Being limited from other social activities while breast feeding is important to you.	90	22.1	289	71.3	26	6.4
3	feeling embarrassed while breast feeding in public is likely to occur	331	81.8	58	14.4	16	3.7
4	Being convenient for me to breast fed my child is important.	274	67.6	119	29.4	12	3.0
5	Taking much of my time while breast feeding is convenient to me	303	74.8	89	22.0	13	3.2
6	Increasing mother –to- child bonding is very important to me	155	38.3	229	56.6	21	5.2
7	Saving some money by breast feeding my child is necessary for me	218	53.8	47	11.7	140	34.6
8	being prevented from breast cancer through breast feeding is important	280	69.1	102	25.1	23	5.7

3.3 The composed (indirect) attitude: after multiplying each behavioral belief with respective evaluation of the outcome, attitude was computed by summing the products for each item. Belief based attitude score range from 2.38 to 22.5 with average score of 10.52(SD± 3.2).the correlation coefficient between direct measure and belief based measure of attitude was 0.28(P<0.00).

Table6. *Correlation coefficient between direct pregnant women attitude and belief of exclusive breast feeding seeking ANC in governmental health institution in Dire Dawa town, 2002.*

variables	S/N	1	2	3	4	5	6	7	8	9
Direct attitude	1	1								
Health benefit	2	.38*	1							
Limit social activities	3	-.12*	-.35	1						
Convenient	4	.09	.21	.15	1					
Take time	5	.13*	.001	.015	.074	1				
Increase bonding between mother and child	6	.29*	.25	.133	.264	.176	1			
Embarrassments in public places	7	.09	.058	.14*	.14*	.28*	.13*	1		
Save money	8	.066	.22*	-.10*	.10*	.087	.13*	.004	1	
Prevent breast cancer	9	.084	.33*	-.19*	.016	.12*	.11*	.078	.4*	1

The result also revealed that beliefs that exclusive breast feeding has health benefit to my child, take time and increase bonding between mother and the child had significant positive correlation with attitude towards exclusive breast feeding.

4. Subjective norm

Four items which contain 5 score on liker scale were used to assess over all perceived social pressure pregnant women had regarding exclusive breast feeding. The result revealed that the mean score of perceived social pressure were 3.4(SD±0.86) and for the ease of analysis those respondents above mean score were categorized as having high perceived social pressure to exclusive breast feeding 260(64.2%) and those below the mean score 145(35.8%) were labeled as having lower perceived pressure towards exclusive breast feeding.

4.1 Normative belief

Normative belief towards exclusive breast feeding was assessed with four items on likert scale consisting five scores. These items assess pregnant women’s belief regarding significant people who could influence (positively or negatively) them to exclusively breast feed their child.

The result of this study revealed that 309(76.3%) of pregnant women believed that their mother thought that she had to breast fed their child exclusively and 64(15.8%) pregnant women believed that their mother would not expect them to exclusively breast fed their child.

Table7 opinion of pregnant women, who were seeking ANC in governmental health institution in Dire Dawa, on statement assessing referent belief

S/N	items	agree		disagree		Not sure	
		Freq	percent	Freq	percent	Freq	Percent
1	Your mum think that you should breast feed your child for six months exclusively	309	76.3	64	15.8	32	7.9
2	Do you think your partner would approve if you breast fed your child for six months exclusively	331	81.7	58	14.4	16	4
3	Do you think your close friends would approve if you exclusively breast fed your child	284	70.1	83	20.5	38	9.4
4	Do you think Your nurse expects you to exclusively breast fed your child for the first six months.	350	87.1	44	10.9	8	2
Crombach alpha=0.704							

4.2 Motivation to comply

Items which assess motivation to comply were also grouped on a likert scale. Pregnant women's opinion were categorized in to three groups as agree, disagree and not sure. Respondent's opinion for each of the four statements described below.

The result of this study showed that 289(70.6%) pregnant women thought that what their mom's approval about breast feeding were important to them where as only 269(61.4%) of pregnant agreed with the statement that what their partner thought of exclusive breast feeding matters to them.

Table 8 *opinions of the pregnant women on the statement which assess motivation to comply regarding exclusive breast feeding, Dire Dawa, 2002.*

S/N	items	agree		disagree		Not sure	
		Freq	percent	Freq	percent	Freq	percent
1	Your mothers' approval of exclusive breast feeding for six months is important to you.	286	70.6	64	15.8	55	13.6
2	What your partner thinks of exclusive breast feeding do matter to you.	269	61.4	58	14.3	98	24.2
3	What your close friends think that you should exclusively breast feed is important to you.	312	77.0	61	15.1	32	7.9
4	Doing what your nurse think you would like to do is important to you.	353	87.2	29	7.1	22	5.4
Crombach alpha 0.84							

This study revealed that all normative belief items correlate positively with subjective norm and close friend's expectation having stronger relationship with subjective norm than other normative beliefs.

Table 9 Correlation coefficient between pregnant women subjective norm and normative belief about exclusive breast feeding.

variables	s/no	1	2	3	4	5
Direct subjective norm	1	1.000				
Mother's expectation	2	.396*	1.000			
partners expectation	3	.385*	.494	1.000		
close friends expectation	4	.425*	.474	.428	1.000	
nurses expectation	5	.278*	.335	.340	.356	1.000

P <0.01

5. Perceived behavioral control

Items on control beliefs were grouped on a Likert scale. For the ease of analysis strongly agree and agree are categorized in to agree and strongly disagree and disagree are classified into disagree and neutral is grouped not sure.

Over all mean score of the perceived behavioral control or pregnant women was 3.08(SD±0.62).

5.1 Control belief

Table 10 response of pregnant women to items assessing control belief to exclusive breast feeding, Dire Dawa 2002.

s/no	items	agree		disagree		Not sure	
		freq	percent	freq	percent	freq	percent
1	The change in the shape of my breast during breast feeding is unlikely	248	61.2	112	27.6	45	11.1
2	The physical problem encountered during breast feeding is unlikely	147	24.9	207	50.1	51	12.6
3	When you breast fed your child tiredness is unlikely	186	46.0	179	44.2	40	9.9
4	Support from others when you breast fed is unlikely	169	41.7	223	55.1	13	3.2
5	When I breast feed my child taking much time is unlikely	132	32.6	265	65.4	8	2.0
Crombach alpha=0.763							

This study revealed that 248(61.4%) of the respondents perceived that change in breast shape is unlikely during breast feeding their child. more than half of the respondents (55.1%) were likely to get support from others during their breast feeding. And majority 65.4% of the study subjects thought that breast feeding their child would take much of their time.

5.2 Power of control

This study revealed that 154 respondents (62.7%) would likely to continue breast feeding if physical problem occur. However 185(45.7%) respondents reported to less likely to continue breast feeding if it takes much of their time.

Table11. Pregnant women response to statement which assess power of control to exclusive breast feeding.

s/no	items	agree		disagree		Not sure	
		freq	per	freq	per	freq	per
1	When physical problems during breast feeding occur, I'm likely to continue to breast feed.	154	62.7	123	30.4	28	6.9
2	Change in the shape of breast during breast feeding makes it difficult to breast feed	147	36.3	207	51.1	51	12.6
3	Feeling of tiredness during breast feeding makes it difficult to continue breast feeding	186	45.0	179	44.2	40	9.9
4	Support from others when I breast feed makes it easier to continue breast feeding.	169	41.7	223	55.1	13	3.2
5	Despite taking my time I'm likely to continue breast feeding.	127	31.3	185	45.7	93	23
Crombach alpha=0.81							

5.3 Over all perceived behavioral control

Perceived behavioral control for exclusive breast feeding was computed from control belief and power to control breast feeding and the result revealed that 223(55.1%) of pregnant women had greater perceived behavioral control and (44.9%) weak perceived behavioral control.

6. Intention

Over all intention of pregnant women were assessed by three items on likert scale and each item contains five scores .The mean exclusive breast feeding intention of the participant is 3.86(SD±1.33) which range (1) from to 5.

Table 12 opinion of pregnant women, who were attending ANC in governmental health institution in dire dawa, on statement which assess their intention for exclusive breast feeding, 2002.

items	agree		disagree		Not sure	
	freq	percent	freq	percent	freq	percent
I expect mothers to breast feeding their child for six months	319	78.8	80	19.8	6	1.5
I want to breast feed my child for the first six months.	315	77.7	86	21.3	4	1.0
I intend to breast my child for the first six months.	302	74.6	84	20.7	19	4.7

319(78.8%) pregnant women expected that mothers should breast feed their child for the first six months after birth however 84(20.7%) pregnant women didn't intend to exclusively breast feed their child.

This study also revealed that 317(78.3%) of the respondents were intended and 88(21.7%) not intended to exclusively breast feeding their child during the first six months after birth.

There was statistical significant difference in behavioral intention between different occupations [$\chi^2 = 10.55, p = 0.043$].majority (33%) of the house wife,18.9%govenmental employee, 14.8% of NGO workers, 11.4% of business women , and 11.7% of students were intended to exclusive breast feed their child. There was also statistically significant difference in behavioral intention between past breast feeding experience[$\chi^2 = 20.47, p = 0.00$].60.0% of women with past feeding experience and 39.4% of without past feeding

experience intended to exclusively breast feed their child. Result also revealed that there is statistically significant difference in behavioral intention smoking habit [$\chi^2 = 3.89$, $P=0.048$].89.9% of non-smokers and 10.1% of smokers have intended for exclusive breast feeding.

This study also revealed that there was statistically significant difference between perceived behavioral control groups [$\chi^2 = 8.202$, $p =0.004$].65.6% of pregnant women with greater perceived behavioral control and 34.4% of pregnant women with less perceived behavioral control have intention for exclusive breast feeding.

Statistically significant difference was revealed between attitude level [$\chi^2 = 6.51$, $p =0.011$], subjective norm [$\chi^2 = 44.33$, $p =0.00$] and intention. Where majority (72.6%) of those with high perceived social pressure and (51.7%) those pregnant women with positive attitude had intended to exclusive breast feeding.

6.1 Independent predictors' of pregnant women intention.

After controlling the effect of other variables the following variables displayed in table 13 below were found to be associated with excusive breast feeding intention.

This study revealed that on multiple logistic regressions pregnant women with higher social pressure (subjective norm) were 10 times more likely to have higher intention for exclusively breast feeding than pregnant women with lower social pressure [**AOR=10.21,95%CI (4.69,22.21)**],pregnant women with higher perceived behavioral control were also 56% less likely to have higher intention for exclusive breast feeding[**AOR=0.44, 95%CI(0.21, 0.92)**].pregnant women with past breast feeding experience were 89% less likely to have higher intention for exclusive breast feeding[**AOR=0.11,95%CI(0.41,0.28)**] than those with no past breast feeding experience.

Table 13 independent predictors of exclusive breast feeding intention among pregnant women seeking ANC in governmental health institution in Dire Dawa town, 2002.

variables		Highly Intended		Adjusted OR(95%CI)
		Yes (%)	No (%)	
Direct subjective norm	Higher	230(88.5%)	30(11.5%)	10.21(4.69,22.21)**
	Lower	87(60%)	58(40.0%)	1
Perceived behavioral control	Higher	122(68.5%)	56(31.5%)	0.44(0.21,0.92)**
	Less control	195(85.9%)	32(14.1%)	1
Past breast feeding experience	Yes	192(71.6%)	76(28.4%)	0.11(0.41,0.28)**
	No	125(91.2%)	12(8.8%)	1
Occupation	House wife	14(11.7%)	106(88.3%)	5.13(1.44,18.37)**
	Government	60(75.0%)	20(25.0%)	2.95 (0.82,10.6)
	NGO	47(72.3%)	18(27.7%)	2.28(0.64,8.12)
	business	36(76.6%)	11(23.4%)	1.66(0.41,6.67)
	Student	37(72.5%)	14(27.5%)	0.96(0.27,3.33)
	Daily laborer	31(73.8%)	11(26.2%)	1

Results with this sign **shows significant association.

6.2 Prediction of behavioral intention.

Prediction of behavioral intention from TPB constructs.

Table 14 correlation coefficient between intention and TPB constructs of pregnant women who were seeking ANC in governmental health institution dire dawa, 2002.

variables	s/n	1	2	3	4	5	6	7
SN	1	1						
Att	2	.32**	1					
PBC	3	.35**	.05	1				
B.Att	4	.36**	.28**	.21**	1			
B.SN	5	.48**	.35**	.097	.33**	1		
B.PBC	6	.003	.10	.10	.22**	-.48**	1	
Int	7	.45**	.38**	.21**	.82**	.64**	.48**	1

** Coefficients with this mark are significant at 0.05.

The result revealed that intention and belief based attitude construct have strong positive association. Positive correlation was also observed between all TPB constructs and intention for exclusive breast feeding. However belief based PBC and belief based SN has negative correlation. Belief based PBC only positivity correlate with belief based attitude construct.

Table 15 linear regression of intention on TPB predictor variables: final model

variables	beta	Standard error	95% CI	Standa.beta	t	p
intercept	1.95	0.244	1.46 ,2.42			
Perceived control	-0.01	.003	-.016,.005	-.167	-3.75	0.00
Breast feeding attitude	0.014	.002	.009,.019	.277	5.93	0.00
Subjective norm	0.019	.002	.014,.024	.354	7.69	0.00

R=.287 ; F =14.1 ;df =1,401; p=.000

Step wise linear regression was performed; first attitude was introduced in to the model and 22.2% of the variance was explained by attitude. Subsequently subjective norm and perceived behavioral control were interred in the model where R. square change was 4.5% and 2.5% for subjective norm and perceived behavioral control respectively.

The overall prediction of intention from attitude, perceived behavioral control, and subjective norm was 28.7% of the total variability of intention.

When other significantly associated variables (past breast feeding experience and smoking habit) were added in to the model the predictive power of the model become 29.9%.

Table 16 linear regression of intention on TPB predictor variables, smoking and past feeding experience.

variables	beta	Standard error	95% CI	Stand.beta	t	p
intercept	2.5	0.507	1.5 ,3.5			
Perceived control	-0.01	.003	0.013, .023	-.332	7.15	0.000
Breast feed attitude	0.014	.002	.009, .019	.276	5.82	0.000
Subjective norm	0.019	.002	-.02, -.005	-.17	-3.79	0.000
Smoking habit	-0.42	.204	-.816, -.01	-0.087	-2.036	0.042
Past breast feeding	.24	.121	0.05, .481	0.086	2.00	0.045

R=.299 ; F =115 ;df =1,403; p=.000

Chapter 6

Discussion

Despite all the advantages of exclusive breast feeding, exclusive breast feeding rate in developing world like Ethiopia is low. This healthy behavior is determined by mother's decision/intention/ of how long they would breast feed their child and this decision/intention/in turn is affected by women's attitude towards the behavior, positive or negative social support from relevant others/social groups/ and the perceived ease/difficulty of breast feeding (according to Ajzen Theory of reasoned action model).

The result of this study revealed that the overall knowledge of the pregnant women was good, unlike the study done in Scotland. This could be due to the difference that the study in Scotland was done on high school girls' age 12-18 yrs who might not get adequate information on benefits of breast feeding like pregnant women who were seeking ANC services where they had a chance to get information on breast feeding. BUT there were still some miss conceptions regarding breast feeding such as breast milk and bottle milk are the same (12.6%), breast feeding will prevent the mother to return to pre-pregnant weight (39.5%), and small breasts could not make enough milk for the baby (24%). This could be attributed to the fact that these topics were not discussed to them during ANC visit and culturally constructed wrong beliefs.

This study also revealed that the overall attitude of the participants was positive (in favor of breast feeding) and this is consistent with a study done in Glasgow. This could be due the fact that these women's are urban residents and on ANC visit that had access to information on the benefit of breast feeding which might foster these pregnant women to develop beliefs that are in favor of breast feeding. Majority of the pregnant women belief that their child would have health benefit from breast feeding but around one third of the respondents' belief that it would be inconvenient for them to exclusively breast feed their child as it take much of their time.

The result also indicated there was significant weak positive association between direct and composed attitude measure, consistent with other study [40], which indicated that direct measure of attitude might not indicate the actual breast feeding attitude since it is

not based on underlying beliefs that constitute attitude. Attitude also showed to have significant positive association with beliefs that exclusive breast feeding had health benefit to my child, it take my time and increase bonding between mother and child. These beliefs were shown to have positive association because they were common beliefs which indicate the “naturalness” of breast feeding behavior.

More than half of the pregnant women (64%) had high social pressure to exclusively breast feed their child and 70.6% of women thought that their mom’s approval about exclusively breast feed their child were important and their partners approval partners (61.1%).but close friends expectation had strong correlation with subjective norm which is consistent with study [42].

Most pregnant women thought that change in shape of the breast was unlikely to occur and 62.2 would like to continue breast feeding if physical problem occur during breast feeding. This could be attributed to the fact that most women’s do have high attitude towards breast feeding and there was high social support to breast feeding which in turn help them decide to exclusively breast feed despite perceived difficulties.

78.3% of the respondents’ were intending to exclusively breast feeding their child. Intention was found to have statistical association with occupation of the mothers. Where being house wife is more likely to intend for exclusively breast feeding. And this is consistent with a study 43].this could be due to the fact that breast feeding behavior by nature takes time making the house wife pregnant women to perceive possible to exclusively breast feed their child.

It was revealed that statistically significant difference in behavioral intention with past breast feeding experience which was found to be consistent with study [44] .this association could be explained by having experience on certain behavior would make decision making process easy for them since they knew the benefits and perceived behavioral difficulties with breast feeding.

A pregnant woman with higher perceived behavioral control were less likely (AOR=0.44 times) to intend for exclusive breast feeding than less perceive behavioral control. This result indicated that having high perceived behavioral control might not necessary show behavioral intention for breast feeding so that efforts to increase pregnant women's perceived behavioral control over may not in improving their intention to breast feed their child.

All the theory of planned behavior constructs showed significant association with intent to breast feed, but attitudes exerted a larger effect on intention than did perceived behavioral control and subjective norm. This result showed that efforts to increase positive attitude towards breast feeding might be effective in enhancing breast feeding behavior. This finding is consistent with a study [51].

Attitude, subjective norm and perceived behavioral control did prove to be predictors of intention in this sample of pregnant women. Attitude explained 22.2 percent of the variance where as Subjective norm and perceived behavioral control increase the variance in intention by 4.5% and 2.5% respectively when interred following subjective norm subsequently. As in prior research, the findings indicated that maternal attitudes were a dominant predictor of infant feeding intentions; however, unlike previous results, subjective norm was proved to predict breast feeding intention. This might be explained theoretically as Ajzen (1988) stated that the theory assumes that relative importance of attitude toward behavior and subjective norm depends partially on the intention in question. Some intentions depend more heavily on attitudinal factors, others on social pressure. In this test the influence of the personal factors, attitudes and perceived behavioral control, appeared to outweigh social influences. The women of this sample held positive attitudes toward breastfeeding, and had high levels of perceived control and relatively low subjective norm scores.

The overall prediction of intention from attitude, perceived behavioral control, and subjective norm was 28.7% of the total variability of intention. Other significant variables would only explain 1.2% of variability when added on the model constructs. This model explained slightly stronger than previously done similar study [52] where the model only

explained 23% of the variability of intention these could be explained by the fact that in this study attitude, subjective norm and perceived behavioral control were the predictors of intention which might slightly increased the predictive power of the model where as in the previous study only attitude and perceived behavioral control predict intention in the final model as the predictive power of the model would be influenced by the number of variables in the final model. The result showed that the utility of theory of planned behavioral model for breast feeding.

Strength and limitation of the study

Strength

- Using behavioral model for predicting breast feeding intention.
- Multivariate analysis was used to control the possible confounding effect of covariates.
- Data is collected by diploma holder data collectors who are health professionals.
- Elicitation study was done to identify salient beliefs.

Limitation

- Descriptive study design
- Institution based study was conducted.
- Selection bias.

Chapter 7

CONCLUSION AND RECOMMENDATIONS

Conclusion

Based on the finding of this study the following conclusions are forwarded which might for the help future intervention on enhancing breast feeding duration.

- Despite the overall knowledge of pregnant women towards exclusive breast was high there is still some miss conceptions such as breast milk and bottle are the same, breast feeding will prevent mothers to return to pre-pregnant weight and small breasts could not make enough milk for the baby.
- These participants had positive/supportive attitude towards breast feeding and majority of them belief that their child would have health benefit from breast feeding however around 30% of belief that it would be inconvenient for them to exclusively breast feed their child as it take much of their time.
- More than half of the pregnant women had high social pressure to exclusive breast feeding and they thought that their mom's approval and their partners' approval were important.
- Most pregnant women thought that change in shape of the breast was unlikely to occur and would like to continue breast feeding if physical problem occur during breast feeding.
- Majority of the respondents' were intended to exclusively breast feeding their child. Where being house wife is more likely likely to intend for exclusively breast feeding.
- Those women with past breast feeding experience were less likely to had higher intention for exclusive breast feeding.
- Among the theory of planned behavior constructs attitude showed larger effect on intention than did perceived behavioral control and subjective norm.

Recommendation

- Ministry health and other non-governmental organization working to promote this healthy behavior should design interventions to enhance pregnant women attitude towards breast feeding.
- Intervention to increase breast feeding rate in urban setting should incorporate ways/strategies to involve pregnant women's mother and their partners in helping their decision making process. This could be achieved by:
 1. Preparing health education session for both pregnant women's mother and their partner's.
 2. Establishing breast feeding support group comprised of mothers and partners.
 3. Preparing and conducting radio spot programs targeting pregnant women's mothers and their partners.
 4. Adopting different interventions from countries with similar settings in to our country.
- Efforts to enhance mothers' positive attitude should address certain beliefs which have positive correlation with attitude. These are breast feeding has health benefit, increase bonding between mother and child. Incorporating these beliefs/advantages/ in detail during ANC could help pregnant women develop positive attitude towards this behavior.
- Pregnant women's intention was found to have inverse relationship with their perceived behavioral control so that organizations who are working towards promoting this behavior should focus on enhancing attitude and supportive social environment for the mothers.
- Dire dawa health office and other NGOs might use this model for planning and evaluation of breast feeding interventions since it explain around one third of variability in intention for breast feeding.

- For future researchers effort should be made on the following points:
- Predictive ability of behavioral intentions for exclusive breast feeding on actual behavior
- Predictive ability of this model for exclusive breast feeding intention in rural settings.

ANNEX

1. Face To Face Interview Questionnaire To Be Filled By A Nurse Who Is Working At The Governmental Health Institution In Dire Dawa.

February 2010

Dear respondents,

It is known that exclusive breast feeding has many advantages for the infant, mother, family and the nation as a whole. So that the need to promote this health behavior is unquestionable. In line with this a study was conducted to predict pregnant women's intention for exclusive breast feeding that can be used to design an appropriate intervention. You are chosen to participate in this study. The choice was done randomly using a lottery type of approach. In order to effectively attain the goal your responses are important information which will enable us to examine knowledge and attitudes of pregnant women's intention who are seeking ANC s and many factors which are involved in pregnant women's decision to exclusively breast feeding.

We are asking you for your cooperation. Now I will ask you some questions. Your name will not be mentioned on the questionnaire so that; no individual can access your responses .It is your full right to refuse any or all of the questions. Please listen to each question carefully and answer it to the best of your ability. There are no correct or incorrect responses; we are merely interested in your personal point of view.

Do you want to participate in the study?

1. Yes, I want to participate in the study

Signature _____ *Date* _____

2. No, I don't want to participate in the study.

THANK YOU VERY MUCH!

Date of completion _____

Name of health institution _____

Questionnaire

Part I

Socio demographic variables

Direction: Before finishing please provide some personal information about yourself. This information is <u>very important</u> . Please make sure you reply all the questions without skipping any. Just as with the rest of the questionnaire, your answers to these questions wascompletely confidential.		
S/No	Questions	Response
101	Age	_____
102	Sex	1. Male 2. Female
103	Marital status	1. Married 2. Unmarried 3. Divorced 4. Widowed 5. Separated
104	Religion	1. Muslims 2. Orthodox 3. Protestant 4. Catholic 5. Others, specify
105	Ethnicity.	1.. Amhara 2. Oromo 2. Somali 4. Tigre 5.Others, Specify_____
106	Income per month (in birr)	-----
107	Educational status	1. can't read and write 2. read and write 3. 1-6 grade 4. 6-8grades 5. 9-10 grade 6. 10-12 7. 12+ 8. higher education____
108	Have you ever breast feed a child before?	1.yes 2.no
109	occupation	1.house wife 2.governmental employee 3. NGO 4.businnes man

		5.student 6.
109	What type of feeding are you planning for the new born with in the first six months?	1.breast feeing 2.bottel feeding 3. Combind 4. Formula fed.
110	Did you experience any breast feeding problems when you breast fed your child?	1.yes 2.no
111	Did you smoke cigarette?	1. yes 2.no

Part two:

Knowledge items

Directions: for each statement below please reply whether the statement is true, false, or whether you are not sure of the reply.				
S/no	questions	true	false	Not sure
201	Breast milk and bottled milk are the same.	1	2	3
202	Babies who are bottle-fed have more illnesses than babies who are breastfed	1	2	3
203	Breastfeeding helps bonding between mother and baby	1	2	3
204	Breastfeeding prevents a woman from returning to her pre-pregnancy weight	1	2	3
205	If breastfeeding a woman cannot return to work.	1	2	3
206	Breastfeeding is unhygienic and can spread germs.	1	2	3
207	Small breasts will not produce enough milk.	1	2	3
208	Breastfeeding mums have less risk of breast and ovarian cancer.	1	2	3
209	Breastfeeding contains antibodies which protect a baby from infection and strengthen his/her immune system.	1	2	3
210	Most women make enough milk to breastfeed.	1	2	3
211	Women who breastfeed should avoid certain foods.	1	2	3
212	Exclusive breastfeeding is recommended for the first 6	1	2	3

	months of a baby's life.			
213	Breast milk provides all the nutrients a baby needs.	1	2	3
214	Breastfed babies have better mental development than babies fed on bottled milk.	1	2	3

Part III theory of planned behavior constructs

Direct measurement of attitude for breast feeding.						
For each of the following statements, please indicate how much you agree or Disagree by circling the number that most closely corresponds to your opinion (1 = strong disagreement [SD], 2 = disagreement [D]. 3 = neutral [N], 4 = agreement [A], 5 = strong agreement [SA]). You may choose any number from 1 to 5.						
S/N	questions	1[SD]	2[D]	3[N]	4[A]	5[SA]
*301	The nutritional benefits of breast milk last Only until the baby is weaned from breast milk.					
*302	Formula-feeding is more convenient than breast-feeding.					
303	Breast-feeding increases mother-infant bonding.					
304	Formula-fed babies are more likely to be overfed than are breast-fed babies.					
*305	Breast milk is lacking in iron.					
*306	Formula-feeding is the better choice if a mother plans to work out side the home.					
307	Mothers who formula-feed miss one of The great joys of motherhood.					
*308	Women should not breast-feed in Public places such as restaurant.					
309	Babies fed breast milk are healthier Than babies who are fed formula.					

*310	Breast-fed babies are more likely to be Overfed than formula-fed babies.					
311	Breast milk is the ideal food for babies.					
312	Breast milk is more easily digested than Formula.					
*313	Formula is as healthy for an infant as breast Milk.					
314	Breast-feeding is more convenient than Formula feeding.					
315	Breast milk is less expensive than formula.					
*316	Mother who occasionally drinks alcohol should not breast-feed her baby					
*317	Fathers feel left if a mother breast-feeds.					

Note. Items marked with asterisks are reverse-scored and the scores for each item are then was summed. Higher scores indicate more positive attitudes toward breast feeding.

Intention to breast feeding.

	Questions	SD	D	N	A	SA
		1	2	3	4	5
401	I expect mothers to breast feed their child for six months.					
402	I want to breast feed my child for the first six months.					
403	I intend to breast my child for the first six months.					

3.2 Behavioral beliefs

Directions: For each of the following statements, please indicate how much you agree or Disagree by circling the number that most closely corresponds to your opinion		SD	D	N	A	SA
		1	2	3	4	5
501	If I breast fed my child for six months or more, I feel that my child will have health benefit.					
502	If I breast fed my child for six months or more, It will limit me from other social activities.					
503	If I breast fed my child for six months or more in public, I feel embarrassed.					
504	If I breast fed my child for six months or more, it would be very convenient for me.					
505	If I breast fed my child for six month or more, it will take much of my time.					
506	If I breast feed my child for six months or more, it will increase mother –to- child bonding.					
507	If I breast feed my child, I will save some money.					
508	If I breast fed my child for six month or more, it will prevent me from breast cancer.					

3.2 Strength of out come evaluation

Directions: For each of the following statements, please indicate how much you agree or Disagree by circling the number that most closely corresponds to your opinion		SD	D	N	A	SA
		1	2	3	4	5
509	having health benefit to my child is important					
510	If I breast fed my child for six months or more, limiting me from other social activities is inconvenient					
511	feeling embarrassed in public during breast feeding is likely					

512	Being convenient for me to breast feed is likely					
513	Taking much of my time during breast feeding is likely					
514	Increasing mother –to- child bonding is likely.					
515	Saving some money is important for me					
516	Preventing from breast cancer is important					

3.3 Direct measure of subjective norms

Directions: For each of the following statements, please indicate how much you agree or Disagree by circling the number that most closely corresponds to your opinion		SD	D	N	A	SA
		1	2	3	4	5
601	Most people who are important to me think that should breast feed.					
602	It is expected of me that I breast fed my child for six months					
603	I feel under social pressure to breast fed my child for six months.					
604	People who are important to me want me to breast feed my child for six months.					

3.4 Indirect measure of subjective norms.

Directions: For each of the following statements, please indicate how much you agree or Disagree by circling the number that most closely corresponds to your opinion		SD	D	N	A	SA
		1	2	3	4	5
701	Your mum think that you should breast feed your child to breast feed.					
702	You think my partner would approve if you breast fed your child					
703	I think my close friends approve if I breast feed my child for six months.					
704	I think the nurses want me to breast feed my child for six months.					

Directions: For each of the following statements, please indicate how much you agree or Disagree by circling the number that most closely corresponds to your opinion		SD	D	N	A	SA
		1	2	3	4	5
705	My mothers' approval of breast feeding for six months is important to me.					
706	What my partner think of breast feeding should do matter to me.					
707	I think my close friends					
708	Doing what my nurse think I would like to do is important to me					

Perceived behavioral control (direct measurement)

Directions: For each of the following statements, please indicate how much you agree or Disagree by circling the number that most closely corresponds to your opinion		SD	D	N	A	SA
		1	2	3	4	5
801	I am confident that I could breast feeding for six months.					
802	For me to breast fed my child for six month is					
803	The decision to exclusively breast fed is beyond my control.					
804	Whether I exclusively breast fed my child is entirely up to me.					

Indirect measurement of behavioral control.

Directions: For each of the following statements, please indicate how much you agree or Disagree by circling the number that most closely corresponds to your opinion		SD	D	N	A	SA
		1	2	3	4	5
901	The change in the shape of my breast during breast feeding is unlikely					
902	The physical problem encountered during breast feeding is unlikely					
903	When you breast fed your child tiredness is unlikely					
904	Support from others when you breast fed is unlikely					
905	When I breast feed my child taking much time is unlikely					
906	When physical problems during breast feeding occur, I'm likely to continue to breast feed.					
907	Feeling of tiredness during breast feeding makes it difficult to continue breast feeding.					
908	Change in the shape of breast during breast feeding makes it difficult to breast feed					
909	Support from others when I breast feed makes it easier to continue breast feeding.					
910	Taking much of my time during breast feeding makes it difficult to continue breast feeding.					

በድሬደዋ ከተማ ውስጥ በመንግስት የጤና ድርጅቶች ውስጥ የሚደረግ የፊት ለፊት መጠቀሚያ

ገጽ 1 ተጠቃሚ

እንደሚታወቀው የተወለዱ ልጆች ለስድስት ወራት ጡት ብቻ ማጥባት ብዙ ጠቃሚነቶች ለሌሎች ለእናቱ እንዲሁም ለ ሀገሪቱ በአጠቃላይ እንዳለው ይታወቃል። በዚህም መሠረት ይህ ጥናት የሚካሄደው የነፍሠ ጡር እናቶችን ለስድስት ወር ጡት የማጥባት ፍላጎት ለማወቅ ነው። ይህም እናቶች ለስድስት ወራት ጡት እንዲያጠቡ ለሚደረጉ ፕሮግራም ጥረቶች አስተዋፅዖ ያደርጋል።

በዚህ ጥራት ውስጥ እንዲሳተፉ ተመርጠዋል። ምርጫውም የተደረገው በእጣ ሲሆን እርስዎ የሚሠጡን ኢንፎርሜሽን የ ነፍሠ ጡር እናቶችን እውቀትን አመለካከት እንዲሁም ለ6 ወር የማጥባት ፍላጎት መፈተህ ያስችለናል። በተጨማሪም የተለያዩ በጡት ማጥባት ፍላጎት ውሳኔ ላይ ተፅእኖ የሚያሳድሩትን ሁኔታዎች ለመለየት ያስችለናል።

በዚህም መሠረት አሁን የርስዎን ትብብር እስጠይቃለሁ። የተወሰኑ ጥያቄዎችን ከዚህ በመቀጠል እጠይቅዎታለሁ። የመላሹ ስም አይጠቀስም እንዲሁም ማንም ሠው የመለሱትን መልስ በማያገኝበት ሁኔታ ይሆናል። ማንኛውም ጥያቄ የመመለስም ሆነ ለመመለስ መብ አለዎት። ጥያቄዎቹን በአፅንኖት ሠምተው እንዲመልሱ ይመከራሉ። ምንም ዓይነት ትክክል ወይም ሀሰት የሚባል መልስ የለም። ስለዚህ የእርስዎን አስተያየት ብቻ ነው የምንፈልገው።

ለመሳተፍ ጠቃሚነት ነዎት ወይ?

1. አዎን መሳተፍ ማለት ሲለሁ _____ ቀን _____

2. አይ መሳተፍ አልፈልግም።

በጣም አመሠግናለሁ

ጥያቄው የተጠናቀቀበት ቀን _____

የጤናው ድርጅት ስም _____

ክፍል አንድ፡- የጡት ማጥባት እውቀትን የሚለኩ ጥያቄዎች

ከተራ ቁጥር የ እስከ 14 የተዘረዘሩትን አረፍተ ነገሮች እውነት, ሐሰት ወይም

ርፅ ኛ አይደለሁም የሚለውን ምርጫ በማክበብ ይመልሱ፡፡

ተ.ቁ	ጥያቄዎች	እውነት	ሐሰት	<input type="checkbox"/> ርፅ <input type="checkbox"/> ኛ አይደለሁም
1.	<input type="checkbox"/> እናት ጡት ወተት እና የጡጦ ወተት አንድ ናቸው			
2.	ጡጦ የጠቡ ህፃናቶች ጡት ከሚጠቡ ህፃናቶች በበለጠ ብዙ የጤና ችግሮች ያጋጥማቸዋል፡፡			
3.	ጡት ማጥባት በእናትና በልጅ መሀል ያለውን ቁርኝት ያጠናክራል			
4.	ጡት የሚያጠቡ እናቶች ከወሊድ በፊት <input type="checkbox"/> ለጡት <input type="checkbox"/> ለብረታቸው እንዲመለሱ ይረዳል			
5.	ጡት የምታጠባ እናት ወደ ስራ መመለስ አትችልም			
6.	ጡት ማጥባት ንፅህና ስለሌለ <input type="checkbox"/> <input type="checkbox"/> ርም ሲያስተላልፍ ይችላል			
7.	ትንህ ጡት በቂ ወተት አይሠራም/አይኖረውም			
8.	<input type="checkbox"/> ሚ <input type="checkbox"/> ጡት እናቶች ለጡትና ለማህፀን ካንሠር <input type="checkbox"/> መ <input type="checkbox"/> ለ <input type="checkbox"/> እድላቸው ያነሠ ነው			
9.	ብ <input type="checkbox"/> እናቶች ጡት ለማጥባት በቂ ወተት <input type="checkbox"/> ሠራሉ			
10	<input type="checkbox"/> እናት ጡት ወተት በሽታን የሚከላከሉ ንጥረ ነገሮች ስላሉት የልጁን የበሽ <input type="checkbox"/> መከላከል አቅም ይጨምራሉ እንዲሁም ልጁን ከበሽታ ይከላከላሉ			
11	<input type="checkbox"/> ሚ <input type="checkbox"/> ጡት እናቶች የተወሠኑ ምግቦችን መመገብ የለባቸውም			
12	<input type="checkbox"/> እናት ጡት ወተት ለልጅ የሚያስፈልጉትን ንጥረ ነገሮች ሁሉ አሟልቶ መስጠት ይችላል፡፡			
13	ጡት የጠቡ ህፃናት የተሻለ የአእምሮ እድገት ጡቦ ወተት ከጠቡት የበለጠ አላቸው			
14	<input type="checkbox"/> እናት ጡት ወተት ብቻ ለ6ወታት ለህፃኑ እንድታጠባ ይመክራል			

ክፍል ሁለት

ቀጠላዊ የሆነ የጡት ማጥባት አመለካከትን የሚዳሰሱ ጥያቄዎች

ከዚህ በታች ለተዘረዘሩት ጥያቄዎች እባክዎትን ከራስዎ አስተያየት ጋር ለሚዛመሱ/ለሚቀራረቡ መልሶች በጣም ተስማምቼአለው ወይም በጣም አልተስማማሁም በማለት አንዱን ቁጥር በማክበብ ይመለሱ፡፡

5. በጣም ተስማምቼአለሁ 4. ተስማምቼአለሁ 3. አስተያየት የለኝም 2. አልተስማማሁም
1. በጣም አልተስማማሁም

ተ.ቁ	<input type="checkbox"/> ቁ	መልስ				
		1	2	3	4	5
1.	የፎርሙላ ምግቦች ከግፍት ጡት በተሻለ ተስማሚ/አመቺ ናቸው					
2.	ጡት ማጥባት በእናትና በልጅ መካከል ያለውን ቁርኝት ያጠናክራል					
3.	ጠርሙላ የሚመገቡ ህፃናት ከመጠን በላይ ይመገባሉ ከናት ጡት ከሚጠቡት በበለጠ					
4.	<input type="checkbox"/> እናት ጡት ወተት Iron <input type="checkbox"/> ለጡትም					
5.	ፎርሙላ ከእቤት ውሚ ለሚሠሩ እናቶች ተመራጭ ነው					
6.	<input type="checkbox"/> ርሙላ <input type="checkbox"/> ሚመጡ እናቶች በእናትነት ሊጠቡ <input type="checkbox"/> ሚችሉትን ደስ <input type="checkbox"/> ጡት					
7.	እናቶች ሠዎች በተሠበሠቡበት ቦታ ልጆቻቸውን ጡት ማጥባት የለባቸውም					
8.	<input type="checkbox"/> እናት ጡት የሚጠቡ ልጆች ፎርሙላ ከሚመገቡ ህፃናት የተሻለ ጤነኞች ናቸው					
9.	<input type="checkbox"/> እናት ጡት ወተት ለልጆች በጣም ተመራጭ ምግብ ነው					
10.	<input type="checkbox"/> እናት ጡት ወተት ከፎርሙላ ምግቦች በቀላሉ <input type="checkbox"/> ል					
11.	የፎርሙላ ምግቦች ከእናት ጡት በኩል ለህፃኑ ጤናማ ነው					
12.	<input type="checkbox"/> እናት ጡት ወተት ከፎርሙላ ወተት ያነሠ ይወደዳል					
13.	አልፎ አልፎ አልኮል የሚጠጡ እናቶች ጡት ማጥባት የለባቸውም					
14.	አባትየው የተገለለ ይመስለዋል እናቷ ልጇን በምታጠባበት ወቅት					

ክፍል ሶስት:- ጡት የማጥባት እቅድ (ውሃኔ)

ከዚህ በታች ለተዘረዘሩት ጥያቄዎች እባክዎትን ከራስዎ አስተያየት ጋር ለሚዛመዱ/ለሚቀራረቡ መልሶች በጣም ተስማምቼአለው ወይም በጣም አልተስማማሁም በማለት አንዱን ቁጥር በማክበብ ይመለሡ።

ተ.ቁ	<input type="checkbox"/> ቁ	መልስ				
		1	2	3	4	5
1.	እኔ እናቶች ጡት ለ6 ወራት እንዲያጠቡ <input type="checkbox"/> ብቃለሁ					
2.	እኔ ልጄን ለ6 ወራት ጡት ማጥባት <input type="checkbox"/> ልብለሁ					
3.	እኔ ልጄን ለ 6 ወራት ጡት ላጠባት <input type="checkbox"/> ስኛለሁ					

ል 4.1 :- ጡት ስለማጥባት ያላቸው እምነት.

ከዚህ በታች ለተዘረዘሩት ጥያቄዎች እባክዎትን ከራስዎ አስተያየት ጋር ለሚዛመዱ/ለሚቀራረቡ መልሶች በጣም ተስማምቼአለው ወይም በጣም አልተስማማሁም በማለት አንዱን ቁጥር በማክበብ ይመለሡ።

ተ.ቁ	<input type="checkbox"/> ቁ	መልስ				
		1	2	3	4	5
1.	ልጄን 6 ወራትና ከዚያ በላይ ጡት ብቻ ባታ ልጄ የጤና ጠቀሜታ የሚያገኝ <input type="checkbox"/> መስለኛል					
2.	ልጄን ለ 6 ወራትና ከዚያ በላይ ጡት ብቻ በጠበ ከሌሎች የማህበረሰብ እንቅስቃሴዎች ይገታኛል					
3.	ልጄን ለ6 ወራትና ከዚያ በላይ ጡት ብቻ ባታ ለእኔ በጣም አመቺ ነው					
4.	ልጄን ለ6 ወራትና ከዚያ በላይ ጡት በጠባ ጊዜዬን ይሻማብኛል					
5.	ልጄን ለ6 ወራትና ከዚያ በላይ ጡት ብቻ					

	በባባ በእኔና በልጄ መሀል ያለው ቁርኝት ባሬ ምራል					
6.	ሠዎች በተሠበሠቡበት ጡት በጠባ የተሸማቀኩ ይመስለኛል					
7.	ልጄን ጡት ብቻ ባጠባ የተወሠነ ገንዘብ መቆብ እችላለሁ።					
8.	ልጄን ለ6 ወራትና ከዚያ በላይ ጡት ብቻ በጠባ ከጡት ካንሠር ይከላከልልኛል					

ክፍል 4.2 የጡት ማጥባት ጥቅሞችን መመዘኛ

ተ.ቁ	ጥያቄዎች	መልስ				
		1	2	3	4	5
1.	ለልጄ የጤና ጥቅም ማግኘት ለእኔ					
2.	ጡት በማጥባቴ ከሌሎች የማህበር እንቅስቃሴዎች በመታገዴ					
3.	በሠዎች ፊት ጡት ማጥባቴ እና መሸማቀቄ ለእኔ					
4.	ጡት ማጥባቴ ለእኔ መመቸቱ					
5.	ጡት በማጥባት ብዙ ጊዜዬን መውሠዱ ለእኔ					
6.	በእኔና በልጄ መሀል ያለው ቁርኝት መሬ መሩ ለእኔ					
7.	ከጡት ካንሠር መጠበቄ መከላከሉ ለእኔ					
8.	ገንዘብ መቆጠብ መቻሌ ለእኔ					

ጠቅላይ 5.1:- ቀጠተኛ የሆነ የሌሎች ሰዎች ተፅእኖ መላኪያ/መመዘኛ

ተ.ቁ	ጥያቄዎች	መልስ				
		1	2	3	4	5
1.	ለእኔ በጣም ቦታ የምሰጣቸው ሰዎች ጡት እንደጠባ ያስባሉ					
2.	ጡት ለ6 ወራት እንዳጠባ ይጠበቅብኛል					
3.	ለ6 ወራት ጡት እንዳጠባ በሰዎች ተጠቅሞ ስር እንደሆንኩ ይሰማኛል					
4.	በህይወቴ በጣም አስፈላጊ የሆኑ ሰዎች ልጄን ለ 6 ወራት እንዳጠባ ይጠበቁኛል					

5.2 ቀጠተኛ ያልሆነ የሰዎች ተፅእኖ መከላከያ

ተ.ቁ	ጥያቄዎች	መልስ				
		1	2	3	4	5
1.	እናትሽ ጡት እንድታጠቡ ትጠበቅብሻለች					
2.	የትዳር አጋርሻ ጡት እንድታጠቡ/ማጥባትሽን ይደግፋሉ					
3.	በጣም የምቀርቢያቸው ጎደኞችህ ጡት እንድታጠቡ/ማጥባትሽን ይደግፋሉ					
4.	የአንቺ ነርስ እንድታጠቡ ትፈልጋለች					

ጠቅላይ 6.1 : ቀጠተኛ የሆነ የጡት ማጥባት በራስ የመተማመን መመዘኛ ጥያቄዎች

ተ.ቁ	ጠቅላይ	መልስ				
		1	2	3	4	5
1.	እኔ በራሴ በጣም እርግጠኛ ነኝ ለስድስት ወር ጡት ማጥባት እችላለሁ					
2.	ለአንቺ ጡት ለ6 ወራት ማጥባት አስችጋሪ ነው					
3.	ጡት ለማጥባት ያለኝ ውሳኔ ከእኔ ቁጥጥር ውጪ ነው					
4.	ለ6 ወራት ጡት ማጥባት መሉ በሙሉ					

	በራሴ ቁጥጥር ሥር ነው					
--	----------------	--	--	--	--	--

ጠቅላይ 6.2 : ቀጠላ ያልሆነ የጡት ማጥባት በራስ የመተማመን መመዘኛ ጥያቄዎች

ተ.ቁ	ጠቅላይ	መልስ				
		1	2	3	4	5
1.	በማጠባበት ወቅት የጡት ቅርፅ መቀየር ይከሰታል					
2.	የሰውነት የቅርፅ ችግር በማጥባት ወቅት ይከሰታል					
3.	በማጠባበት ወቅት ጡት ሣጠባ ስህተት መኖሩ					
4.	በማጠባበት ወቅት የሌሎች ሰዎች ጋር ጋር ጋር ጋር ጋር					
5.	በማጠባበት (ጡት ማጥባት) ጊዜ ይከሰታል					
6.	ጡት በማጠባበት ወቅት የተለያዩ ችግሮች ቢያጋጥሙኝ ጡት ማጥባት ሊቀረጸው ይችላል					
7.	ጡት ሣጠባ የሚያጋጥመኝን የድካም ስሜት በሚሰማኝ ጊዜ ጡት ማጥባት ሊቀረጸው ይችላል					
8.	ጡት ሣጠባ የጡቴ ቅርፅ ቢቀጥርም ማጥባቴን ሊቀረጸው ይችላል					
9.	ጡት ሣጠባ የሌሎች እርዳታ መኖር ጡት ማጥባቴን እንድቀጥል ይረዳኛል					

ክፍል 7 አጠቃላይ የግለ-ብ መረጃ

መመሪያ: ከመጨረሻው በፊት እባክዎ እርስዎን የተመለከተ መረጃ ይስጡ። የሚሰጡን መረጃ ለጥናቱ በጣም ጠቃሚ ነው። የሚሰጡን መረጃ ሚስጢራዊነቱ የተጠበቀ ይሆናል።

ተ/ቁ	ጥያቄዎች	መልሶች
101	<input type="checkbox"/> <input type="checkbox"/> ማ	
102	የትዳር ሁኔታ <input type="checkbox"/>	1. <input type="checkbox"/> ለ 2. <input type="checkbox"/> ባ 3. ተ <input type="checkbox"/> ትቻለሁ 4. ባለበተ ሞቱአል 5. ተለያይቻለሁ
103	ሃይማኖት	1. ኦርቶዶክስ 2. ሙስሊም 3. ፕሮቴስታንት 4. ክፍለ-ክ 5. ሌላ-----
104	ብሃረሰብ	1. አማራ 2. ኦሮሞ 3. ሶማሊ 4. ትግረ 5. ሌላ-----
105	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> (ብብር)-----	
106	የትምህርት ደረጃ	1. ማንበብና መሳፍ አልችልም 2. ማንበብና መሳ <input type="checkbox"/> እችላለሁ 3. 1-6 <input type="checkbox"/> ል 4. 6-8 <input type="checkbox"/> ል 5. 9-10 <input type="checkbox"/> ል 6. 10-12 <input type="checkbox"/> ል 7. 12 እና ከዚያ በላይ 8. ከፍተኛ የትምህርት ተቀም
107	ከዚህ በፊት ጡት አጥብተ <input type="checkbox"/> ተቃለህ	1. አውቃለሁ 2. አላውቅም
108	ለሚ <input type="checkbox"/> ለ <input type="checkbox"/> ል <input type="checkbox"/> ለመጀመሪያዎቹ 6 ወራት ምን ለመመገብ አቅደህል?	1. <input type="checkbox"/> እናት ጡት ወተት ማጥባት 2. ጡጡ ማጥባት 3. <input type="checkbox"/> እና ጡት ማጥባት 4. <input type="checkbox"/> ሙሉ መመ <input type="checkbox"/> ብ
109	ሰ <input type="checkbox"/> ራ <input type="checkbox"/> ፊ ሳለህ <input type="checkbox"/> <input type="checkbox"/>	1. አጨሳለሁ 2. አላጨሰም
110	ስንት ልጆቹ አሉህ	

PART II ELICITATION STUDY GUID.

We are conducting a study on pregnant women’s intended duration for breast feeding. We are interested in the reasons why do or do not [breast feed their child exclusively]. We would appreciate your responses to some questions about this. There is no right or wrong answers. Please tell us what you really think.

Please take a few minutes to share your thoughts about the following questions.

What do you believe are the advantages of exclusive breast feeding?
What do you believe are the disadvantages of exclusive breast feeding?
Is there anything else you associate with your own views about exclusive breast feeding?
Are there any individual or groups who would approve of your exclusive breast feeding?
Are there any individual or groups who would disapprove of your exclusive breast feeding?
Is there anything else you associate with other people’s views about exclusive breast feeding?
What factors or circumstances would enable you to exclusive breast feeding?
What factors or circumstances would make it difficult or impossible for you to exclusive

breast feeding?

Are there any other issues that come to mind when you think about exclusive breast feeding?

Thank u for your participation.

10. References.

1. Nurturing the future: challenges to breastfeeding in the 21st century; 2327 September 2002, Arusha, Tanzania Penang: World Alliance for Breast feeding Action; 2004.
2. Innis SM: Perinatal biochemistry and physiology of long-chain polyunsaturated fatty acids. *J Pediatr* 2003, 143(4 Suppl):S1-8.
3. Breastfeeding trends and updated national health objectives for exclusive breastfeeding United States, birth years 2000-2004. *MMWR Morb Mortal Wkly Rep* 2007, 56(30):760-763.
4. Fiocchi, A., Assa'ad, A., & Bahna, S. (2006). Food allergy and the introduction of solid foods to infants: A consensus document. *Annals of Allergy, Asthma, & Immunology*, 97, 10-21.
5. Knip, M., & Akerblom, H. K. (2005). Early nutrition and later diabetes risk. *Advances in Experimental Medicine and Biology*, 569, 142-150.
6. Sly Kerman, R. F., Thompson, J. M. D., Bercroft, D. M. O., Robinson, E., Pryor, J. E., Clark, P. M., et al. (2005). Breastfeeding and intelligence of preschool children. *Acta Paediatrica*, 94, 832-837.
7. Thorsdottir, I., Gunnarsdottir, I., Kvaran, M. A., & Gretarsson, S. (2005). Maternal body mass index, duration of exclusive breastfeeding and children's developmental status at the age of 6 years. *European Journal of Clinical Nutrition*, 59, 426-431.
8. (American Academy of Pediatrics, 1997).
9. WHO: Global Strategy on Infant and Young Child Feeding. 55th World Health Assembly. Geneva 2003.
10. Peters E, Wehkamp K-H, Felberbaum RE, Ger DK, Linder R. Breastfeeding duration is determined by only a few factors. *European Journal of Public Health*. 2005;16(2):1627.
11. Foo LL, Quek SJS, Ng SA, Lim MT, Deurenberg yap M. Breastfeeding prevalence and practices among Singaporean Chinese, Malay and Indian mothers. *Health Promotion International*. 2005;20(3):229-37.
12. IMCI---in the hands of families-13).
13. WHO. Global strategy for infant and young child feeding. The optimal duration of exclusive breastfeeding. Geneva; 2001.

14. WHO. Indicators for assessing breast-feeding practices. Report of an informal meeting. Geneva Switzerland; 11-12 June 1991.
15. WHO. Nutrient adequacy of exclusive breastfeeding for the term infant during the first six months of life. Geneva; 2002.
16. King, J. et A. Ashworth. «Historical review of the changing pattern of infant feeding in developing countries: The case Malaysia, the Caribbean, Nigeria and Zaire», *Social Science and Medicine*, 25 (12), 1987, 1307-1320.
17. Meldrum, B. et C. DiDomenico. «Production and reproduction. Women and breastfeeding: Some Nigerian examples», *Social Sciences and Medicine*, 16 (13), 1982.
18. Federal MoH. National Strategy for Child Survival in Ethiopia. Addis Ababa, Ethiopia; 2005.
19. WHO. The optimal duration of exclusive breastfeeding: a systematic review. Geneva; 2002.
20. Ethiopian demographic and health survey. 2005 report.
21. Renfrew M, Dyson L, Wallace L, D'Souza L: The Effectiveness of Public Health Interventions to Promote the Duration of Breastfeeding – Systematic Review 1st edition. London: National Institute for Health and Clinical Excellence; 2005.
22. Couto de Oliveira MI, Bastos Camacho LA, Tedstone AE: Extending breastfeeding duration through primary care: a systematic review of prenatal and postnatal interventions. *J Hum Lact* 2001, 17(4):326-343.
23. Palda VA, Guise JM, Wathen CN: Interventions to promote breast-feeding: applying the evidence in clinical practice. *CMAJ* 2004, 170(6):976-978.
24. U.S. Preventive Services Task Force: Behavioral Interventions To Promote Breastfeeding: Recommendations and Rationale Rockville, MD: Agency for Healthcare Research and Quality; 2003.
25. Sikorski J, Renfrew MJ, Pindoria S, Wade A: Support for breast-feeding mothers: a systematic review. *Paediatr Perinat Epidemiol* 2003, 17:407-417.
26. Dennis, C.L., Breastfeeding initiation and duration: a 1990-2000 literature review. *JOGNN - Journal of Obstetric, Gynecologic, & Neonatal Nursing*, 2002. 31(1): p. 12-32.
27. Scott, J.A. and C.W. Binns, Factors associated with the initiation and duration of breastfeeding: a review of the literature. *Breastfeeding Review*, 1999. 7(1): p. 5-16.

28. Della A Forster*¹, Helen L McLachlan² and Judith Lumley¹ Factors associated with breastfeeding at six months postpartum in a group of Australian women. *International Breastfeeding Journal* 2006, 1:18
29. McKinley, N.M. and J.S. Hyde, Personal attitudes or structural factors? A contextual analysis of breastfeeding duration. *Psychology of Women Quarterly*, 2004. 28(4): p. 388-399.
30. Renfrew, M., et al., Breastfeeding for longer - what works? A summary of "The effectiveness of public health interventions to promote the duration of breastfeeding: systematic reviews of the evidence". 2004: Health Development Agency, National Health Service, www.hda.nhs.uk.
31. Kaufman, K. J., & Hall, L. A. (1989). Influences of the social network on choice and duration of breastfeeding in mothers of preterm infants. *Research in Nursing and Health*, 12, 149-159.
32. Swanson V. & Power K.G. (2000) A theoretically based cross-cultural study of infant feeding in new mothers and their partners. In *Researching Health Promotion* (Watson J. & Platt S., eds), Routledge, London.
33. O'Campo, P., Faden, R., Gielen, A., & Wang, M. (1992). Prenatal factors associated with breastfeeding duration: Recommendations for prenatal interventions. *Birth*, 19(4), 195-201.
34. Buxton, K., Gielen, A., Faden, R., Brown, C., Paige, D., & Chwalow, J. (1991). Women intending to breastfeed: Predictors of early infant feeding experiences. *American Journal of Preventative Medicine*, 7, 101-106.
35. Papinczak, T., & Turner, C. (2000). An analysis of personal and social factors influencing initiation and duration of breastfeeding in a large Queensland maternity hospital. *Breast-feeding Review*, 8(1), 25-33.
36. Dennis, C.-L., & Faux, S. (1999). Development and psychometric testing of the Breastfeeding Self-Efficacy Scale. *Research in Nursing and Health*, 22, 399-409.
37. Manstead, A., Plevin, C., & Smart, J. (1984). Predicting mothers' choice of infant feeding method. *British Journal of Social Psychology*, 23, 223-231.

38. Kaufman, K. J., & Hall, L. A. (1989). Influences of the social network on choice and duration of breastfeeding in mothers of preterm infants. *Research in Nursing and Health*, 12, 149–159.
39. Scott, J. A., Shaker, I., & Reid, M. (2004). Parental attitudes toward breastfeeding: Their association with feeding outcome at hospital discharge. *Birth*, 31(2), 125–131.
40. Dungy, C., Losch, M., & Russell, D. (1994). Maternal attitudes as predictors of infant feeding decisions. *Journal of the Association for Academic Minority Physicians*, 5(4), 159–164.
41. Scott, J. A., Landers, M., & Hughes, R. (2001). Factors associated with breastfeeding at discharge and duration of breastfeeding amongst two populations of Australian women. *Journal of Paediatric and Child Health*, 37, 254–261.
42. Kessler, L. A., Gielen, A. C., Diener-West, M., & Paige, D. M. (1995). The effect of a woman's significant other on her breastfeeding decision. *Journal of Human Lactation*, 11(2), 103–109.
43. Mahoney, M. C., & James, D. M. (2000). Predictors of anticipated breastfeeding in an urban, low-income setting. *Journal of Family Practice*, 49(6), 529–533.
44. Ann Di Girolamo, Nancy Thompson, et.al Intention or Experience? Predictors of Continued Breastfeeding 2005; 32; 208 *Health Education & Behavior*, Vol. 32 (2): 208-226 (April 2005).
45. Dix, D. (1991). Why women do not breastfeed. *Birth*, 18, 222–225.
46. Hill, P., & Aldag, J. (1993). Insufficient milk supply among black and white breastfeeding mothers. *Research in Nursing & Health*, 16, 203–211.
47. Humenick, S., & VanSteenkiste, S. (1983). Early indicators of breastfeeding progress. *Issues in Comprehensive Pediatric Nursing*, 6, 205–215.
48. Wambach, K. (1989). The effect of lactation consultant contact on early breastfeeding problems. Unpublished master's thesis, The University of Arizona, Tucson.
49. Ajzen, I. (1991). The theory of planned behavior. *Organizational Behavior and Human Decision Processes*, 50, 179–211.
50. Coreil, J., & Murphy, J.E. (1988). Maternal commitment, lactation practices, and breastfeeding duration. *Journal of Obstetric, Gynecologic, and Neonatal*

Nursing, 17, 273–278.

51. Ajzen, I., & Madden, T. J. (1986). Prediction of goal-directed behavior: Attitudes, intentions, and perceived behavioral control. *Journal of Experimental Social Psychology*, 22, 453–74.

52. Duckett L., Henly S., Avery M., Potter S., Hills-Bonczyk et al. A theory of planned behavior-based structural model for breast-feeding. *Nursing Research* 47(6), 325–336.

53. Janke J.R. (1994) Development of the breast-feeding attrition prediction tool. *Nursing Research* 43(2), 100–104.