Knowledge, Attitude and Practice of Breast and Complementary Infant Feeding Among Mothers in Shinasha Culture: The Case of Bullen Woreda, Benishangul Gumuz Region

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This is to certify that the thesis prepared by Assefa Hirpa entitled as Knowledge, Attitude and Practice of Mothers on Breast and Complementary Infant Feeding in Shinasha Culture: The Case of Bullen Woreda, Benishangul Gumuz Region and submitted in the partial fulfillment of the requirement for the degree of Masters in Developmental Psychology complies with the regulation of the university and meets the accepted standards with respect to originality and quality

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Acronyms and Abbriviations

APA: American Psychological Association

AHRQ: Agency for Healthcare and Research Quality

CRC: Convention of the Right of the Child

CSA: Central Statistical Authority

DHS: Demographic Health Survey

EBF: Exclusive Breast Feeding

EFSA: European Food Safety Authority

FGD: Focus Group Discussion

HTP: Harmful Traditional Practices

ICMBSR: International Code of Marketing and Breast milk Substitutes and Subsequent Relevant Resolution

ILO: International Labour Organization

KAs: Kebele Administrations

NEC: Necrotizing Enterocilitis

NFFS: National Family and Fertility Survey

NGO: Non-Governmental Organizations

PAHO: Pan American Health Organization

SES: Socio-Economic Status

SIDS: Sudden Infant Death Syndrome

SPSS: Statistical Packages for Social Science

TGE: Transitional Government of Ethiopia

UNGA: United Nations General Assembly

UNICEF: United Nations International Children Emergency Fund

WHA: World Health Association

WHO: World Health Organizatio

Abstract

The objective of this study was to investigate the knowledge, attitude and practice of breast and complementary infant feedings among mothers of Shinasha culture in Bullen Woreda. The study was undertaken in four kebeles (Metti, Bullen 02, Matta and Addias Alem) and 80 participants were selected by using convenient sampling as they are mothers who currently are feeding (breast and complementary foods) to their infants and Questionnaire, interview and focus group discussion were used to collect data. This study employed the combination of both qualitative and quantitative methods. In this mixed approach the researcher used quantitative methods of data collection as the dominant and qualitative methods are supplementary. The data were analyzed by using frequency, mean, percentage, Pearson's correlation as well as one way ANOVA (one way analysis of variance). The result of analysis reveals that mothers were not given any information about infant feeding before birth of the infant and after birth of the infant mothers got information about breast and complementary infant feeding from elder mothers. The result also indicated that there is no significant difference among mothers on their knowledge, attitude and practice of breast and complementary infant feeding on the three categories of age. Mothers lacked sufficient knowledge about the importance of breast feeding for breastfeeding mothers and also biased in duration of breastfeeding between both sexes of their infants. Mothers showed positive attitude about breast feeding in such areas as: Self-initiated interest of breast feeding, enhancement of mother child interaction through breast feeding, enjoyable nature of breast feeding. Regarding the practices of breastfeeding mothers reported that they give fresh butter as pre-lactal food before breast milk during the time of birth. Concerning the knowledge of complementary infant feeding mothers reported that male infants should start complementary foods earlier than female infants. Mothers had positive attitudes about complementary infant feeding, so they reported that early introduction of complementary foods makes their infants healthy and strong. As far as mothers practices of complementary feeding is concerned, mothers practiced providing their infants about two- three times a day.

It is concluded that there is no statistically significant difference among mothers on their knowledge level, attitude and practices on breast and complementary infant feeding on their age groups. Finally it was recommended that all concerned bodies of the community, health extension workers etc. should take their parts in educating and creating awareness for mothers about breast and complementary infant feeding.

Key words: *Breastfeeding, Complementary feeding, Knowledge. Attitudes, Practices, Mothers*

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Chapter One

1. Introduction

This chapter deals with background of the study,statement of the problem,objectives of the study, research questions,significance of the study, definition of terms,delimitation of the study.

1.1. Background of the Study

Most women are eventually able to breastfeed. Nevertheless, it is not an instinctive act. (Vinther &Helsing,1997).Breastfeeding is an art that has to be learned. A few women breastfeed easily from the first day and never have a problem, but many meet challenges somewhere along the road. When that happens, most women need encouragement and skilled support to continue to breastfeed effectively (Vinther et,al.1997).

Although, breastfeeding is uniquely mothers' activity, and all literature and practice concerned with infant feeding are by definition about mothers, it has held little interest for feminists. This lack of apparent concern with breastfeeding is in marked contrast with extensive feminist attention to other areas of women's health and reproduction. Indeed one might have expected that Oakley's path breaking study of child birth. (Oakley, 1980 cited in Carter, 1995) would have triggered interest in the close related areas of lactation. With very few exception (e.g.Maher,1992;Oakley,1993;Dtbal,1992 in Carter,1995) feminist energy in relation to the politics of breast-feeding has provided little challenges to the main stream pre-occupation; how to get more women to breastfed for longer (Van Esteric,1989,Palmer,1988,1993).

In addition, modern philosophers and writers of the 19th and 20th centuries like Pautarch, Laufenberg, Comenius & McCleary (cited in Fischer&Lazerson,1984) have also urged mothers to breastfeed their new born by stressing that refusal to breast feeding means promoting mortality and suffering.

Several researchers like (Harfauche, 1990; Arnup, 1994;(as cited in Tesfaye, 2005) affirm that breast feeding is the normal way of feeding the human infant and fundamental determinant of growth, development and survival of the infant. Generally breastfeeding seems to be worldwide phenomena of having countless advantages particularly to new born. According to Rinda (2005) breastfeeding saves six million infants living each year by preventing diarrhea and acute respiratory infections. Research conducted in developing countries reveal that infant and early childhood mortality is found to be lower among breastfed infants than complementary (bottle) fed ones (Gray, Palloni, et al; Mujumder, Marrow et al; cited in Yeshwamebrat, 1995).

In addition to nutritional values, breast feeding provides psychological values as much as warmth, affection, sense of security, self-reliance and the overall emotional needs of the child.

In Ethiopia breast feeding is widely practiced. The 1990 National Family and Fertility Survey (NFFS) show that 97 percent of women breastfed their last child, the average duration being two years and one month. In spite of its high prevalence in Ethiopia the average duration of breastfeeding appears to be declining as a result of various psychological and demographic factors (Fischer &Lazerson, 1984) (. However, its decline leads to the loss of all the above mentioned benefits and call for early intervention. On the other hand, it is only after 1950s that the importance of breastfeeding for children's psychological health become brightly favored when Freud's thought about the significance of early experiences began to have strong pressure (Fischer et, al.1984).Therefore, the practice of breastfeeding for infants' social, emotional and personality development by establishing emotional attachement with mothers has earned an increased attention.

The issue of breast feeding seems to call the attention of policy makers of America. A meeting of WHO/UNICEF (1990) resulted in global initiative, Innocenti Declaration on the protection, promotion and support of breastfeeding stated as follows,

"For optimal breastfeeding all women should be enabled to practice exclusive breastfeeding and all infant should be fed exclusively on breast milk from birth to four to

six months of age. Subsequently children should continue to breast feed, while receiving appropriate and adequate complementary foods up to two years of age or beyond**"**

Likewise the new Ethiopian policy (TEG, 1993) considered promoting breastfeeding practices as one of the strategies to attain the objectives of reducing existing high child fertility and mortality rates in Ethiopia. As breastfeeding is a unique practice with multiple benefits, nutritive, protective, contraceptive, affective, cognitive and behavioral that takes place during critical (sensitive) periods of human development, its preservation or promotion appears obligatory. And that is why it is cited in slogan "Breast milk is the best for the baby" and a supreme method suited for the psychological and physiological needs of the children.

Nevertheless, the current rate of practice, knowledge, attitude and prevalence of critical method of feeding and developing a new born do not seem equal among all the diverse communities in the world. Most of the determinants of breastfeeding are psychological in nature as some developmental theories indicate (Tesfaye, 2005).

1.2. Statement of the Problem

Globally, breastfeeding practices have been decreasing over the years. Wet nursing, an ancient social custom, was widely accepted for many years (Fildes 1995). In Western Europe, from the early second millennium wealthy families employed wet nurses to feed their children. As an alternative to breastfeeding or as a complement, different types of artificial feeding(see fig 2 on the appendix) have probably always been used - cow's milk, goat's milk or milk from other animals, and/or cereal. This decline started in the industrialized countries and then spread to other less developed countries, especially in large cities and urban settlements (Jellife & Jellife and Palmer cited in Aarts 2001).

The failing to receive human milk has undoubtedly been associated with problems and has been found in many instances to be fatal, or detrimental to the health of the newborn infant, as mammalian milk is species-specific and there are distinct differences between the milk of different mammals Lawrence and Lithell (cited in Aarts 2001). In the eighteenth and nineteenth centuries high infant mortality rates in certain areas in the

world could be related to low breastfeeding rates, due to the extremely high work load of the women.

Several research evidences such as, Harfauche, 1990; Arnup, 1994 ;(as cited in Tesfaye 2005), have carried out the possible contribution of infant feeding methods to their health and developmental patterns. It is stated that breastfeeding, especially the exclusive type, had been and still perceived differently, not only by the breastfeeding mothers but also by other segments of the society across every spectrum. That is, the varying physical, social and cultural environments exert their own negative or positive influence on the process of breastfeeding. Because of such influences, breastfeeding and simultaneous observations and processes like maternal knowledge, attitude and practice which can themselves be articulated by prevalence, rate, initiation, duration, termination, care for breast shape and size in order to have the breast which is small, round, firm to indicate that they are young yet (Spitzack cited in Jones, 2004) are also likely to be influenced and vary across socio-economic and demographic disparities. Therefore, changes in the physical and socio-cultural environment can result in changes in infant feeding practices of mothers like breast and complementary infant feeding.

The existing meager studies (e.g. Fildes 1995) and general observation in developing countries including Ethiopia, urban centers as well point out that the trend of exclusive breastfeeding is decreasing. And this is supposed to be the result of urbanization and fast social changes that are usually accompanied by psycho-social and economic changes that in turn hamper with the traditional and more positive parental child rearing beliefs and practices including infant feeding methods which affects the normal development of the infants in the study area.

Breastfeeding is a common practice in Ethiopian culture. However, large proportions of women do not practice appropriate breastfeeding and complementary feeding behavior for their children [Federal Mninisry of Health, 2008]. According to 2012 the Ethiopian Demographic Health Survey report, 27% of mothers provide water, butter, and various types of food to feed their children, thereby reducing the percentage of exclusive

breastfeeding and increasing the percentage of introducing complementary food at very young age [Central Statistical Authority,2012 cited Desalegn,et.al 2013]. Nationally, 50.6 % of newborns were put on breast within 1 hour of birth and about 80% of infants 2 months old are exclusively breastfed. However, this proportion rapidly drops to 38% at the age of 6 months and complementary feeding starts too early in about 14% of infants [Federal Ministry of Health, 2005].

Since the study area is one part of Ethiopia, the declining duration of exclusive breastfeeding and early introduction of complementary foods is becoming common practices. It is the writer's observation that mothers in the study area seem to lack knowledge about especially the necessity of breast milk to their infants because they are not giving good attention to their infants.

Since the study area is one part of Ethiopia, the duration of exclusive breastfeeding and early introduction of complementary foods is becoming common practices. Mothers in the study area seems lacking knowledge about especially the necessity of breast milk to their infants because they are not giving good attention to their infants. And this study tries to assess knowledge of these mothers about the importance of breast feeding to their infants and timely initiation of complementary foods. If this down sides continues the number of infants death will increase because of lack of immunological value of breast milk to infats particularly at the infant stage of development. However, no studies were documented about breast and complementary infant feeding patterns in the study area.

Hence, to make some contribution to Bullen *Woreda* and its surrounding *Kebeles* an attempt has been made to investigate the knowledge, attitude and practice of mothers on breast and complementary infant feeding among mothers in Shinasha culture.

1.3. Objectives of the Study

The major purpose of this study was to assess the knowledge, attitude and practice of breast and complementary infant feedings among mothers of Shinasha culture.

More specifically, this study intends to:

- Identify the major sources of information about breast and complementary infant feeding
- Investigate the differences in breast and complementary infant feeding knowledge ,attitudes and practices among the participants who are mainly categorized by age;
- Examine the knowledge, attitude and practice of mothers on breast and complementary infant feeding;

1.4. Research Questions

Below are the research questions that the study attempts to answer

1. What are the major sources of information about breast and complementary infant feeding in shinasha culture?
2. Is there a difference in breast and complementary infant feeding knowledge attitude and practices, as a function of age?
3. What are the knowledge, attitude and practice of mothers on breast and complementary infant feeding?

1.5 Significance of the Study

The significances of the study are:

1. To contribute to the development of projects that enhances mothers' understanding about breast and complementary infant feeding knowledge, attitudes and practices,
2. To give awareness to mothers about necessity /importance of appropriate breast and complementary feeding for their infants,
3. To contribute by filling the knowledge gap among breast and complementary infant feeding mothers in particular and community in general,
4. To assist the government and non-government (NGO) agencies for planning, monitoring and evaluating the activities with regard to breast and complementary infant feeding practices among mothers.

5. The study is expected to be valuable for planning further studies in the breast and complementary infant feeding in shinasha culture and other cultures in the country and assist planner and policy makers to improve the knowledge, attitude and practice mothers onbreast and complementary infant feeding.

1.6. Definition of Terms

Breastfeeding: is a means of infant feeding where infants exclusively fed on breast milk for at least 6 months

Breast feeding duration: the time length for which the child is breastfeed with or without supplements measured by months (years).

Complementary feeding. The infant receives breast milk and solid or semi-solid foods and allowed any food or liquid, including non-human milk.

Developmental Niche: is the concept to mean the simultaneous psychological and cultural contributions of human development.

Exclusive breast feeding: refers to feeding infants only with breast-milk

Infant: Children whose age is under two years of life

Infant feeding: is feeding a child until two year of age.

Late adulthood mothers: this indicates mothers whose age range is in between 45-60 and above.

Maternal attitude: it is the like and dislike of breast and complementary infant feeding that mothers exhibit.

Maternal knowledge: refers to the extent to which the breast and complementary infant feeding mothers respond correctly to items asking for their know-how or skills in feeding their infants.

Maternal practice: this refers to any behavior or action that breast and complementary feeding mothers disclose in relation to infant feeding.

Middle adulthood mothers: in this research it refers to mothers whose age is in between 25-45.

Socio-demographic variables: Are significant variables like maternal age, income, educational level, employment/occupation residential areas etc.

Woreda- is an area marked off and developed for administrative purpose with defined authority and responsibility representing a population of up to 100,000 people (TGE, 1992).

Younger mothers: in this study it refers to mothers whose age is below 18-24 years.

1.7 Limitation of the Study

While conducting this research a number of limitations have been encountered. Among these, for example financial and time constraints, transportation problems to go to research sites or kebeles as well as the shortage of resource were some of the limitations.

1.8 Delimitation of the Study

Because of financial, time, and other resource constraints, this study is delimited interms of area coverage and extent of the study and research methodology. As to the study area, Bullen Woreda is covered by the study. Thematically, the study is concerned only with knowledge, attitude and practice of mothers on breast and complementary infant feedings. Methodologically, this research has employed both quantitative and qualitative techniques. However, only 80 breast feeding shinasha mothers who had children from birth to two years old were the study participants.

Chapter Two

2. Review of Related Literature

2.1. History of Infant Feeding

Breastfeeding has been the natural and normal means of feeding infants. In fact, it is one of the defining characteristic of being a mammal. The importance of breastfeeding before civilization was so pronounced that, wet nurses were contracted for infants of the wealthy and the royal families who were not able to lactate successfully (Wickes, 1953 cited in Bright, 2010). Wet nursing has been in continual existence from earliest times although its popularity has been inconsistent. In England and Europe in the fifteenth and sixteenth centuries, the middle classes began employing wet nurses, a luxury formerly afforded only to the elite. By the latter part of the 1700s wet nursing was on the decline in North America and England, largely due to increased public concern regarding the moral character of wet nurses and the care they provided (Golden, 1996 cited in Bright, 2010).

Before the last few hundred years, alternatives to breastfeeding were rare. Attempts in 15th century Europe to use cow or goat's milk were not very positive. In the 18th century, flour or cereal mixed with broth was introduced as substitutes for breastfeeding, but this did not have any favorable outcome, either. True commercial infant formula appeared on the market in the mid-19th Century but their use did not become wide spread until after World War II. This was the period when the working pattern of women was rapidly changing; a resultant effect of the industrialization process. This was the beginning of artificial feeding for infants (see fig-2) (Wickes, 1953 cited in Bright, 2010). As the superior qualities of breast-milk became better established in medical literature, breastfeeding rates have increased and countries have enacted measures to protect the rights of infants and mothers to breastfeed.

2.2 The Breast Feeding and Developmental Niche Model

Researchers in the field of cross-cultural human development have forwarded some important points pertaining to and influencing child development in general and breast

feeding in particular. Among such type of models that best explains the topic dealt with (breast feeding is the developmental niche concept).

Proposed by Supper and Harkness (1987), this notion put forth the mutual influential characteristics of the physical and social environment is the biological predispositions of an individual itself in precise and concrete terms.

This approach treats child development to be the result the integrated interplay between three components of the developmental niche. These are:

1. The physical and social setting or contexts of everyday life e.g. ones family.
2. Culturally determined customs of child care and child rearing.
3. The psychology of care takes or characteristics of child's parents such as belief systems and development expectations.

According to this model, for normal child rearing practice to occur, the three sub systems should operate in harmony, otherwise disequilibrium and change among the sub systems will resulting in affecting child rearing practices. In addition, the homeostatic abnormality may not work well in conditions of rapid social changes. In short the above sub systems found to have intricate relationship and have impact on child rearing practices. It is also important to hope that mediating factors like child's characteristics take its part.

Being a more relevant approach, the developmental niche model is found to best explain the issues of breast feeding where in most of the actively influencing factors are in consideration.

2.3. Significance of Exclusive Breast Feeding

In the outset it is pointed out that the process of breast feeding involves multidimensional benefits. Literature shows that it is beneficial not only for the new born infants but also for mothers. Some of the importances of breast feeding are mentioned here under:

2.3.1. Physiological significance.

It is clear that breast milk is very conducive type of food for infants in the early postpartum period. As it is in liquid and purified form it is easily digestible and convenient for the infant. According to Harfouche and Arnup (cited in Tesfaye 2005), breast feeding represents the strongest possible foundations for nutrition and care of the infants. Therefore, exclusive breast feeding satisfies all the nutritional needs of the infants. (See figure 1 at appendix)

2.3.2. Immunological value.

The protective value of breast milk is also well documented and researched particularly in the current decades. Breast milk is indicated to protect the newborn from possible allergic reaction that may continue for years, increases immunity and thus lowers susceptibility for infection and for development of diseases such as diarrhea, respiratory diseases meningitis and it the later life heart disease and adult obesity (AAP, cited in Fischer and Laterson, 1984).(See figure 1 at the appendix)

Even more, recent studies in Bangladesh found that children 18-36 months of age who were not breastfed had three fold risk of death (Briend, et al; cited in Greiner, 1996). Shahidullah (also in Grainer, 1996) found an increased risk of death associated with not breast feeding. So, breast feeding minimizes the chance of encountering sudden infant death syndromes (SIDs).

2.3.3. The Social Significance of Breast Feeding.

A part from the above benefits, breast feeding is reported to have social values. To this end, Kaye, (Cited in Fischer and Lazerson, 1984) pointed out that breast feeding is the process that involves mother jiggling lay the foundation for turn taking behavior in latter infancy and childhood. Such dyadic interactions initiated throughout pregnancy are maintained during breast feeding. That is, it is important for social development that begins during breast feeding. More importantly, it is during breast feeding that the new born begin to learn speech that is, babbling and thus develop his/her language attainment (Illingworth,1964) .

2.3.4. Health Effect of Breast Feeding.

The health effects of breastfeeding are well recognized and apply to mothers and children in developed nations such as the United States as well as to those in developing countries. Breast milk is uniquely suited to the human infant's nutritional needs and is a live substance with unparalleled immunological and anti-inflammatory properties that protect against a host of illnesses and diseases for both mothers and children (Lawrence, 2010)

In 2007, the Agency for Health care Research and Quality (AHRQ) published a summary of systematic reviews and meta-analyses on breastfeeding and maternal and infant health outcomes in developed countries (IP.S Chung 2007).The AHRQ report reaffirmed the health risks associated with formula feeding and early weaning from breastfeeding. With regard to short-term risks, formula feeding is associated with increases in common childhood infections, such as diarrhea (Chien, 2001) and ear infection. The risk of acute ear infection, also called acute otitis media, is 100 percent higher among exclusively formula-fed infants (see fig. 2 at appendix) than in those who are exclusively breastfed during the first six months (IP.S ,2007).

The risk associated with some relatively rare but serious infections and diseases, such as severe lower respiratory infection (Bartic, 2010) and leukemia (Kwan, 2004) are also higher for formula-fed infants. The risk of hospitalization for lower respiratory tract disease in the first year of life is more than 250 percent higher among babies who are formula fed than in those who are exclusively breastfed at least four months (Bachrach, 2003). Furthermore, the risk of sudden infant death syndrome is 56 percent higher among infants who are never breastfed (IP.S Chung, 2007). For vulnerable premature infants, formula feeding is associated with higher rates of necrotizing enterocolitis (NEC). The AHRQ report also concludes that formula feeding is associated with higher risks for major chronic diseases and conditions, such as type 2 diabetes, asthma, and childhood obesity(Arenz, 2004) all three of which have increased among U.S. children over time.

Comparison was made between mothers who breastfeed, those who do not breastfeed also experience increased risks for certain poor health outcomes. For example, several studies have found the risk of breast cancer to be higher for women who have

never breastfed (Bernier, et.al, 2000). Similarly, the risk of ovarian cancer was found to be 27 percent higher for women who had never breastfed than for those who had breastfed for some period of time (IP.S Chung et.al. 2007). (See figure 1 at appendix). In general, exclusive breastfeeding and longer durations of breastfeeding are associated with better maternal health outcomes.

2.3.5. The Economic Significance of Breast Feeding.

In addition to the health advantages of breastfeeding for mothers and their children, there are economic benefits associated with breastfeeding that can be realized by families, employers, private and government insurers, and the nation as a whole. For example, a study conducted more than a decade ago estimated that families who followed optimal breastfeeding practices could save more than $1,200–$1,500 in expenditures for infant formula in the first year alone (Ball, 1999).In addition, better infant health means fewer health insurance claims, less employee time off to care for sick children, and higher productivity, all of which concern employers (United States Breastfeeding Commitee,1999).

Increasing rates of breastfeeding can help reduce the prevalence of various illnesses and health conditions, which in turn results in lower health care costs. A study conducted in the US 2001 on the economic impact of breastfeeding for three illnesses—otitis media, gastroenteritis, and NEC—found that increasing the proportion of children who were breastfed in 2000 to the targets established in *Healthy People 2010(US Department of Health and Human service 2010)* would have saved an estimated $3.6 billion annually. These savings were based on direct costs (e.g., costs for formula as well as physician, hospital, clinic, laboratory, and procedural fees) and indirect costs (e.g., wages parents lose while caring for an ill child), as well as the estimated cost of premature death (Weimer, 2001). A more recent study that used costs adjusted to 2007 dollars and evaluated costs associated with additional illnesses and diseases (sudden infant death syndrome, hospitalization for lower respiratory tract infection in infancy, atopic dermatitis, childhood leukemia, childhood obesity, childhood asthma, and type 1 diabetes mellitus) found that if 90 percent of U.S. families followed guidelines to breastfeed exclusively for six months, the United States would save $13 billion annually from

reduced direct medical and indirect costs and the cost of premature death. If 80 percent of U.S. families complied, $10.5 billion per year would be saved (Bartic, 2010). In the study area this is also common and most part of the society were expending few amount of money average 200 birr per year (Woreda Government office, 2014)

2.3.6 The Psychological Significance of Breast Feeding.

Mothers often report that breast feeding is pleasant and emotionally beneficial experience they share with their infants. [However, little research has investigated the role of infant feeding method in the development of maternal bond and the mother child relationships]. Although nursing mothers report that feeding furnish not only nutritional value but also social and psychological nourishment for them and their infants. (Newton; Newton & Newton; Weisenfeld et al; cited in Clark, 2003) the possible link of breast feeding to the development of maternal bonding and the mother infant relationship has received little research (Clark, 2003).

Researchers have become increasingly interested in the physiological and immunological aspect of breast milk while largely ignoring the psychological aspects of breast feeding (Clark, 2003). Following Kennel and Klaus (cited in Clark, 2003) the term bond refers to emotional connection of mother to her infant. The function of bonding behavior is to preserve nearness of the mother to her infant (Maestripieri, cited in Clark, 2003). Originally bonding theorists argued that for an optimal bond to develop, physical contact between mother and her infant must occur early in the post partum period (Klaus, cited in Clark, 2003). This implies the need for breast feeding as to ensure the development of mother infant relationship.

The few behavioral studies focused on breast feeding mothers provide suggestive results. One study showed that mothers who breast feed tend to be more responsive to their infants (Wiesenfeld, cited in Clark, 2003). Breast feeding mothers also tends to touch their infants more during feeding and play time (Bernal and Richards; Kuzela, Stiffer and Worobey; cited in Clark 2003). On the other hand, it is more interesting that breast feeding make mothers to be free from the retrospective guilt of not breast feeding their child (Robertson, 2003).

In addition, breastfeeding may help to lower the risk of postpartum depression, a serious condition that almost 13 percent of mothers experience (O'Hara, 1996). This disorder poses risks not only to the mother's health but also to the health of her child, particularly when she is unable to fully care for her infant, (O'Hara, 1996) Research findings in this area are mixed, but some studies have found that women who have breastfed and women with longer durations of breastfeeding have a lower risk of postpartum depression (Mancini, 2007) Whether postpartum depression affects breastfeeding or vice versa, however, is not well understood (Dnnis,2009)

In sum, although little is studied about the psychological importance of breast feeding for both parties, the above findings reflect that during breast feeding infants experience belongingness, intimacy, attachment, security etc. Moreover infants are exposed to some behavioral management skills like gratification delay, weaning and so on. By implication, it is mainly through breast feeding that mother infant relation is initiated or enhanced where by breast feeding acts as a mediator.

2.3.7. Significance for Cognitive and Motor Development.

Vis-à-vis the effect of breast feeding on cognitive and motor development milestone achievements several researchers (Dewey, Taylor, Wang, Florely, cited in Tesfaye, 2005) argued that breast feeding has strong contribution to the cognitive and motor development of infants. Thus they challenge, due to the socio-emotional benefit associated with the process of breast feeding, breastfed are always superior in cognitive and motor milestone abilities compared to their artificial fed counterparts(see fig-2) though other scholars(e.g. Papalia cited in Tesfaye, 2005), indicate that there would not be significant difference.

2.3.8 Contraceptive Function of Breast Feeding.

Besides to the importance's described above, breast feeding is reported to have birth spacing effect. This notion hold true particularly for couples who effectively do not use modern birth control methods and/or among cultural communities where modern contraceptive utilization is not familiar. Although there are some inconsistencies of research findings, especially the exclusive breast feeding type is considered to function as

a reliable contraceptive measure where a cut off points is 12 months as a study in Bangladesh indicates (Briend, et al., cited in Greiner 1996). Moreover Huffman et al (cited in Greiner, 1996), found 20 months of median duration of post-partum amenorrhea.

In general, without discouraging its contraceptive duration, breast feeding is important in countries like Ethiopia where many of its citizens earn low income, both fertility and annual population growth rates are high and consequently affect resource allocation and in turn optimal development.

2.4. Causal factors/Determinants of Breast Feeding

Determinants of EBF are the factors or conditions that might lead to some changes in the practice which for instance encourage or impede it. The extent to which these determinants or factors affect EBF is fairly complex and varies from one country to another and/or between different groups in the same country. Some are biological and beyond women's control (e.g. breast engorgement, nipple problems etc) are combinations of economic, environmental, cultural, social etc. Howeve there are two factors which are psycho- social factors which includes, knowledge, attitude, community support, educational rank, working conditions, urban dwelling of mothers and the demographic variables which includes sex of the child, age of the mothers, parity and the like.

2.4.1 Psychosocial causal factors of Breast Feeding.

2.4.1.1 Maternal Awareness/Knowledge.

Mothers knowledge of child development and breastfeeding may directly affect the maternal sensitivity by influencing the mothers perception, interpretation and responsiveness to infants prompt (Elster,et al.,1983);Coley and Chase-Linsaqdale,1998; Jorgenson,1993(cited in Fabes &Martin,2000) stated that younger mothers compared to older mothers lack child development and breastfeeding knowledge and face difficulties in taking the responsibilities of being a parent. On the other hand Parks & Smeriglio (1983) by measuring the parenting and breastfeeding knowledge on the first time infant mothers stated that the knowledge level was high and no difference from that of older mothers of comparable socio-economic status (SES).

The mother's intention to breastfeed is related to her and the husbands' beliefs and knowledge on infant feeding, their attitudes towards breastfeeding, their experiences, expectations, skills, confidence, and emotions involved and to the predicted consequences, for example the mother's perceived work load Freed, (cited in Aarts2001). This is also the case in the study area as observed/experienced by the researcher

It is believed that mothers will be more effective if they are knowledgeable about their own child and how to breastfeed. Mothers' knowledge of breastfeeding can be affected by culture, family and generation which may influence mothers behavior of breastfeeding. Culture influence the way mothers think about their breastfeeding value (Levine, et al., cited in Truwork, 2005).

Several studies show that significant number of mothers do not seem to be aware of the value of breast feeding and the coexisting benefits. For example in a study conducted by Rinda (2005) in and around Manglore city in India, only 15% of participant mothers revealed good knowledge regarding breast feeding. Despite being aware of it, in many countries, including Ethiopia there is a strong tendency to replace breast feeding by other supplements particularly by bottle feeding. Especially in developing countries bottle feeding has high social status value (Howrigan, 1988). A study on Yucatec Mayans (Howrigan, 1988) suggested that the availability of bottle feeding reduced worrying about prolonging the supply of breast milk. This is true of urban mothers where they considered bottle feeding as "fact of modern life" (Abdulaziz, 1988 Yeshewamebrat, 1995) or as a "symbol of modernity" (Howrigan 1988).

Howrigan commented further that exposure to media and supply models, has resulted in misconceptions of children of middle class as bigger healthier and more successful in school than ones (lower class child).

Also it has been stated that education about breastfeeding is not always readily available to mothers nor easily understood by them. Many women rely on books, leaflets, and other written materials as only source of information on breastfeeding (Moore et.al., 2007) but using these sources to gain knowledge about breastfeeding can be ineffective, especially for low-income women, who may have more success relying on role models

(Sikorski et. al., 2003) The goals for educating mothers include increasing their knowledge and skills relative to breastfeeding and positively influencing their attitudes about it.

2.4.1.2 The Attitudes of Mothers.

Studies indicated that mothers attitude and experience and culturally conditioned and indeed influence infant feeding decision and feeding duration (Esterik, Online Doc.). That is, mothers breast feed longer if they desire to breast feed, if they intended to do it for a longer period of time, if they feel comfortable feeding in public, and also if they are not anxious about the process (Allen LH, Pelto GH. PIP, 1985).

Besides, maternal anxiety that breast milk alone might not provide sufficient nourishment is also found to force mothers engage in non exclusive breast feeding as study in rural Jamaica reveals (Chatman, et al, online Doc.). Likewise perceived milk inadequacy among disadvantaged mothers is reported to be the primary reason for early termination of breast feeding (Evers et al, in Williams on line Doc.). Similarly internal personal factors such as mothers' self- efficacy and out expectations with regard to breast feeding were cited to be crucial for successful breast feeding (MacLean, Hill & Aldag, cited in Williams online Doc.) There are attitudinal differences between married and single women. For example, the study conducted by De La Mora and. Arora et al (cited in Bright 2010),the attitudes of married women concerning breastfeeding were more positive than were the attitudes of single mothers. Married women breastfeed their infants exclusively more often than single women.

In short mother perceptions and attitudes are among the major determinants of breast feeding duration and other related activities.

2.4.1.3 Community Support for Mothers.

Breast feeding can be a difficult behavior to practice and, as such, is best practiced just as any other social behavior, in a supportive environment. **[**As it is a product of learning, breast feeding is highly influenced by social and cultural factors]. To this end, studies document that in societies where community support and advice are common, longer duration of breast feeding is observed (Allen LH, 1985). Social or peer

support as a determinant of successful breast feeding, particularly for mothers from disadvantaged back grounds is also indicated in Sacks et al., Rousseau et al, Freed et al, (cited in Williams online Doc.). However with increase of urbanization process that do not accommodate the needs of the feeding mothers and the infant and the breakdown of the joint family system, there will be absence of significance others or older women in the family who can advice the young mother. Lack of social support, therefore, has emerged as a key constraining factor on infant choices. This often increases the mothers' vulnerability and insecurity in breast feeding the child (Gurmeet, 1998). A link between social support and breastfeeding initiation and duration has been supported in multiple studies. Having friends who successfully breastfeed and seeing family and friends breastfeed increases the likelihood of a mother breastfeeding (Meyerink & Marquis, 2002).

The above evidence may be explained by the fact that as breast feeding mother are encouraged by local communities, especially by husband and experienced mothers, both psychologically and materially, they become interested and confident to carry on breastfeeding.

Moreover, such type of social support is believed to reinforce breast feeding mothers to develop positive attitude towards it.

2.4.1.4 The Educational Rank of Mothers.

Studies conducted in many countries release that the higher the educational level of mothers, the shorter is the breast feeding duration and the reverse holds true which means the lower the educational level of mothers the longer breast feeding duration. (Maclean, cited in Williams, online Doc.). Similarly the scanty and as such comprehensive study in Ethiopia (Abdulaziz, 1988; Tigist et al, 1993; Yeshwamebrat 1995; Eyob 1993) indicated that the educational level of both the mother and her husband has a negative correlation with length of breast feeding.

However analysis of data from 28 countries in Africa, Asia and Latin America by Smith and Kerry (Cited in Yeshewamebrat, 1995) documented a non-significant

relationship between education of women and breast feeding duration and this is found to be consistent with study conducted in China (Tu, 1990). Beside to this the study conducted by Good. S (2009).

Family income is usually a covariate of educational level. The mother's level of education was shown to correlate with the nutritional status of the children.

Several studies evidenced that lower maternal education resulted in infant feeding malpractices, such as the early introduction of cow's milk and premature weaning (Fawzi, as cited in Good 2009). A pilot study in Malawi showed positive results after nutritional education of mothers. They were encouraged to increase total energy intakes, energy densities or intakes of iron and zinc of complementary foods.

2.4.1.5 Maternal Working Condition.

Infant feeding is a time-consuming behavior of the domestic arena and thus profoundly affects the method of feeding newborns. For instance, Eshetu (1994) and Ferry (1981) showed that non working women breastfeed for longer duration than those who work at home and away from home. The primary empirical finding concerning working mothers and infant feeding is that the intention to return to a job does not hinder initiation of breastfeeding but does hinder duration of breastfeeding (Auerbach & Guss, 1984). Most investigators agree that full-time employment and school enrollment are associated with decreased breastfeeding duration as the result of environmental barriers at both work and school (Spisak & Gross, (cited in Bright, 2010). Likewise an inconvenience at workplace like absence of maternity break is found to affect effective breast feeding (Gurmeet, 1998).

2.4.1.6 Urban Dwelling Mothers.

Urban dwelling is one of the most important variables that determine the education of breast feeding. Several studies have shown that urban women breastfed for shorter duration than their rural counter parts (Preze, Nappaporn, cited in Yeshewambrat, 1995). CSA's report also shows that in Addis Ababa, the proportion of women breast feeding their last child until the child was 12-13 months was 55.8% but for other urban centers it was 74.0%. Besides, as a result of stress developed in breast feeding from pressures of

urban life, it interferes with breastfeeding (Gurmeet, 1998). In Ethiopia, where mothers in rural areas tended to exclusively breastfeed their children longer (mean of 2.1 months) compared to their counterparts in urban areas (mean of 1.8 months). Nationwide in Ethiopia, two-thirds of children who are less than two months of age are exclusively breastfed, while at six months of age this number declines to only 18.7% DHS, 2005 (cited in Good 2009). An Ethiopian study in Tigray and Gonder revealed that a major factor for offering complementary food before six months was lack of awareness of breast milk importance (Getahun as cited in Good, 2009).

2.4.2 Socio-Demographic Variables.

2.4.2.1 Sex of the Child.

In early infancy there were virtually no differences between boys and girls in most of the countries studied. In Namibia, Kazakhstan, and the Dominican Republic boys were breastfed slightly more often (i.e., more than 5 percentage points) than girls, but it is difficult to know if the results represent real cultural preferences for boys, because the sex differences were not consistent across age groups. It may be that in some countries boys are breastfed somewhat more in the early months, but not in later life. In Jordan girls are more likely to be breastfed than boys during infancy, but not in the second year. It is also indicated that the regional averages for boys and girls at 12 to 15 months, and the absence of noteworthy sex differences at that age. By 20 to 23 months, larger differences between boys and girls are apparent in some of the Asian and Near East/North Africa countries. In Kenya, Rwanda, Zimbabwe, Guatemala, and Paraguay boys are more likely to be breastfed than girls by about 5 to 10 percentage points. In Turkey boys are 5 times more likely to be breastfed than girls. In Pakistan and the Philippinesse girls tend to be breastfed somewhat more often than boys. Regionally, at 20 to 23 months, boys tend to be breastfed more often than girls in the Near East/North Africa and Asia, while sex differences are not apparent in the other regions (Huggerty, et.al; 1999)

In Ethiopian society where agriculture is the dominant economic activity, strong preference is made for male children (Yeshewamebrat, 1995). Hence mothers lean

towards longer breast feeding duration on the part of the male. For example, (1986) reported that a real discrepancy in breast feeding duration by sex of child, boys are being breastfed longer than girls India.

2.4.2.2. Age of Mothers.

Research studies addressing the influence of maternal age on breastfeeding initiation and duration have varying results (Ford & Labbok, 1990). Investigators have found a strong, positive correlation between maternal age and education level and breastfeeding initiation and duration. Specifically, older, and more educated women are the subgroup most likely to choose breastfeeding as their preferred infant feeding method, and generally they breastfeed their children longer than other groups. Scott & Binns, 1999). Older women are more likely to breastfeed exclusively Arora, McJunkin, Wehrer, & Kuhn, (cited in Bright, 2010). Multiple studies addressing the factors associated with the infant feeding practices have "identified adolescent mothers as one group that is unlikely to breastfeed" (Volpe & Bear, 2000, p. 196).

Still other research evidences have pointed out that there is a positive relationship between duration of breast feeding and age of mothers. Eshetu (1994) shows that mothers in the age group of 35-49 breastfed for about 7 months longer than women in the age group 15-24. Abdulahi (as cited in Yeshewamebrat, 1995) also discovered shorter duration of breast feeding for younger women in Mettu, Haremaya and Addis Ababa. Here it might be the case that older women are more traditional in orientation or are resistant to change and thus likely to breast feed for longer duration.

2.4.2.3 Parity.

In the DHS 2005 parity was higher in mothers with lower education and/or from poorer households. Beyond that, urban women had fewer children than their rural counterparts (2.4 vs. 6.1). In the last few decades, the fertility rate has declined from 6.4 births per woman (1990) to 5.4 births (2005). Further DHS data indicated a desire of the women to limit family size, especially as the number of surviving children increased (DHS, 2005; Bhargava (cited in Good 2009). A greater spacing between children would enable mothers to better care for their children in respect to nutrition and general care. A

recent systematic review evaluated the affect of birth spacing on the nutritional status of children, and found that a longer birth interval was associated with a lower risk of malnutrition in most populations. A reduction in stunting from 10 to 50% was reported when birth interval was ≥36 months. In addition to better care other factors such as prolonged breastfeeding were found to be important (Dewey et.al cited in Good 2009).

The research conducted in Addis Ababa (Tigist, (1993) revealed that the higher the number of the children a women has the more likely she is to discontinue breastfeeding. This may be due to the fact that breast feeding is a form of child care that requires mothers' attention and time and thus interferes with the child care needs of young children. For instance Tigist, (1993) found a negative relationship between parity and duration of breast feeding in Addis Ababa.

2.5. Specific Practices Associated with Breastfeeding

In addition to the fore mentioned causal factors or determinants, there are some specific practices having to do with breastfeeding. These may include suckling or discard of colostrums, the initiation and duration of breastfeeding presented below.

2.5.1. Colostrums Feeding.

The highly protein containing element that is expelled from the breast of women who gave new birth is called colostrums, is perceived differently among different cultures although most findings are in favor of its advantages. It contains more protein and minerals. The most important function of colostrums is its ability to transfer antibodies against various diseases to the body of the infant. Thus it provides temporary immunity against a number of diseases until the mother's milk can begin to provide antibodies also, and until the baby's own body can begin to manufacture its own. But in many cultures mothers due to lack of awareness about the importance of colostrums were refused to feed it for their infants. Because of its color and thickness many mothers considers it as dirty until it is replaced by milk from 3 to 4 days after child birth (Harris, 1993). For example the study in Bangladesh (Begum et al., cited in Greiner, 1996) shows that out of the nationwide sample of 381women, 71%of mothers reported that they have been expelling and throwing away their colostrums. On the other hand, as the result of

attempts made for several years to encourage mothers to give colostrums has nowadays becoming a norm (Greiner, 1996)

2.5.2 Breastfeeding Initiation and Prelactal Feeds.

Early initiation of breast feeding reduces mothers' risk of excess post partum bleeding and anemia. Exclusive breast feeding advances mothers immune system, delay next pregnancy and reduce the insulin needs of diabetic mothers. Breast feeding can help mothers to protect themselves from breast and ovarian cancers and osteoporosis (Singh, 2004). In addition to this, early initiation of breastfeeding is important because it fosters mother-infant bonding and takes advantage of the newborn's intense sucking reflex and alertness immediately postpartum, which permits the newborn to benefit within the first hour of life from the nutritional, antibacterial, and antiviral properties of colostrums Righard and Alade, (cited in Hggerty, 1999). It also stimulates breast milk production and causes the uterus to retract.

On the other hand, delayed initiation of breastfeeding may result in the newborn being provided with other sources of nourishment that can introduce infection and delay lactogenesis (milk arrival) Perez- Escamilla (cited in Hggerty, 1999). Such kind of practice goes in opposite to the 'immediately after birth the newborn infant should get breastmilk which is' commented by physicians.

A study conducted in Bangladesh discloses that breastfeeding initiation is irregular ranging from half an hour after birth to beyond three days (Huffman, cited in Greiner (1996).

More amazingly, mothers in several countries are found to supply their newborn a variety of prelactal foods that harm the health of the new born. Honey, sugar water, mustard seed oil and diluted cow milk are among common neonatal foods in Bangladesh. And one study conducted by Ainsworth (1967), the Ganda in Uganda the new born infant was customarily given food "for the purpose of clearing the throat", and this food contains "amufatu" (butter or other fats an essential ingredient). Still another study conducted by Barrington in Ghana (1960) reported the time variation between birth and

the infant's first food. In some areas the first food is given as soon as the infant has been bathed; if the mother has no milk the nursing relative takes over. This may happen in any case as some people believe that colostrums is harmful for the infant. In other area the infant does not receive its first breastfeed until the second, third or even the fourth day after birth. In the meanwhile the infant is given sugar water or sometimes coconut milk.

Ethiopian mothers also appears to share this experience whereby in some localities they provide their new born unrefined fresh butter believing that it is good for infants though the practice is frequently cited as harmful traditional practices(HTPs) Randa Baren,1996).

2.5.3. Breastfeeding duration.

As stated in the foregoing parts due to various maternal, psychological and cultural factors, the length of period of breastfeeding is seldom uniform among mothers at diverse cultural settings.

For instance, Hawaiians were said to breastfeed for five years and Eskimos for about seven years (Greiner, 1998). In their assessment of the anthropological literature of the time Ploss and Bartlet (cited in Greiner, 1998), anticipated that the average duration of 3-4 years among "primitive" people. Similarly Ford (cited in Greiner,1998)wrote that breastfeeding continued for three years or longer in 15 of 45"primitive cultures" for which he could find clear idea for two years in 16 of them, for 18 months in 13 of them and for 6 months in one culture. Here it is important to indicate that the author of the article did not clearly locate who the primitive people are and where they lived.

Likewise in Ethiopia although the prevalence rate of breastfeeding is reported to be high (99.2%) ,a study conducted in Addis Ababa disclosed due to various factors mentioned earlier the average duration of breastfeeding is declined to 16.5 months Yeshewamebrat (cited in Kebede, 2006).

Despite the encouraging cultural norms and international declarations that recommend a six month exclusive breastfeeding and until or beyond 24 months non-

exclusive (mixed) feeding, existing literature shows that exclusive breastfeeding is moving back elsewhere and the fact make susceptible the newborn infant to infections.

2.5.4. Suckling Frequency.

As it can be understood from the literature, there is no commonly prescribed suckling frequency for infants. However, suckling frequency is observed to differ depending up on the breastfeeding child, younger neonates being frequently breastfeed than older ones. For instance studies in Bangladesh show that at earlier stages 4-5 months infant receive the breast more than once per hour, up to 15 months the breast was still given 0.8 times per hour. From 16 to 24 months there was continued gradual decline to 0.4 times per hour (Guldan et al., cited in Greiner, 1996). And Greiner (1998) on his side suggested that there might not be prescribed fixed hours for sucking rather one has to supply breast on the child's demand.

2.6 Mother- Infant Interactions

Naturally one expects certain interaction pattern between mothers and infants, though it may vary in its form and magnitude and result in differing behavioral development of children.

To many researchers, for instance, Harfouche(1990) and Arnup (1994) breastfeeding is natural way of feeding infants and also considered to be crucial determinant for growth, development and survival of infants. It is the integrated part of child rearing and reflects the ideal cultural image of the mother particularly for traditional societies. Further explanation of these researchers reveals that breastfeeding represents the strongest possible foundation for nutrition and care of infants. It also influences the quality of mother –infant interaction, mother's attitude, values, interests beliefs as well as care taking. To this end Zanden (1993) also stated that breastfeeding provides emotional and psychological rewards that are not avail to mothers who bottle- feed their infants. In his study several mothers reported that the intimate physical contact afford by breastfeeding is a sensual pleasure and interesting. Those mothers believed that breastfeeding highly minimized the separations of the mothers from their infants and thus

mothers are always beside the infants to provide the appropriate care and they are also more responsive to their infants than those women who do not breastfeed.

According to Zanden, the emotional and psychological benefit of breastfeeding serve as the bonding mechanism between the mother and the infant and may itself be a factor in developing other carrying behaviors by affecting child's ability to elicit good care through superior and secure attachment formation.

In similar way Greiner(1998), pointed out that breastfeeding contributes much to the quality of infant's care by strengthening the mother- infant bonding, simulating skin eye contact as well as by providing high quality of nutrients hygienically and countering infection. In line with this view, Harfouche (1990) suggested that breastfeeding has psychological values for both mother and infants. The mother infant interaction and bonding initiated during gestation period are maintained after birth through breastfeeding which create close dyadic physical contact and mutual love as well as infant care (See figure 1at appendix.)

Conforming to the above concept, Lawrence & Gartner (1997) states that breastfeeding and mother's milk benefits to infants in providing many advantages regarding to the general healthy, growth and development, but significantly decreasing risks for a number of acute and chronic diseases. They also reported that breastfeeding has been related to a possible enhancement of cognitive, language and motor development. According to Eibl-Ebestfedt (1989) the physical and verbal mother-infant interaction during breastfeeding has great role for infant's language and motor development. From his study of mother infant interaction among traditional community (in Congo) he reported that mothers begin to talk and play with infants just when they finished drinking milk and release breast. Mothers listen to their infants vocalizations and help them when they have found difficulties.

According to Ainsworth (1967) breastfeeding has the power to reduce the psychological trauma such as mother-child separation. Although, all child nutritions are arranged with appropriate diets on milk and protein by means of different feeding methods such as bottle of cup feeding, it cannot be substituted by the value that child

receives from breastfeeding. This is because the child may suffer from insufficient mother –child interaction.

An interesting study conducted by Richman, (as cited in Gardiner, 1996) observed mother child interactions in five cultures (three industrial and two agrarian) and reported a number of prominent variations. For example, Gussii mothers of Kenya engage in holding and soothing and over physical contact more than do middle class mothers in Boston, but at the same time look and talk to them less often. The writers justified such type of maternal behavior to be the result of culture specific beliefs, values and demographic factors such as high infant mortality rates.

Similarly in agrarian communities of Yucatec Mayans (Howrigan, 1988)among the three categories of caretakers, mothers caretaker was characterized by high rate of holding, soothing rocking and physical caretaking which are believed to promote the child's security, attachment and maternal attention.

The above finding entail that there are variations concerning mother –child interaction during early periods of development depending on the cultural settings. Thus it seems valid that breastfeeding or its absence clearly predicts the occurrence of these specific maternal behaviors are important for normal development of children.

2.7 Opportunities Flattering for Breastfeeding

This section highlights the accessible opportunities that are potentially adequate to protect and promote breastfeeding.

2.7.1. Culture.

Breastfeeding has been a common feature of all cultures since the survival of mankind. Certain cultural beliefs and practices contribute to what women consider to be normal infant feeding practices (Stewart, 2003). The mistaken cultural belief that, for babies, "big is healthy," can lead to both formula feeding and inappropriate early introduction of solid foods (Schlickau, 2005). (See figure 2 and 3 at appendix part). The mistaken idea that larger babies are healthier is common among many racial, ethnic and cultural groups, and

mothers who are part of social networks that hold this belief may be encouraged to supplement breastfeeding with formula if the infant is perceived as thin (Higgins, 2000)

For example, low-income Hispanic women in Denver, Colorado, were found to favor a practice called "best of both" (i.e., providing both breast milk and infant formula). Despite guidance that breast milk is the only source of nutrition a child needs for about the first six months of life, some women mistakenly see the "best of both" as a way to ensure that their babies get both the healthy aspects of human milk and what they believe to be the "vitamins" present in infant formula (Bunik,2006). Another practice associated with cultural beliefs is the use of cereal in a bottle because of the misperception that it will prolong infants' sleep (Heinig, 2006). Besides, the use of colostrums, prelacteal feeding, nutritional supplementation and the duration of breastfeeding have varied and still vary between cultures, between urban and rural areas and between the rich and the poor (World Health Organization, 1989). In many traditional societies breastfeeding is still the principal way of infant feeding, and prelacteal feeds and early supplementation are widely practiced Shirima as (cited in Aarts 2001). Similarly in shinasha culture early introduction of complementary foods is becoming common among mothers for the reason of making their infants fat.

2.7.2. International Declarations or Conventions on breastfeeding.

There are many international instruments such as declarations, conventions and recommendations that could address a women's right to breastfeed. These instruments have legal or normally binding obligations once they have ratified by the government. The following are three of the most important of such instrument

2.7.2.1. TheWHO/UNICEF International Code of Marketing of Breast milk Substitutes and Subsequent Relevant Resolutions (ICMBSR).

In 1981 the WHA in Geneva passed a resolution to adopt the UNICEF/WHO ICMBS which was to be enacted by all governments "as a minimum requirement" (WHO 1981). The main aim of the code is to ensure that all babies has the best possible start in life in

view of the vulnerability on infant in the early months of life and the risk involved in inappropriate feeding practices including the unnecessary and improper use of breast milk subs titutes. And the code is not just for baby milk companies, it is directed at health professionals (midwives), policy makers, citizens groups and individuals.

The code allows baby milk companies to produce information that is factual and scientific and forbids them seeking direct contact with pregnant women and mothers. Thus, the code protects the women's right to make a decision about how to feed her baby. Similarly the code also stresses health workers responsibilities in encouraging and protecting breast and complementary feeding by giving appropriate information particularly in the early days of postnatal periods.

2.7.2.2 The Convention of the Right of the Child (CRC).

Adopted in November 1989, the United Nations General Assembly (UNGA), the CRC market the UNs moved beyond the basic struggle for child survival to a right based approach. The CRC has been ratified by 191countries including Ethiopia and is reported to the most universally embraced human rights instruments in history (UNICEF, 1997)

Article 24 of the CRC states that, it is the right of the children to 'enjoy the highest attainable standard of health'; the government who ratified the convention has a legal obligation to fulfill their commitment regarding CRC. For example they should take measures to reduce children morbidity by insuring that all sectors of society particularly parents have access to education and are supported in the use of basic knowledge of child health and nutrition, and advantages of breastfeeding ….(UN.1989).

The 2002 World Fit for Children (cited in UNICEF, 2006) which clearly states "to reduce child under-nutrition among children less than five years of age by at least one third, with special attention to children under two years of age" and "to protect, promote and support exclusive breastfeeding for six months and continued breastfeeding with safe, appropriate and adequate complementary feeding up to two years of age and beyond".

In short, government who ratified the convention should do their best in the provision of safe and adequate nutrition for infants in the protection and promotion of breastfeeding

and ensuring the proper use of breast milk substitutes as these are necessary on the basis of adequate information and through appropriate marketing and distribution (CRC Committee and UNICEF, 1997).

2.7.2.3. The International Labor Organization (ILO) Maternity Protection Convention No 103.

By revising the 1952 Maternity protection convention No 103, in June 2000 the ILO adopted a new convention that supersedes convention 103 and which has provision for 14 weeks statutory maternity leave. It is an increase from 12 weeks and provision necessitating adequate nursing breaks that will allow women to continue breastfeeding after mothers return to work (http:// www.ilo.org).

Working mothers' rights to take breastfeeding breaks at their work-place were included in the third International Labour Organisation (ILO) convention, as early as in 1919, and this was reinforced in convention 103 in 1952 and in the recently revised Maternity Protection Convention 183 ILO 2000(cited in Aarts 2001)

However, some studies reveal that many employed women around the world are still only entitled to a short period of paid maternity leave. Combined with unfavorable conditions at work place, this make breastfeeding difficult (Martiyn cited in Kebede, 2006). It is vivid that for effective breastfeeding during recommended 6 months period of exclusive breastfeeding, and continue breastfeeding, express milk or get nursing breaks, they all call for creating conducive environment for mothers even after 6 months.

Nonetheless, the issue on paid maternity leave might not be serious concern in Ethiopia as many mothers are unemployed and house wives. On contrary , a significant number of mothers are found employed in some small private business and non-business enterprises where four month maternity leave is not a such implemented fully and this profoundly affect optimal breastfeeding.

2.8 Complementary Infant Feeding

2.8.1 Definition and Importance of Complementary Feeding

According to (PAHO/WHO 2003), *complementary feeding can be* defined as, the process starting when breast milk alone is no longer sufficient to meet the nutritional requirements of infants and therefore other foods and liquids are needed, along with breast milk. And "complementary foods" as any foods—whether manufactured or locally prepared—that are suitable as a complement to breast milk when it becomes insufficient to meet the nutritional needs of the infant. Any non-breast milk foods or nutritive liquids that are given to young children during this period are defined as *complementary foods*.

In developing countries, efforts to promote sound infant and young child nutrition are based on the World Health Assembly's recommendation that infants should be breastfed exclusively for the first 6 months of life and fed appropriate complementary foods from about the age of 6 months, with continued breastfeeding and frequent feeding with safe and adequate amounts of local foods. Breastfeeding with complementary foods should be continued from 6 months to two years (WHA, 1994).

Of the three major components of infant feeding, (breastfeeding, complementary feeding, weaning) complementary feeding is often regarded as the most complex. A mother's complementary feeding practices are determined by a number of factors often out of her immediate control including local water and food availability and accessibility, employment, and environmental conditions. Knowledge of appropriate timing of introduction of foods and types of foods is another factor often complicated by lack of resources. Marriott et al (cited in Schwartz H.L 2008) reported that the 20 countries studies, 21.9% of mothers reported feeding 0- to 6- month old infants some type of solid food, and 80.1% of mothers reported feeding solids to 6 to 12 month olds. The same study also showed that there are types of milks, other liquids and solid foods were much more commonly administered than commercial infant formulas in the countries studied.

WHO recommends starting complementary feeding from the age of six months with continued breastfeeding up to two years of age or longer. Appropriate foods should be matched with the nutritional needs of the infant so that adequate amounts of energy, protein and micronutrients are provided. Also recommended is that all foods given are hygienically stored and prepared to minimize risk of food borne pathogens. WHO's last recommendation regarding complementary feeding is concerned with an individual infant's feeding behaviors. Infants express hunger, satiety, and preferred feeding methods through a variety of behaviors from which a mother acts upon according to her interpretation. Infants do not necessarily have the capability to choose which types of foods and beverages they should consume; this responsibility usually lies with the mother (WHO, 2001. cited in Schwartz H.L (2008)

2.9 Effects of Complementary Feeding on Infants

Inappropriate complementary feeding practices are a major cause of the onset of malnutrition in infants. The incidence of malnutrition rises sharply during the period from six months to 18 months of age in most countries, and the deficits acquired at this age are difficult to compensate for later in life (See figure 2 at appendix)

From six months onward, when breast milk alone is no longer sufficient to meet all the nutritional requirements, infants enter a particularly vulnerable period of complementary feeding during which they make a gradual transition to eating family foods. WHO, 2001 (cited in Schwartz, .2008)

Poor nutrition intake during this critical period of development can increase the risk of morbidity and mortality and can result in compromised growth and cognitive function in later years (Shroeder & Brown, 1999, (cited in Schwartz, 2008).

In many parts of the world, lactation amenorrhea is the major factor in birth spacing, particularly in regions lacking in birth control prophylaxis or family planning programs. A positive association between the early introduction of complementary foods and the rapid resumption of ovulation has been documented (Simondon, 2003 (cited in Schwartz, 2008).

Increasing the length of time between births is important given that a newborn often takes a mothers' time away from other infants. This concomitantly results in cessation of breastfeeding of existing infants or introducing inappropriate foods too early, which has been known to lead to increased morbidity and mortality in infants (Jacobsen, Sodemann, Molbak, & Aaby, 1996 cited in Schwartz, 2008).

2 .10 Common Deficiencies of Complementary Foods

Complementary foods are often deficient in energy, protein and micronutrients including calcium, iron, zinc, vitamin A, riboflavin. Poor bioavailability of these micronutrients further compounds this problem (Hotz & Gibson, 2001 cited in Schwartz, 2008). Complementary foods are often used as substitutes instead of supplements to breast milk, and are most always of lesser nutritional quality (See figure 2). World Health Assembly's recommendation that infants should be breastfed exclusively for the first 6 months of life and fed appropriate complementary foods from about the age of 6 months, with continued breastfeeding and frequent feeding with safe and adequate amounts of local foods

2.11 Introduction of Complementary Food to Infants

The appropriate age at which the introduction of complementary foods to infants depends on a range of factors which include the growth and development of the infant and the readiness of the infant to accept different feeding mode (e.g. spoon versus suckling). The readiness of the infant is determined both by the stage of development and relationship with caregivers, and by his/her (fine, gross and oral) motor abilities. However, beliefs and cultural habits of the family and socioeconomic factors can play the major role in the decision when complementary feeding is started Wright 2004. (Cited in EFSA, 2009). There may be a critical window for introducing lumpy solid foods (Illigworth 1964) and if they are not introduced before 10 months of age, it may increase the risk of feeding difficulties which may have an impact on dietary habits later in life. There has been much controversy over the optimum time at which to introduce food, other than breast milk into an infant's diet. Introducing solid food too early may

undesirably increase renal solute load, increase the risk of infection, compromise the maintenance of lactation amenorrhea, and possibly expose the infant to dietary antigen. On the other hand, according to WHO global infant feeding recommendations WHO, 2002 (Cited in Basil,J.Kanoa (2011),complementary feeding (solid food) should start at six month and breast feeding should continue to two years of age. Early introduction of complementary feeding was associated with more wheezy and respiratory illness (Al-sahirafi,M.et.al.,(2002) cited in. Kanoa, J. B. (2011) leaving complementary feeding too late may impair growth because the nutrients density of liquid diet is low (Libney, M.J.(2006) cited in,. Kanoa J. B. (2011).

Regarding the labeling rules and in particular the age of introduction of complementary food in an infant's diet, Article 8 of Directive 2006/125/EC provides for the following mandatory particular labelling: '*the stated age shall not be less than four months for any product'* and allows that *'products recommended for use from the age of 4 months may indicate that they are suitable from that age unless independent persons having qualifications in medicine, nutrition or pharmacy, or other professionals responsible for maternal and child care, advise otherwise'*.(EFSA,2009)

At international level, the Codex Standard for processed cereal-based foods for infants and young children covers processed cereal-based foods intended for feeding infants as a complementary food generally from the age of 6 months onwards.

A number of studies also have revealed the effect of age of introduction of complementary foods or duration of exclusive breast-feeding on growth. In a randomized study of timing of introduction of complementary food, infants (N=165) were randomized to start complementary foods at 3 or 6 months. None of the infants were breast-fed at the start of the study at 3 months. There were no differences in length, weight or body composition at 6 or 12 months (Mehta et al., 1998 cited in EFAS, 2009). Kramer and Kakuma have performed a large Cochrane review of the effects of duration of exclusive breast-feeding which was last updated in 2009 (Kramer and Kakuma, 2002, cited in EFAS,2009). In a large cohort of Danish children born 1996 early introduction of

complementary feeding (before 16 weeks) was positively associated with infant weight gain, but only in those breast-fed for less than 20 weeks (Baker 2004).

2.12 Process of Complementary Feeding

Mothers recognized a variety of cues that signaled their infants' desire to eat foods other than breast milk. These included the babies' watching other people eat, holding people's hands while they ate, putting objects in their mouths, and fidgeting when they saw or smelled food. Teaching an infant to take complementary foods began with these cues and then proceeded by trial and error. Some mothers prepared their infants to eat solid foods by trying porridge intermittently from a young age. Other mothers simply began feeding their infants porridge when they thought the infant was interested in eating and had achieved the physical capacity to swallow. Most mothers began by feeding the infant porridge with a spoon and later let the infant feed himself/herself from a plate (Davia, 2003).

2.13 Practices of complementary infant feeding

The impact of feeding practices on nutritional status, growth, development, and health outcomes of infants and young children are well documented. The critical window for improving child nutrition is from pregnancy through the first 2 years of life, a period when the transition is made to CF. *In breastfed infants, the objective of CF is to complement ongoing breastfeeding, neither displacing nor replacing breast milk. CF typically covers the period from 6 months to 2 years of age, and due to the potential for inappropriate feeding practices and risk of malnutrition, this is a very vulnerable period for infants and young children* WHO/UNICEF (2008).

Appropriate CF is essential for achieving the health, growth, and development potential of young children, but some CF practices put infants and young children at increased risk. Inappropriate CF practices include late initiation of breastfeeding, a lack of exclusive breastfeeding in the first 6 months, CF starting too early or too late with foods that are often nutritionally inadequate and unsafe, and discontinued breastfeeding. In terms of intervention, influencing appropriate feeding practices is as critical as

influencing the availability and use of adequate foods[29]; a complex activity being subject to political, psycho-social, cultural, economic, and commercial forces

2.14. Developmental aspects

2.14.1. Food Preferences

Preference for flavour compounds, particularly those detected by the sense of smell, is highly influenced by learning early in life. For instance, prenatal experience with food flavours, transmitted from the mother's diet to amniotic fluid, leads to a greater acceptance of these foods at the time of introduction of complementary foods (Mennella, 2001 cited in EFAS, 2009). Flavour learning continues after birth, as a consequence of exposure to mother's milk. As in the case with amniotic fluid, breast milk does influence infants liking and acceptance of food flavors (Forestell and Mennella, 2007 cited in EFAS, 2009). Of course, food preferences are also affected by the introduction of complementary feeding. Repeated exposures to such foods promote their acceptance (Sullivan & Birch, 1994 cited in EFAS, 2009). There are some indications that a progression in texture complexity may also play a positive role in infants food preferences (Lundy et al., 1998 cited in EFAS, 2009). Similarly, providing infants with a variety of flavours when complementary foods are first introduced greatly facilitates the subsequent acceptance of foods that are new for the infants (Maier, 2008 cited in EFAS, 2009) which may have an impact on dietary habits later in life.

2.14.2. Digestion and absorption

If complementary food is introduced after 4 months of age, the digestive system will be mature enough to digest and absorb starches, proteins and fats provided by a non-milk diet. However, infants functional gastric capacity is quite limited. It ranges from 38 to 76 mL in term neonates (Zangen, 2001) to about 20 mL/kg body weight in toddlers (Zangen, 2003 cited in EFAS,2009).), which amounts to about 160-200 g/meal for a 6-8 months infant.

2.15 Health Aspects

Under this the health aspects of complementary foods to infants are focused. These are:

2.15.1. Obesity

Several studies have examined if age at introduction of complementary food had an effect on risk of obesity in childhood and found no effect (Burdette, 2006; Kramer, 1981; Zive, 1992; Maffeis, 1994; Lanigan, 2001 cited in EFAS, 2009). However, one prospective study from Scotland found that those who were introduced to complementary foods before 15 weeks had higher weight and body fat at age 7 years (See figure 2). In an analysis where the age of introduction of complementary foods was included as a continuous variable, a positive association between body fat and age at introduction of complementary foods was also found. Wilson, 1998. In a Danish study with 5068 individuals born 1951-61 there was no effect of age at introduction of complementary food on the risk of obesity during childhood, but at follow-up at 42 years, those who were introduced to complementary feeding late had a lower risk of obesity as adults.

There are many studies which have found highly significant positive associations between growth during infancy and the risk of being overweight or obese later in life (Ekelund, 2006). The studies of the effect of age at introduction of complementary food on infant growth have therefore also some relevance for the question if age of introduction of complementary foods has an effect on the risk of later obesity.

2.15.2. Growth

Studies for example by (FSA) have shown that breast-fed infants have a different growth pattern, when compared to infants fed infant formula. Neither controlled clinical trials, nor observational studies from developing or developed countries show deficits in weight or length gain for those who continued to be exclusively breast-fed for 6 months. However, there is no indication that a small reduction in growth has negative effects. The data were grossly inadequate to reach conclusions about the effect of exclusive breast-feeding beyond 6 months. It is also indicated that the age of introduction of complementary feeding seems not to have a strong impact on growth velocity (both

weight and length). However, some data suggest that late introduction, after 6 months, could result in a decline in rate of length and weight gain and early introduction, before 4 months, could result in an increased rate of weight gain which could have long term negative consequences with regard to an increased risk for obesity, type 2 diabetes and cardiovascular disease in adult life (EFSA 2011).

2.16 Sex Difference on early introduction of complementary foods

There are regional averages differences in the median age of introduction of complementary foods to child by sex. In Latin America/Caribbean and sub-Saharan Africa, there were few differences in age of introduction by sex, although in both regions foods were introduced to girls slightly earlier than to boys. In the Asian countries, sex differences were more pronounced, with girls being started on complementary foods almost a month earlier than boys on average (7.7 vs. 8.4 months). In the Near East/North Africa, median age data were available only for Egypt, where boys were given complementary foods almost a month earlier than girls (6.9 vs. 7.7 months). Sex differences in the age of introduction of foods may reflect cultural/religious biases and may partially explain differences in nutritional status, morbidity, and mortality rates, although many other factors also influence these outcomes (Huggerty, 1999)

2.17 Frequency of Infant Feeding

Infants need to be fed five to six times a day in addition to breast feeding. It must be remembered that inadequate feeding of infant during the first two years of life is the main cause of malnutrition. And also breast feeding should be continued up to two years or beyond. In the beginning when complementary foods are introduced to infants after six months of age it must be fed when the infant is hungry. As the infant start taking complementary foods well the infant should be given breast milk first and then complementary foods. This will ensure adequate lactation (Singh, 2004)

2.18 Local and international research Findings on mothers' knowledge, attitude and practice of complementary infant feeding

2.18.1. Knowledge and attitudes.

Study conducted by Desssalegn,Dayan and Tefera in Jimma ,Arjo Woreda, revealed that mothers' knowledge and attitude about complementary food were significantly associated with an introduction of complementary food. Mothers who thought that complementary food is good for normal growth of children were more early introduced additional food compared to mothers who had no such perception and findings from Zambia, Gambia and Indonesia showed that maternal knowledge and attitude about optimal child feeding practices had a significant role in the promotion of optimal infant feeding practices Desalegn, 2013).

Other similar studies also showed that lack of knowledge; breastfeeding experiences and pre-lactation feeds are some factors of early introduction of complementary food (Haider, 2010.)

2.18.2. Complementary Infant Feeding Practices.

Because most African countries begin introducing complementary foods before four months of age, the safety, sanitation, and appropriateness of the foods introduced are of much importance to the infant's health UNICEF, (cited in Schwartz, H.L, 2008). In a study conducted in rural Cameroon, more than 38% of the 320 mothers surveyed reported giving their infant water in the first month of life, and all had given their infants water and food supplementation prior to six months of age (Kakute , 2005). In Malawi, East Africa, Hotz and Gibson determined that by four months of age, all of the 163 mothers in their study group had begun complementary feeding (2001).Common first beverages given to infants in sub-Saharan Africa include water, animal milks, herbal teas and sugar water and are commonly given from birth and continue even after breastfeeding has been well established (Okolo, 1999). The most common solid foods introduced are carbohydrate based staples such as rice, cassava, potatoes, millet, maize and other roots and tubers. There are usually mashed or pre-chewed for ease of ingestion and then mixed with water or animal milk. During the first six months of age gruels are regularly given, however after this age family foods are usually substituted. Protein sources including

fish, beef, goat, chicken and eggs are rarely given to infants as these are usually reserved for the head(s) of the household.

Chapter Three

3. Methodology

This chapter presents the, instrument for data collection, the population, sample size, sampling techniques, data collection procedure and data analysis methods, pilot study and ethical considerations.

3.1 Research Design

This study employed the combination of both qualitative and quantitative methods because the qualitative method is appropriate for data collected through interview and focus group discussion and the quantitative methos is used for data collected by using questionnaire. In this mixed approach the researcher used quantitative methods of data collection as the dominant and qualitative methods are supplementary.

3.2 Target population

The general populations of this study were 272 mothers who are breastfeeding their infants and whose age limitation is in between 18-45. Four kebeles were purposefully selected due to their relative crowd population of breast feeding mothers. Among the total mothers 80 mothers were selected by using convenience sampling.

3.3 Description of Study Site

Bullen Woreda is found in Metekel zone of Benishangul Gumuz Regional State, one of the nine regional states of Ethiopia located in the Western part of the country.

There is only single health center, it is not only one in number but also under equipped by material, drugs and health human resources so one may understand that health center is insufficient to provide quality services to the population in the study area (Woreda Government communication Office,2014). This indirectly indicates that there is little

chance for mothers to have education about breast and complementary infant feeding and since more sources of income is depend on agricultural activities, mothers are forced by their husbands to be with them in farm lands than nursing their infants which adversely has influence on infant feeding in shinasha culture**.**

3.4 The Rationale for Selecting the Study Area

Bullen, which is one of the Woredas in Metekel Zone is the site that the study is base. The most important reasons for conducting this study in Bullen *Woreda* include the following:

a. It may fill the gap in the absence of studies on knowledge, attitude and practice of mothers on breast and complementary infant feeding in the study area.
b. The area is still in acquaintance with traditions like early marriage, large family size norms, which in one or another way affect the practice of infant-feeding among mothers.
c. The Woreda is diversified in terms of socio-cultural setting and most populated area of the zone
d. The researcher is familiar with the study area and expects high response rates.

3.5 Sampling Frame

The participants are Shinasha mothers whose age range is from 18 to 45 years old. The mothers are currently breastfeeding their infants /child or practicing complementary feeding from birth to the second year.

3.6 The Sample Size

There are 19 Kebeles in Bullen Woreda. In order to gather data from four kebeles of the woreda, which are Bullen 02, Metti, Addisalem and Matta have been selected purposely because of their relative breast feeding population.

According to Woreda Health Office, it is very difficult to have the exact number of mothers who have infants below two years of birth and breast feeding currently. But the information from kebeles health extension workers indicates that there are around 272

mothers feeding infants currently. Among these Bullen 02 has around 68 mothers and among these 20 mothers was selected. In Metti there are 57 and among these 17 mothers, in Matta 62 among these 18 mothers and finally Addis Alem there were 85 mothers among these 25 mothers were selected by using convenience sampling. So totally the samples of 80 mothers of having a child below two years who are living in four *kebeles* of the *Woreda* were selected.

3.6.1. Sampling Technique.

The sampling technique that has been used is non- probability sampling in which case respondents meeting the required ethnic group and having the infant from birth up two years of age has been selected by using convenience sampling.

3.7 Instruments of Data Collection

The instruments of data collection includes:-

3.7.1. Interview.

Interview is an interchange of views between two or more people on a topic of mutual interest, which focus on the centrality of human interaction for knowledge production, and emphasizes the social situations of research data. Accordingly the researcher interviewed health extension workers of the study site kebeles**.** It includes seven items which were developed by the researcher (see appendix I).

3.7.2. Focus Group Discussion (FGD).

Its purpose is to obtain in-depth information on concepts, perceptions and ideas of a group. The idea is that group members discuss the topic among themselves, with guidance from the facilitator.

It has advantage of collecting information from different people with in short period of time. This instrument is also helpful in establishing the internal triangulation since people has face opportunity to correct one another. Therefore the reseasrcher have arranged group discussion. The group discussion has 8 individuals. Individual involved in the discussion are elder and experienced mothers so as to see knowledge, attitude and

practice differences among varied age group of mothers on breast and complementary infant feeding. It has five items developed by the researcher and checked their appropriateness to the culture studied.

3.7.3. Questionnaire.

This instrument is helpful for the reason that it makes the task easier in collecting data from the wide range population with s short period of time. The questionnaire items have been used to collect data on the respondent's socio-demographic data, source of information, awareness /knowledge, attitudes as well as practice of mothers who have infant below age two years and are presently breast feeding and introducing /providing their infants with complementary foods. It consists more than seventy items developed by the researcher on line with the review literature and some were taken from the previous studies. Among these eighteen items and seven were subscales developed by Rosenbergs to measure the attitudes about breast feeding and complementary feeding respectively.

In the line of investigating the attitude of the respondents towards breast and complementary infant feeding 25 close- ended items were employed 18 items for breast feeding attitude and 7 items for complementary feeding attitude. Each item was followed by five alternatives: Strongly Agree, Agree, Don't know, Disagree, and Strongly Disagree. The items were constructed in such a way that they can elicit either positive or negative or combined reactions from the respondents the label of the alternatives is as follows; SA= Strongly Agree, A =Agree, DK= Don't know, D =Disagree, SD =Strongly Disagree.

In the mean computation the following weights were assigned to the alternatives: Strongly Agree=5, Agree=4, Don't know =3, Disagree =2, Strongly Disagree=1.

Thus regardless of the direction of the statements, the higher mean value indicates general agreement with the items while lower mean value represents general disagreement with the propositions. Here Rosenberg's five point attitude scale comprising 18 items for breast feeding and 7items for complementary feeding was

employed so as to measure mothers' attitude about breast and complementary infant feeding. Numerically parallel to the frequency and percentage values were analyzed and interpreted as follows: $2 < x < 0$: interpreted as general disagreement and $5 \leq x \geq 2$: interpreted as general agreement.

3.8. Methods of Data Analysis

The following data analysis methods has been employed for analyzing the data that has been collected

1. Percentage, Frequency, and Mean; in this case, variables that better suit for such analysis has been treated.
2. One way ANOVA was used whether there was significance difference in age of mothers and knowledge, attitudes and practices of mothers on breast and complementary infant feeding.There were three groups of respondents categorized on the basis of their age. These age groups are younger mothers (mothers whose is below 24 years) middle adulthood mothers (25- 34 years) and late adulthood mothers (35-45 years and above). And since ANOVA does not indicate which specific pair of means is significantly different, post hock analysis was used.
3. Qualitative analysis: the data that has been obtained through focus group discussion (FGD) and interview was analyzed by means of qualitative approach.

3.9 Pilot Study

The purpose of pilot study was to check the applicability and quality of the instrument that was developed to collect data about breast and complementary infant feeding in shinasha culture. The questionnaire was prepared in Amharic language consisting of 70 close ended items. The questions were divided in to sub titles focusing on different aspects of breast and complementary infant feeding.

Even though, the questions were prepared in reference with available literature on breast and complementary infant feeding practices of shinasha culture, it is to test the quality of instruments to get better response from the questions raised.

The pilot study was conducted by taking 16 mothers from Azem kebele who available at home during pilot study session and who share common features in ethnic back ground and location.

The pilot study was conducted to check the clarity of the questions and their cultural appropriateness, the time devoted to fill the questionnaire, the reaction of the respondents to the questions and other issues. In the particular focus on the attitude measures both on breast and complementary infant feeding the internal consistency were computed and the result of cronbach alpha (α) showed that the scale wasfound to be reliable with α coefficient of 0.76 for breast feeding attitudes and α coefficient of 0.71 for complementary infant feeding attitudes, which indicates that the internal consistency of the reliability is acceptable. The pilot study questionnaire took one hour and 15 minutes to complete. After pre-test the questionnaire was modified.

Table 1

The Result of Pre-Test Questionnaire and the Modifications Made

Kind of difficulty observed	Number of items with a difficulty	Example of items with the difficulty	Measure taken	Example of the item which is customized)
The items repeated	4	What did you fed your infant just after birth?	Removed	Removed
Lack of clarity	3	Which of your children do you think should fed breast milk for longerperiod of time in yourpoint of view?	Modified	Which of your children do you think should breast fed longer?
Tricky to answer	2	Is it health extension workers' or that of older mothers' advice about complementary infant feeding which one is superior or better?	Removed	Removed

3.10 Data Gathering Procedures

As it has been mentioned so far the study was conducted in four kebeles of Bullen woreda.

By considering the wide nature of the study area and the potential language barrier (since there are people who do not speak Amharic) five assistants were hired who are from the same study area and can speak shinashgna language to translate Aharic to mothers and three of them are degree holders and two are diploma holders. The assistants were hired to assist the data collection process and translators in the whole process.

On the first day, a half day training was given to the assistants in which the objective and contents of the research was thoroughly discussed. In the training the researche and the assisstants tried to replace/translate some of the concepts which are in Amharic in to their respective Shinashigna language meaning so that all of us can say the same thing while interacting with the informants/respondents.

Concerning the focus group discussion participants who qualify the subtle requirement like sex and age were participated. The focus group discussion was held in open space setting for two hours. The focus group discussion was held among 8 mothers in Shinashigna and took one hour and fourty five minutes and the responses were recorded by the sound recorder with the consent of the participants.

3.11 Ethical Considerations

Mothers were given a full explanation in the Shinashigna language about the purpose of the study and the participation was completely optional. The mothers who participated in the study received the awareness session regarding infant feeding issues. All the study participants were reassured that they would be anonymous. Names or any personal identifiers were not recorded. Respondents were clearly told about the study and the variety of information needed from them. They were given the chance to ask anything about the study and made free to refuse or stop the interview or filling questionnaire at any moment they want if that was their choice.

Chapter Four

4. Results

This chapter of the study incorporates the analysis and interpretation of data gathered from participants in Bullen Woreda of Benishangul Gumuz Region.

The questionnaire containing both close and open ended question (structures and semi-structured items) were used to collect data pertaining to breast and complementary infant feeding from 80 mothers of Shinasha people as a research participants. Once the data were collected both qualitative and quantitative analysis techniques were used to analyze data. Accordingly, the data obtained from the questionnaire were quantitatively analyzed by using one way ANOVA, percentage, mean, frequency.

The data obtained from FGD (focused group discussion) and interviews were also analyzed qualitatively by narrating the responses of the participants. The responses of the participants are synthesized in light of the research questions in different categories.

4.1 General Profiles of the Respondents

In this section, the selected household characteristics of the survey participants are presented to provide general demographic information (age, religion, residential areas, educational status, etc) about the sample household mothers.

Table 2

Background Information of the Respondents

Age of Mothers	Frequency	Percent
18-24	24	30.0
25-45	42	52.5
46-60	14	17.5
Total	80	100
Religion		
Orthodox	61	76.2
Protestant	19	23.8
Total	80	100
Residential Areas		
Big Town	9	11.3
Small town	21	26.3
Rural	50	62.5
Total	80	100
Occupation Type		
House wife	57	71.3
Petty trade	12	15.0
Gov. Employee	11	13.7
Total	80	100
Monthly Income		
<200 Birr	29	36.3
200-500	32	40.0
500+	19	23.8
Total	80	100
Educational Level of Mothers		
Couldn't read and write	36	45.0
Elementary	22	27.5
Secondary	11	13.8
Certificate/Diploma	7	8.8
Degree and above	4	5.0
Total	80	100.0

As can be seen from Table 2 above, the most frequently occurring age category is the age between 25-34 years. It is modal age common to the 42 (52.5%) of respondents. Computation of the age of the mothers indicates that they are around middle adulthood in terms of developmental category. Similar computation also shows that 24 (30 %) of the respondents are mothers with age range of between 18-24 years which indicates that they are in the adolescent stage. Lastly, the 14 (17.5%) of the respondents are found in the age range of between 35-45.

The religion affiliation of most respondents was Orthodox Christian followed by Protestant believers. On average, 76.2%were Orthodox Christians while others 23.8%were Protestants.

Regarding the residential areas, (62.5%) of the respondents were living in rural areas while others (26.3%) were living in a small town. And a very insignificant number of the respondents were living in a big town (11.3%).

Occupation wise, most of the respondents (71.3%) appears to be housewives followed by petty trading (15%) and government employees (13.7%).

Concerning monthly income, (40%) of the respondents earns the monthly income of birr between 200-500. Whereas (36%) of respondents earns birr less than 200 per month and (23%) of the respondents earns birr 500 and above.

With regard to educational status, 45% of the respondents did not read and write and while only 5% of the respondents have attained education above degree. 27.5% of the respondents attended elementary education, 13.8% secondary education and 8.8% certificate/diploma.

4.2 Source of Information about Breast Feeding

Table 3

Sources of Information on Breast Feeding

Information about Breastfeeding Before Birth	Frequency	Percent
Yes	39	48.8
No	41	51.2
Total	80	100.0
Information from Various Sources		
Husband	1	1.3
Elder mothers	32	40.0
Radio/Television	2	2.5
Cultural Experience	14	17.5
Health Professionals	16	20.0
Nobody	15	18.8
Total	80	100
Information given by Health Extension Workers		
Yes	33	41.2
No	47	58.8
Total	80	100.0

Regarding sources of information about breast feeding before birth the "Yes" or "No" alternative questions were forwarded to the respondents. Accordingly, 51.2% of the respondents do not have any information about breast feeding before birth, while 48.8% of the respondents have information.

The sources on information about how, why and when to breastfeed also revealed that most mothers (40%) have got information from elder mothers, and (20%) of respondents also reported that they got information from health extension workers, while others replied that they were informed by nobody and cultural experiences (18.8%) and (17.5%) respectively. This implies that the experiences of elder mothers need to be encouraged and scale up.

However, 58.8% of the respondents were not given any type of information about breastfeeding when they go to health centers for check up, while other mothers (41. 2%) got information by health extension workers. So that, the health extension workers participation in providing information to mothers about breastfeeding needs improvement.

4.3. Mothers' Awareness/Knowledge on Breastfeeding

Table 4

Knowledge of Desirability of Colostrums for Infants

Desirability of Colostrums	Frequency	Percent
Desirable	43	53.8
Undesirable	16	20.0
Don't know	21	26.2
Total	80	100.0
Knowledge of Breast Feeding Advantage for Breastfeeding Mothers		
Has merit to mothers	20	25.0
Has no merit to mothers	55	69.0
Don't know	5	6.0
Total	80	100
Knowledge of Duration of Exclusive Breast Feeding Based on Sex		
Males	58	72.5
Females	22	27.5
Total	80	100

With regard to the mothers awareness 53.8% have awareness/knowledge about the necessity of colostrums feeding to their infants. While, 20% of mothers replied "not desirable" about the importance of colostrums feeding to their infants. 26.2% replied that they are not sure about the desirability of colostrums feeding to their infants.

As shown on the above table (table 4) almost all respondents (69%) replied that breast feeding does not have any advantage for breast feeding mothers. On the other hand, 25% of the respondents answered that breast feeding is useful to breast feeding mothers. The

remaining respondents (6%) replied that they are not sure about the importance of breast feeding to breastfeeding mothers.

This indicates that awareness creation program has to be prepared by health extension workers to mothers about breast feeding importances to breast feeding mothers.

As indicated in table 4, 72.5% of the participants replied that among both sexes of their children males should breastfed for longer period of time. In contrast to this, 27.5% of respondents replied that females should breastfed for longer period of time. This has important implication that mothers should be made awared by health extension workers about both sexes of thir children should be threated equally in breastfeeding duration.

Table 5

One-Way ANOVA for Knowledge of Breastfeeeding as a Function of Age Categories of Mothers

D. V	Demog. C	Descriptive Statistics			DF		F	Sig
Variables measuring knowlege	Age.C	N	Mean	S.D	B/n. G	W/n.G		
	18-24	24	1.80	. 83				
	25-45	42	1.82	.69	2	77	.932	.398
	46-60	14	1.9	.67				
	Total	80	5.52	2.19				

P>0.05, two-tailed

NOVA table above (table 5) shows that there is no statistically significant difference in the knowledge of breastfeeding as a function of age of mothers [(2, 77) = .932, p> .05]. That is knowledge of breastfeeding did not reveal differences in the age of mothers.

4.4. Mothers Attitudes about Breastfeeding

Table 6

Breast Feeding Attitude as Related to Interest and Physical Appearance of Mothers.

S. No	Statement	SA N	%	A N	%	D N	%	SD N	%	Mean*
1	I breast fed my child on my own interest	32	40	36	45	8	10	4	5	1.80
2	I breast fed just only to avoid pregnancy	-	-	8	10	56	70	16	20	3.10
9	I dislike breasfeeding because it makes my appearance thin	9	11.25	18	22.5	26	32.5	27	33.75	2.88
10	Breast feeding distorts the shape of my breast	2	2.5	4	5	35	43.7	39	48.7	3.38

Excerpt from Appendix IV

The participants were asked whether they are interested in breast feeding or not. Here, 45% of the participants showed their interest in breast feeding by their own willingness, meaning without the lobby of others. While others 5% reported that they are not willing to breast fed by their own interest.

Relating breast feeding to pregnancy only 10% of the respondents indicated they involved breast feeding simply to avoid pregnancy where as the remaining vast majority (70%) replied that they engage in breast feeding not to avoid pregnancy rather to help the growth of their infants. In general, the participants appear to have engaged in breast feeding not because of persuasions from others but by their own initiatives.

As it can be seen in the table, the attitude of mothers about breast feeding, 33.75% of the participants replied that breast feeding never make their appearance thin. On the other hand (32. 5%) responded that since breast feeding is similar with donating ones blood it exactly makes their appearance thin. Concerning the effect of breast feeding on the shape of the breast, the vast majority (48.7%) of the respondents revealed their disagreement on the issue. While only few of the participants (5%) agreed that the breast feeding distorts the shape of their breast.

Table 7

Breast Feeding Attitude In Relation to Biological and Cultural Values

S. No	Statements	SA N	%	A N	%	D N	%	SD N	%	Mean*
7	God created breast on me to feed my child	19	23.75	45	56.25	12	15	4	5	2.01
13	As it is our culture, breast feeding should not be neglected	15	18.75	44	55	13	16.25	8	10	2.17
14	Now a days' breast feeding is becoming old fashion	1	1.25	2	2.5	38	47.5	39	48.7	3.43

Excerpt from Appendix IV

The respondents were enquired further to point out their outlook of breast feeding by associating with their biological and cultural values. Accordingly, a large proportion (56.25%) of the respondents expressed their agreement with the item that states as God created breast on us to feed our infants and only few (15%) of the respondents appear to hold negative attitude towards the item.

Concerning cultural values of breastfeeding, about 55 % of the respondents believed that breastfeeding is their cultural practices and it should not be neglected. But the rest, 16.25% of the respondents did not ascribe breastfeeding to the cultural values. On the other hand, so as to have the respondents' attitude about the current status of breastfeeding 48.75% of the participants disagreed about the notion that breastfeeding is old-fashion.

Table 8

Breastfeeding Attitudes on Mother-Child Interaction, Social Reactions and General Perception

S. No	Statement	SA N	%	A N	%	D N	%	SD N	%	Mean*
11	Because others reveal concern for me I like breast feeding	3	3.75	15	18.75	43	53.75	19	23.75	2.97
12	Encouragement of family members made me love breast feeding	6	7.5	38	47.5	33	41.25	3	3.75	2.41
15	Breast feeding keeps me with my child in close proximity	49	61.25	27	33.75	2	2.5	2	2.5	1.46
17	Breast feeding is a difficult way of infant feeding	4	5	4	5	28	35	44	55	3.40
18	Generally breast feeding is an enjoyable practice	30	37.5	44	55	5	6.25	1	1.25	1.71

Excerpt from Appendix IV

The above statements were designed to evoke reactions of participants by relating breast feeding to social reaction, perceptions and mother-child interaction. With respect to concern shown by others 53.75% of the respondents indicated that they engaged in breastfeeding independent of the behavioral reaction shown to them by others. But the other participants (18.75%) replied that they agree with the item that they like breastfeeding because of others concern for them.

Similarly, 47.5% of the participants agreed that the encouragement on behalf of family members influence them to love breastfeeding, a good number (41.25%) of the respondents found that family members encouragement is not useful in appreciating breastfeeding because since it is their cultural practice they do it with out influence. Generally speaking these findings indicates that the social factors are not in due position to negatively influence mothers attitudes towards breastfeeding.

Concerning the item that asks for proximity almost all (61.25%) of the participants stated that they like breastfeeding as it keeps in close interaction with their infants. This implies that mothers highly believe that breastfeeding is important to maintain mother-infant bonds/attachment.

The general perception of the participant is positive. Hence, majority (55%) of the participants replied against the item which states about breastfeeding is difficult way of infant feeding. In addition, the significant proportion (55%) of the respondents disclosed that breastfeeding practice is pleasant while the process of breastfeeding is perceived negatively as unpleasant only by 6.25% of the respondents.

Table 9

One-Way ANOVA for Attitude of Breastfeeeding as a Function of Age Categories of Mothers

D. V	Demog. C	Descriptive Statistics			DF		F	Sig
Variables Measuring Attitudes	Age.C	N	Mean	S.D	B/n. G	Within. G		
	18-24	24	4.02	. 4.79				
	25-45	42	1.50	2.69	2	77	.469	.628
	46-60	14	2.2	3.67				
	Total	80	7.72	11.15				

P>.05, two-tailed

The ANOVA table (table 9) above shows that there is no statistically significant difference in the attitudes of breastfeeding as a function of age of mothers [(2, 77) =.469, p>.05]. This implies that attitude of breastfeeding did not reveal differences in the age of mothers.

4.5 Mothers' Practices of Breastfeeding

Table 10

Pre-Lactal Feeding Practices of Mothers

feeding practices before lactation	Frequency	Percent
Fresh butter	39	48.8
Honey	1	1.3
Cow's milk	21	26.3
Other	19	23.8
Total	80	100.0
Colostrums feeding Practices		
Discarded away	32	40.0
Fed the new born	48	60.0
Total	80	100.0

The research participants were asked to indicate the kind of prelactal food a new born was provided soon after birth. Accordingly, the practice indicated in table 10 reveals that most of the respondents (48.8%) answer during time of birth they gave their new born infant with fresh butter before breast milk. And the least number of respondents (1.3%) gave their infants honey. Some (26.3%) gave cow's milk to the infants just at the time of birth.

This idea was also strengthen by the interview made with kebele health extension workers and said that it is not possible to say that there is totally no harmful traditional practices(HTPs) in the kebeles like giving fresh butter, removing tonsils etc, but it is significantly declining.

Table 10 above also indicates that most mothers (60%) feed their new born infants with colostrums. The remaining (40%) answered that they discarded/ never fed their infants colostrums which is the first milk of mother.

Table 11

Feeding Practice of Mothers before Six Months

Responses	Frequency	Percent
Exclusive breast milk	69	86.3
Bottle feeding	-	-
Both	7	8.7
Breast and other foods	4	5.0
Total	80	100.0
Practices on the Early Initiation of Breast Feeding		
One hour after birth	50	62.5
Half day after birth	19	23.8
One day after birth	8	10.0
Three days after birth	3	3.7
Total	80	100.0
Practices on Breast Feeding Occasions		
During my leisure times	3	3.8
When infant cries	48	60.0
If I thought that the infant is hungery	28	35.0
While performing other tasks	1	1.2
Total	80	100.0

As can be seen from table 11 mothers' practice of feeding infants before six months was exclusive breast feeding. So, the majority of the respondents (86.3%) replied that they preferred to give only breast milk for their infants. On the contrary, some respondents (8.7%) said that they preferred to give both breast and other complementary foods to their infants before six month of age.

Table 11 also indicates majority of the respondents (62.5%) replied that they practiced early initiation of breast feeding just one hour after birth. And, 23.8% of respondents replied that they practiced breast feeding after half day of birth. But still there are few mothers (3.7%) who practiced the initiation of breast feeding after three days of birth.

Similarly, table 11also shows that most respondents' answered to the question on what occasion they practice breast feeding their infants, 60% of the participants replied that

they practiced it when the infant cries. Others (35%) and (3.8%) said that they practiced to feed their infants when they thought that their infant is hunger and during their leisure time respectively.

Table 12

One-Way ANOVA for Practice of Breastfeeeding as a Function of Age Categories of Mothers

D. V	Demog. C	Descriptive Statistics			DF		F	Sig
Variables Measuring Practices	Age.C	N	Mean	S.D	B/n. G	Within.G		
	18-24	24	16.65	4.82				
	25-45	42	9.23	3.67	2	77	1.095	.340
	46-60	14	7.2	3.02				
	Total	80	34.38	11.51				

P>.05, two-tailed

The ANOVA table above (table 12) indicates that there is no statistically significant difference in the practice of breast feeding as a function of age of mothers [(2, 77) =1.095, p>.05]. That is attitude of breastfeeding did not reveal differences in the age of mothers.

4.6. Complementary Infant Feeding

Table 13

Sources on Information about Complementary Infant Feeding

Sources on information by:	Frequency	Percent
Husband	2	2.5
Elder mothers	25	31.3
Radio/Television	1	1.3
Cultural experience	6	7.5
Health extension workers	32	40.0
Nobody	14	17.5
Total	80	100.0

Table -13 indicates the sources of information about complementary infant feeding, the mothers were asked about the sources of information on how, when and why to give complementary foods to their infants. Accordingly, the majority of the respondents (40%) answered that they were informed by the health extension workers. And then followed by elder mothers (31.3%) and some mothers were informed by nobody (17.5%).

4.7 Mothers' Awareness/Knowledge of Complementary Infant Feeding

Table 14
Knowledge on the Initiation of Complementary Foods to Infants

Awareness on the Initiation of Complementary Infant Feeding	Frequency	Percent
Within a month	1	1.3
Within three months	1	1.3
Within six months	14	17.5
After six months	64	80.0
Total	80	100.0
Merits of Complementary Infant Feeding to Mothers		
Has merits to mothers	69	86.2
Has no merits to mothers	11	13.8
Total	80	100.0
Early Initiation of Complementary Foods Based on Sex of The Infants		
Males	34	42.5
Females	22	27.5
Other	24	30.0
Total	80	100.0

The table above(table 14) indicates that, most respondents (80%) started giving complementary foods to their infants after six months of age. On the other hand, others (1.3%) of the participants replied that the infants were given complementary foods within a month and within three months of age. This implies that there are mothers who lacked awareness on the times of initiation of complementary foods to their infants so that, health extension workers need to work hard to create awarness among mothers about the appropriate time of introduction of complementary foods to infants.

As it can be observed also from the above table mothers were asked whether giving complementary foods to their infants has advantage for them or not, almost all mothers(86.2%) said that it is advantageous for them by that if the infant has got sufficient complementary food it may not show upsetting behavior up on them.

As one can also understand from the above table (15) mothers were also asked about their awareness on the early initiation of complementary foods among both sexes, the majority replied that males should start complementary foods earlier for the reason of making male infant rapidly grow.

Table 15

One Way ANOVA for Knowledge of Complementary Infant Feeding as a Function of Age of Categories of Mothers

D. V	Demog. C	Descriptive Statistics			DF		F	Sig
Variables Measuring knowledge of Complementary feeding	Age.C	N	Mean	S.D	B/n. G	Within.G		
	18-24	24	11.68	.97				
	25-45	42	6.25	1.64	2	77	2.339	.103
	46-60	14	3.2	1.05				
	Total	80	21.13	3.55				

P>.05, two-tailed

The ANOVA table above (table 16) reveals that there is nostatistically significant difference knowledge of complementary infant feeding as a function of age of mothers [(2, 77) =2.339.p>.05]. This indicates that knowledge of complementary feeding did not tell differences in the age of mothers.

4.8 Attitudes of Mothers on Complementary Infant Feeding

Table 16

Attitude of Mothers towards Complementary Infant Feeding

S.No	Statement	SAN	%	AN	%	DN	%	SDN	%	Mean*
1	I provide complementary foods because it makes my infant fat	11	13.75	28	35	29	35.25	12	15	2.51
2	I have enough money to buy complementary food items instead of suffering myself by breast feeding	5	6.25	25	31.25	39	48.75	11	13.75	2.70
3	My breast milk is not sufficient to my infant so just after birth I like to introduce complementary foods to my infant	11	13.75	45	56.25	21	26.25	3	3.75	2.20
4	Since others can help me by providing complementary foods I like it	10	12.5	56	70	11	13.75	3	3.75	2.08
5	Breast feeding makes my appearance thin so I like to give complementary foods to my infant	8	10	32	40	37	46.25	3	3.75	2.43
6	Providing my infant with complementary foods make him/her healthy and strong	55	68.75	23	28.75	-	-	2	2.5	1.36
7	After six months complementary foods in addition of breast feeding are preferable.	2	2.5	4	5	30	37.5	44	55	3.45

Key: SA =Strongly Agree, A=Agree, D=Disagree, A=Strongly Disagree.

Concerning the attitudes of mothers towards complementary infant feeding most respondents (35.25%) were not agreed with the item that states about complementary foods make the infants fat, while similar number (35%) shows the agreement on the item the it makes their infants fat.

The majority of the respondents (48.75%) responded that even though they have sufficient money to buy complementary foods they prefer to suffer themselves on breastfeeding their infants but 31. 25% of the participants agree to buy complementary foods than suffering themselves by breast feeding. This implies that for these mothers breast feeding is not based on the interest but only the shortage of money to buy complementary foods make them to breast fed.

Regarding the early initiation of complementary foods 56.25% of the respondents agreed that just after birth they introduced their infants with complementary foods. The other number (26.25%) of the participants replied that even if their breast does not have sufficient milk they never introduced their new born infants with complementary foods.

On the process of providing complementary foods the vast majority of the respondents (70%) reported that they like the item stated as since other help them in providing complementary foods because others can help them in feeding it. Others (13. 75%) said that were not agreed with this idea.

Concerning the physical appearance and complementary foods of the respondents, (40%) said that since breastfeeding makes our appearance thin we prefer to give complementary foods. Others (46.25%) replied that that they did not give complementary foods even breast feeding make their appearance thin. This indicates that mothers in this particular culture have strong desire to breast feed than complementary feeing practice.

Concerning the issue of complementary foods with health effect, most participants (68.75%) revealed that complementary foods make their infants healthy and strong. But few (2.5%) of the respondents reported that complementary foods cannot make their infants healthy and strong.

Lastly, 55% of the participants agreed that instead of breast milk after six months, complementary foods are preferable or should be given more weight.

Table 17

One Way ANOVA for Attitude of Complementary Infant Feeding As a Function of Age Categories of Mothers

D. V	Demog. C	Descriptive Statistics			DF		F	Sig
Variables Measuring Attitude of Complementary feeding	Age.C	N	Mean	S.D	B/n. G	Within.G		
	18-24	24	11.88	2.51				
	25-45	42	5.72	1.25	2	77	.209	.812
	46-60	14	4.12	1.05				
	Total	80	21.72	4.81				

P>.05, two-tailed

The ANOVA table above (table 18) indicates that there is nostatistically significant difference in the attitude of comolementary infant feeding as a function of age of mothers [(2, 77,) =.209, p>.05]. This implies that attitude of complementary feeding did not tell differences in the age of mothers.

4.9 Mothers' Practices of Complementary Infant Feeding

Table 18

Initiation/Practices of Mothers on Complementary Infant Feeding

Initiation of practices for complementary infant feeding	Frequency	Percent
Two months after birth	2	2.5
Four months after birth	4	5.0
Six months after birth	74	92.5
Total	80	100.0
The first complementary foods given to infants		
Cow's milk	26	32.5
Gruels	22	27.5
Porridges	22	27.5
Other	10	12.5
Total	80	100

Table 18- above indicates that most respondents (92.5%) replied that they initiated to give complementary foods to their infants after six months after birth .While other respondents (5.0%) said that they started practicing complementary foods to their infants after four months of age. And finally, the least number of participants (2.5%) said that they started to give complementary foods to their infants after two months of birth.

The table above also shows that most mothers (32.5%) gave cow's milk as the first complementary food to their infants. Others respondents (27.5%) replied that they gave gruels and porridges to their infants as the first complementary foods. While some other participants (12.5%) replied that they gave other complementary foods to their infants and these items were not appeared as the option on the questionnaire but they listed them as *enjera*, egg, bread and etc.

Table 19

Practices on the Occasions of Complementary Infant Feeding

Occasions of practicing	Frequency	Percent
Once a day	3	3.8
Two -three times a day	45	56.2
Three-four times a day	25	31.2
Four -five times a day	3	3.8
Five to six times a day	4	5.0
Total	80	100.0

Table 19 above reveals that majority of the respondents' (56.2%) answered that they provide their infants with complementary foods two to three times a day. Next to this 31.2 % of the respondents said that they gave their infants with complementary foods three to four times a day. Lastly 3.8% of the respondents replied that they gave their infants with complementary foods once and five to six times a day.

Table 20

One Way ANOVA for Practice of Complementary Infant Feeding as a Function of Age Categories of Mothers

D. V	Demog. C	Descriptive Statistics			DF		F	Sig
Variables Measuring Practice of Complementary feeding	Age.C	N	Mean	S.D	B/n. G	Within.G		
	18-24	24	16.76	2.53				
	25-45	42	8.25	2.25	2	77	1.655	.198
	46-60	14	4.75	1.65				
	Total	80	22.76	6.43				

P>.05, two-tailed

The ANOVA table above (table20) indicates that there is no statistically significant difference in practice of complementary infant feeding as a function of age categories of mothers [(2, 77) =, 1.655, p>.05]. This indicates that practices of complementary feeding did not tell differences in the age of mothers.

4.10 Analysis of Data Gathered Through Interview

Under this section data collected by interview session with health extension workers were qualitatively analyzed in detail.

The questions and answers are as follows:

1. Who are considered as infants in this area?

   The participants described that infants are *individuals with distinctive characteristics like those who do not know what is bad and good important or unimportant, or what is danger and what is safe. And those who do not take a flee when some wild animal or ox walking running towards them as well as those who walk in to fire and those who are not capable of avoiding danger are said to be infant. Those who are below two years are named as* ***"Marmata"****to mean innocent.*

2. Are there any harmful traditional practices in relation to infant feeding in this area? If yes what are they?

   As to the respondents it is not possible to say that there is totally no harmful traditional practices in the kebeles like giving fresh butter, removing tonsils but it is significantly declining.

So the harmful traditional practices (HTP) in the kebeles which are affecting the wellbeing of the infants were declining and they are not any more an important problem in the kebeles. HTP on infants are not all prevalent and are not practiced and adhered by the majority, the practices are very rare. This is because of teaching of the government in the areas which discourages this practice. The local government tried to raise the awareness level of the community by giving education on the negative effects of such practices as well as by showing that such practices are punishable by law.

3. Is there any sickness or health complication in relation with breast and complementary infant feeding caused by HTPs?

   It is difficult to say totally no but there is observed health complication on few infants when they for the first time fed egg, which mostly cause vomiting and fever for longer time.

4. How do you see breast and complementary infant feeding knowledge, attitude and practices in this area?

   The knowledge, attitude and practice of mothers are showing significant improvement because of the health extension workers teaching mothers in the villages even though not sufficient.

5. Do you think that infants get sufficient breast and complementary foods in this area?

   The participants who were interviewed said no because as mothers are house wives, they are busy by house chores and taking lunch to their husbands to farm land, infants are not sufficiently getting breast milk but complementary foods are given to infants to independent feeding.

6. How do you describe the sanitation and hygienic practices in preparation of complementary infant foods in this area?

   It is said that the sanitation and the hygienic practices in the preparation and feeding of complementary foods are under question mark. Since the mothers are busy once they wash their hand to prepare and fed the infant in the mean times they may stand to do something and turn back to feed the infant without washing their hands again.

7. What are common problems that mothers encounter during feeding their infants?

   The major challenges among most mothers were the infants are not easily introduced with complementary foods like milk, gruel which the breast milk is not sometimes sufficient because it needs better foods like meat, ***"Dorowot"*** for mothers *which is impossible to have regularly because of economic constraints.*

4.11 Analysis of Data Gathered Through Focus Group Discussion

Under this section data collected through focused group discussion with elder and breast feeding mothers were qualitatively analyzed in detail. The questions and answers are as follows:

1. In comparison with the earlier times, what are your general observations concerning breast feeding in this kebele? Discuss

In response to the above questions, *mothers replied that definitely there are changes regarding the process of breastfeeding. They described the issue in terms of the duration, rate of breast feeding and the use of complementary foods especially cow milk. In the discussion, mothers described that the situation of breast feeding among mothers these days is decreasing as compared to the earlier time. Because during the past time children breastfed for at least three and at most four years. But now a days it has been shrinked and to one year and even less. Moreover, these days many mothers wander here and there and are not observed being properly and earnestly sit down and breast fed their child.*

Also the participants stated that because the younger mothers are easily exposed to the use of bottles, in case of some temporal inconveniency to breast feed they are advised or else they themselves resort soon to the use of bottles instead of resuming breastfeeding.

Even in a number of instance a child hated the breast is the pretext to cease breast feeding, they replied. Above all, they disclosed that breastfeeding mothers of these days has developed the*" I feel the burning syndrome*" which is the notion that the present day mothers are hardly tolerant to the minor discomfort with breast feeding.

In short, the discussion result deals with supplementing the findings in the practice part that the average intension of breastfeeding duration for the study participants is around one year revealing that the duration of breastfeeding is diminishing. Even very currently the duration is not lasting for one year because of the rapid psych social changes that affect mothers.

2. What are the reasons for the change in breast and complementary infant feeding as opposed to the earlier times?

The participants have various suggestions concerning the above item. *However the most influencing factors raised here was that concern for ones physique, fitness and wellbeing on oneself by the breast feeding mother.*

The participants explained the concept as follows: *breastfeeding is similar with donating one's own blood; hence, it harms the respective breastfeeding mother if she is has not compensated it by consuming the balanced diet.*

They disclosed that many mothers are not getting quality foods particularly milk products owing to the economic constraints prevailing in the kebeles. For this reason they asserted that mothers of this generation prefer not to breast feed longer.

In short, manifestation of high concern in prioritizing ones own physiological wellbeing and the fulfillment that are in turn determined mainly by low income coupled with the work nature of breast feeding mothers and the absence of keens interest to breast fed are among the major reasons reported to hinder normal breastfeeding practice these days.

3. What should be the feeding situation of the infant after six months?

   To the above question the mothers indicated that *a child should be breastfed exclusively for six months and with complements for at least two years.*

   They supported their answer by reasoning out that a child who has not be breast fed will not have strength. To this end, also they stressed that a child who does not breast fed for two years will not be capable of standing up if he/she falls down.
4. How do you perceive a mother who totally refused to breast fed her new born infant in your culture?

The participants in the discussion session indicated that the *God built in every female a breast which is principally instrumental in providing breast milk for new born*. As to our culture if a mother is healthy she has to breast fed her infant. Therefore all healthy mothers should practice breast feeding. Unfortunately if the mother does not totally breastfed her infant she would unquestionably the agony of several abusive or derogatory words like she is a mule or horse or even be labeled as *"geday", "aremenie" "demegna*" etc; to mean killer, cruel etc. It is more interesting that the participant crystallized the concept by providing that the process of breast feeding has the value of social pressure.

5. What do you think should be done to bring and maintain the customarily existing breast feeding norm?

   For the last discussion issue, the participants were probed to evaluate the legendary breastfeeding practice. In the discussion the participants emphasized that breast feeding should be maintained principally for the following reasons*: Breast milk is of high quality as it is pure where as other complementary foods including bottle feeding in prone to contaminations and can cause disease like diarrhea that affect the health of the child*.

   In addition to this they revealed that the *superiority of the breast milk connoting that of complementary food (bottle feeding) is not as satisfactory diet to infants as breast milk*.

In order to maintain this valuable cultural practice, the respondents indicated alternatives such as advising younger mothers to breast fed their infants, teaching about pros and cons of breast and complementary feeding (bottle feeding) to their infants, lobbing their relatives and neighbors especially husbands to fulfill their nutritional needs as much as possible and also urges their wives to breast fed their child. Beside to this, the participants have underscored that breastfeeding mothers should be told in advance to breast fed until the child is capable of walking independently. Bo doing so, mothers associate breastfeeding duration with children's developmental milestones so that confusion of "what, how and up to when to breast feed" may be minimized.

Chapter Five

5. Discussion

This chapter is dealing with the discussion part of the research which attempts to provide answer to the research question raised earlier and tried to thoroughly discuss the data analyzed in the earlier chapter and made plausible explanation with the findings of the previous research works.

5.1 Source of Information about Breast and Complementary Infant Feeding

Regarding the sources of information about breast feeding the result is discussed as follows.

Almost half of respondents (51.2%) were not given any information about breast feeding before birth.

The sources on information about how, why and when to breastfeed reveals that most mothers (40%) got information from elder mothers. Also it has been stated that, information about breastfeeding is not always readily available to mothers nor easily understood by them because of their level of education so information from elder mothers is preferred by mothers. This is probably because as to (Moore et.al., 2007) many mothers rely on books, leaflets, and other written materials as only source of information on breastfeeding but using these sources to gain knowledge about breastfeeding can be ineffective, especially for low-income women.

In relation to the sources of information about complementary infant feeding, the mothers were asked on how, when and why to give complementary foods to their infants. Accordingly, the majority of the respondents (40%) answered that they were informed by the health extension workers.

5.2 Knowledge of Mothers about Breast and Complementary Infant Feeding

With reference to knowledge of breast feeding different aspects of breast feeding results can be discussed as follows. On the awareness of the advantage of colostrums feeding to their infants most mothers (53.8%) have good knowledge about it. But, in contrast to a study conducted by Harris, (1993) in many cultures mothers due to lack of awareness about the importance of colostrums were not interested to feed it for their infants. Because of its color and thickness many mothers considers it as dirty until it is replaced by milk from 3 to 4 days after child birth. Mothers were also asked about the importance of breastfeeding to breastfeeding mothers. The majority of the mothers (69%) reported that breastfeeding is not advantageous for them. On the contrary, the study conducted by (Wiesenfeld, cited in Clark, 2003) showed that mothers who breast feed tend to be more responsive to their infants also, breast feeding in terms of its health advantage, several studies have found the risk of breast cancer, ovarian cancer, osteoporosis to be higher for women who have never breastfed than mothers who breastfed (Bernier, 2000).

In relation to the duration of breastfeeding on the basis of sex about 72.5% of mothers replied that males should breast fed for longer period of time than females because males are expected to be, grow in fast pace, to be strong enough to help fathers at farm lands, to help them in domestic labors, to have prestige and respect in the society. This finding was also supported by research conducted by (Huggerty, 1999) in Near East/North Africa and Asia reveals that males tend to be breastfed for longer duration than females. Similarly, a study by Akin, (1986) in India reported that real discrepancies in breast feeding duration by sex of child, males are being breastfed longer than felames.

Generally knowledge of mothers about breastfeeding on the basis of age shows that there is no significance difference on awareness/knowledge level of mothers' age. Similar study by Parks & Smeriglio (1983) indicates that by measuring the parenting and breastfeeding knowledge on the first time infant mothers stated that the knowledge level was high and no difference from that of older mothers.

The awareness about the initiation of complementary infant feeding is concerned; most respondents indicated that they started giving complementary foods to their infants after six months of age.

This finding was also supported by WHO global infant feeding recommendations WHO, 2002 (Cited in Kanoa, J .B. 2011), complementary feeding (solid food) should be started after six month. On the other hand, other small number of the participants replied that the infants were given complementary foods within a month and three months of age.

Various research evidences of the past such as (Al-sahirafi, M. (2002) cited in. Kanoa, J. B. (2011) revealed that both too early initiation and too late initiation are disadvantageous. Accordingly early introduction of complementary feeding is associated with more wheezy and respiratory illness, undesirably increase renal solute load, increase the risk of infection, compromise the maintenance of lactation amenorrhea, and possibly expose the infant to dietary antigen. And giving complementary feeding too late may impair growth because the nutrients density of liquid diet is low and if they are not introduced before 10 months of age, it may increase the risk of feeding difficulties which may have an impact on dietary habits later in life. So, that is it finally stated that there may be a critical window for introducing complementary foods to infants. (Illigworth, 1964)

About (86.2%) of mothers reported that they gave complementary food to their infants earlier because of its advantage for them. Concerning the knowledge of early introduction of complementary foods to the infants on the basis of sex most mothers' said that males should start complementary foods earlier than females. This is similar with the research conducted by (Huggerty, et,al.1999), sex differences in the introduction of complementary foods were more pronounced, in the Near East/North Africa, boys were given complementary foods almost a month earlier than girls (6.9 vs. 7.7 months).

Finally, there is no significance difference between knowledge of complementary infant feeding and age of mothers.

5.3 Attitudes of Mothers towards Breast and Complementary Infant Feeding

The analysis of mothers' attitudes towards breastfeeding across different variables yields the following results. Regarding breastfeeding and interest to breastfeed, majority of the respondents(85%) seems to be in general agreement that they have positive attitude about breastfeeding by their own interest without the external lobbying and relating it with other purposes like avoiding pregnancy,i.e., they breast fed not to avoid pregnancy but by their own initiatives. This finding is also supported by (Allen,1985) who said that mothers breast feed longer if they have positive attitude or a interest to breast feed, if they intended to do it for a longer period of time, and also if they are not anxious about the process.

Concerning the attitudes of breastfeeding and mothers physical appearance about two-third of the participants is in the opinion of that breastfeeding never make their appearance thin.

However, attitude about breastfeeding by almost all participants (92.5%) was not found to be affected by shape of mothers' breast.

This might be interpreted by the fact that Ethiopian culture is not giving much emphasis on the shape of the breast. On the other hand, the research finding of Spitzack, cited in Jones, 2004 demonstrate that in western culture, mothers are socialized to perceive their personal value is reflected in their physical appearance. So they are socialized that their breast is not entirely their own but it should exist for evaluation and pleasure of others (Jones, 2004). Therefore as a result of cultural influence on mothers tend to be more concern about their breast shape and size in order to have the ideal breast which indicate round, small and firm that denotes youth, fertility and sexual pleasure but which overshadow meaning to mothers that is breast feeding.

When the mothers' biological structure of breast is in center of attention except quarter of the respondents most participants were reacted positively. Meaning that, they expressed that God created breast up on them to feed their infants. This was confirmed by the research of Jones, (2004) obviously breasts biologically are mammalian glands

designed to convey food to newborn infants. But, on the other hand most western countries, a great deal of emphasis were placed on the sexual erotic behaviors to men rather than to fed infants (Spitzack, cited in Jones.2004),Ethiopian culture does not give attention to breasts on this regard than nourishing purpose.

Concerning cultural values of breastfeeding, about 73.75% of the respondents believed that breastfeeding is their cultural practices and it should not be neglected. So this is the indicator of appreciation of cultural values of breast feeding by mothers. This point is also raised for older mothers in FGD even there is positive attitude in younger mother , the participants in FGD said that the length of time that the FGD participants devote in breast feeding and those of main participant shows variations because, the FGD participants perceived the overall decline in the culture of breast feeding practices and the main participants viewed the trend of breast feeding in the eye of present condition where rapid psycho social changes are taking place (Kebede,2006). So in this discussion, mothers described that the situation of breast feeding among breastfeeding mothers is decreasing these days as compared to the earlier time. Similarly the general observation conducted by (Fildes 1995) in developing countries including Ethiopia, the trend of exclusive breastfeeding is decreasing. And this is supposed to be the result of urbanization and fast social changes that are usually accompanied by psycho-social and economic changes that in turn hamper with the traditional and more positive parental child rearing beliefs and practices including infant feeding method.

On the other hand so as to have the respondents' attitude about the current status of breastfeeding 96.25% of the participants have negatively reacted about the notion that breastfeeding is old-fashion.

But, this was contrasted by the research findings of (Abdulaziz, 1988 Yeshewamebrat, 1995) which states that mothers considered bottle or other form of feeding as "fact of modern life" or as a "symbol of modernity"

The response to items that pose social reaction indicates that societal factors were not found as the major determinants of breastfeeding indicating negative attitude on a

great number of respondents. This means that breastfeeding mothers engaged in breastfeeding independent of the behavioral reaction shown by others.

Generally speaking, these findings indicates that the social factors are not in due position to negatively influence mothers attitudes towards breastfeeding.

Concerning the item that asks for proximity, almost all participants stated that they like breastfeeding as it keeps in close proximity/ interaction with their infants. This implies that mothers highly believe that breastfeeding is important to maintain healthy mother-infant bonds/attachment. According to Zanden, (1993) the emotional and psychological benefit of breastfeeding serve as the bonding mechanism between the mothers and their infants.

The statements that were intended to trigger reaction on the overall perception of breastfeeding reflect the outlook that most mothers are happy about breastfeeding. And, the vast majority of the participants replied against the item which states about breastfeeding is difficult way of infant feeding. In addition, the significant proportion of the respondents disclosed that breastfeeding practice is pleasant.

Generally, mothers' responses towards the statements measuring their attitude about breastfeeding were negative to some statements and positive to others. Since attitudinal position is a many-sided phenomena which might be determined by level of knowledge, cultural background, practical experiences etc the variations occurred might be legitimate.

In summary, there is no difference among mothers on age items measuring attitudes.

Concerning the attitudes of mothers towards complementary infant feeding on the developmental effects most respondents (51.25%) were not agreed with the item that states about complementary foods make the infants' fat. But in contrast to this, the research finding by (Ekelund, 2006) found that there is highly significant positive associations between growth during infancy because of complementary foods and the risk of being fat/overweight later in life.

The majority of the respondents (62.5%) responded that even though they have sufficient money to buy complementary foods, they prefer to suffer themselves on breastfeeding their infants. This simply indicates that most mothers have positive attitudes towards breast feeding because of its health effect. For example, a study conducted more than ten years ago by (Ball, 1999), estimated that mothers who followed optimal breastfeeding practices could save more than $1,200–$1,500 in expenditures for complementary infant food in the first year alone. In addition, better infant health means fewer health insurance claims, and higher productivity (United States Breastfeeding Commitee, 1999).

On the process of providing complementary foods, the vast majority of the respondents (82.5%) reported that they like the item stated as since other help them in providing complementary foods because others family members can help them in feeding it. This idea was supported by Marriott, (as cited in Schwartz H.L 2008) complementary feeding is often regarded as the most complex that mothers should seek support.

Concerning the issue of complementary foods with health effect, almost all participants (97.5%) revealed that complementary foods make their infants healthy and strong.

The 92.5% of the participants agreed that complementary foods in addition of breast milk after six months are more preferable. This finding is consistent with the study conducted by WHO that states about six months onward, breast milk alone is not sufficient to meet all the nutritional requirements, so infants should be made vulnerable to complementary feeding WHO, 2001 (as cited in Schwartz, .2008)

Finally**,** concerning the attitudes of complementary infant feeding there is no significance difference among ages of mothers and attitude of complementary infant feeding.

5.4 Practices of Breast and Complementary Infant Feeding

The research participants were asked to indicate the kind of prelactal food a new born was provided soon after birth. Accordingly, most respondents practice indicates that at time of birth they gave their new born infant with fresh butter before breast milk. As to Rada (1996), this is the common practice that Ethiopian mothers appears to share

providing their new born unrefined fresh butter believing that it is good for infants though the practice is frequently cited as harmful traditional practices(HTPs).

In relation to the practice of colostrums feeding most mothers (60%) fed their new born infants. Similarly, as the research finding by (Greiner, 1996), indicates that mothers gave colostrums to their infants nowadays because of the result of attempts made for several years to encourage its feeding as a norm.

Most mothers' practiced exclusive breast feeding before six months of age. So the majority of the respondents (86.3%) fed and is feeding only breast milk for their infants. The Innocenti Declaration on the protection, promotion and support of breastfeeding stated in WHO/UNICEF (1990), also indicates that: For optimal breastfeeding, women should practice exclusive breastfeeding and all infant should be fed exclusively on breast milk from birth to four to six months of age.

It is indicated that, majority of the respondents (62.5%) replied that they practiced early initiation of breast feeding just one hour after birth. Similarly the earlier study conducted by Righard and Alade, (as cited in Hggerty, 1999) revealed that early initiation of breastfeeding within the first hour of life is important because it fosters mother-infant bonding and takes advantage of the newborn's intense sucking reflex and alertness immediately postpartum, which permits the newborn to benefit from the nutritional, antibacterial, and antiviral properties of colostrums. On the others hand, few respondents said that they practice breast feeding after three days of birth. And a research by Perez-Escamilla, (as cited in Hggerty, 1999 states that delayed initiation of breastfeeding may result in the newborn being provided with other sources of nourishment that can introduce infection and delay lacto- genesis (milk arrival). Such kind of practice is in opposite to the 'immediately after birth' comment of physicians.
Finally, there is no significance difference among mothers age on practices of breastfeeding.

In relation to the practices of initiation of providing infants with complementary foods, almost all participants (92.5%) were initiated to give complementary foods to their infants after six months of birth. This is similar with the World health assembly

recommendation that mothers should start to feed their infants with appropriate complementary foods from about the age of 6 month onwards (WHA, 1994).

About (32.5%) of mothers gave cow's milk as the first complementary food to their infants. But, according to Okolo, 1999) in other parts of the world gruel is given regularly as the first complementary foods to infants.

Regarding the occasion or frequency of providing infants with complementary foods, majority (56.2) of the respondents practiced it two –three times a day. In contrast to this few research studies revealed that feeding infants two-three times is not sufficient. It must be practiced five to six times a day in addition to breast feeding otherwise malnutrition will be caused in infants (Singh, 2004).

Singh also said that as the infant start taking complementary foods well, the infant should be given breast milk first and then complementary foods. This will ensure adequate lactation.

And also, the practice of mothers on complementary infant feeding there is no significant difference between age mothers and practice of complementary infant feeding.

Chapter Six

6. Summary, Conclusion and Recommendation

6.1. Summary

The main purpose of this study was to assess the knowledge, attitude and practice of breast and complementary infant feedings among mothers in Shinasha people of Bullen *woreda*.

Non- probability sampling method was employed to select participants of the research and source of data were 80 mothers who have infant below two years and are currently breast feeding their infants. Data were collected by using the questionnaire for breast feeding mothers, focus group discussion for mothers whose age is above 35 as well as interview for four health extension workers of four kebele administrations.

The following research questions were set:

- What are the sources of information about breast and complementary infant feeding?
- Are there differences in breast and complementary infant feeding knowledge attitude and practices, among participants as a function of age?
- What are the knowledge, attitude and practice of mothers on breast and complementary infant feeding?

Data collected were collected questionnaire, interview, FGD and analyzed using statistical tools such as frequencies, means, percentage and one way ANOVA test. There were 80 mothers selected conveniently as a sample of the study from Bullen Woreda. All these statistical methods were used to assess breast feeding knowledge, attitude and practices as well as complementary infant feeding knowledge, attitudes and practices. Mothers have good deal of knowledge about breast and complementary infant feeding as well as having positive attitudes about breastfeeding. This indicates that mothers are developing better knowledge about breast feeding than the earlier times. But on the practice most mothers were giving their infants with fresh butter, even though the practice is forbidden.

Some factors like rapid social changes including mothers' knowledge, attitudes and practices have contributed for differences in infant feeding.

6.2. Conclusion

Based on the findings the following conclusions were drawn.

- Information about breast feeding was not given to mothers before birth.
- Elder mothers were found to be good sources of information on how, when and why to breastfed infants after birth.
- There is no statistically significant difference on awareness/knowledge level, attitude, and practices of breastfeeding as a function of age of mothers.
- There is no statistically significant difference on knowledge, attitude and practice on complementary infant feeding as a function of age of mothers.
- Mothers showed good deal of knowledge on breast feeding except on few areas likes:
    - The lack of awareness about importance breastfeeding for breastfeeding mothers.
    - Lack of awareness on equality of sex on duration of breast feeding among their children
- Mothers had positive attitude about breast feeding in such areas as:
    - Self-initiated interest of breast feeding,
    - Enhancement of mother- child interaction through breast feeding
    - Enjoyable nature of breast feeding.
    - Breast feeding does not make their appearance thin
    - Breastfeeding should not be neglected as it is their cultural practices etc.
- Mothers had good practices of breastfeeding but on some areas like:
    - Giving fresh butter just after birth before breast milk
    - Giving breast to infants when he/she cries
- Mothers showed good level of knowledge about complementary infant feeding except in few areas like:
    - Male infants should start complementary foods earlier than females due to the reason that males should grow very fast and enhance strength.

- Early introduction of complementary foods to their infants because of its advantages for mothers.

- Mothers had positive attitudes about complementary infant feeding but in few areas like:
  - Early introduction of complementary foods because it makes the infants healthy and strong.
  - Others can help them and the process of infant feeding is complex complementary feeding is preferred.
- Mothers' practice were found to be good in complementary infant feeding but in few areas like:
  - Frequency of providing infants with complementary foods was practiced two –three times a day.
  - Infants were not getting sufficient breast and complementary foods due to the busy nature of mothers.

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6.3 Recommendations

Based on the major finding obtained and conclusions drawn, the following recommendations are forwarded

1. Sufficient information should be given to mothers and the community in general about breast feeding before child birth by the health extension workers.
2. Mothers should be given information on how, when and why to breastfed infants after birth not only by elder mothers but also by health professionals, husbands and media.
3. There should be a regular program to teach mothers about the advantages of breast feeding to them and their infants through health care professionals of the community so that lack of awareness about importance breastfeeding feeding will be bridged.
4. Mothers should be educated that both sexes are equal and need equal feeding duration for the healthy development.
5. Mothers should be helped to stop giving anything to their infants except breast milk just after birth.
6. Mothers should be well oriented by health extension workers about regular schedule of breast feeding for infants.
7. Mothers should know that infants of both sexes should be introduced complementary foods as their age allows means that they should be given complementary foods after six months of age.
8. Even if mothers believe that early introduction of introduction of complementary foods to their infants is important to mothers, they should learn that, infants should get complementary foods after six months of age and too early introduction of complementary foods may make infants unhealthy and weak.
9. Mothers and other caretakers should be made aware that they should give complementary foods to infants many times and practice five to six times a day for better nutritional satisfaction.

10. Work load of mothers should be minimized at home and offices to breastfeeding mothers so that they have enough time to feed their infants.
11. All members of the society, policy makers, NGOs, local government should work in collaboration with woreda health office to minimize and remove downsides of mothers on knowledge, attitudes and practices about breast and complementary infant feeding.

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Appendices

Appendix 1

Questionnaire (Amharic Version)

አዲስ አበባ ዩኒቨርሲቲ
የደህረ ምረቃ ት/ቤት
የሳይኮለጂ ትምህርት ክፍል

የዚህ ጥናት አላማ በሸናሻ ማህበረሰብ ዉስጥ ያለዉን የጡት ማጥባትን እና ተጨማሪ ምግብ አሰጣጥ ሁኔታን በተመለከተ መረጃን መሰብሰብ ነዉ፡፡
ወድ ተሳታፊዎች፡- የዚህ ጥናት ትክክለኛነት የሚወሰነው እናንተ ለእያንዳንድ ጥያቄ የምትሰጡት ምላሽ በመሆኑ በእያንዳንዱ ክፍል ዉስጥ የለትን መመሪያዎችን በጥሞና በማጤመና በማንበብ ለጥያቄዎቹ ትክክለኛ መልስ በመስጠት የበኩላችሁን አስተዋጽኦ ታደርጉ ዘንድ ከወዲሁ በትህተና እንጠይቃን፡፡ በዚህም መሰረት
   1. በመጠይቁ ከየትኛዉም ቦታ ስም መጻፍ አያስፈልግም
   2. በእያንዳንድ ጥያቄ የራስን ሀሳብና የስምምነት ደረጃን የሚገልጽ እንጂ አንድ ትክክለኛ መልስ ስለሌለ የሌለን ሰው መልስ ማየትም ሆነ ተወያይቶ መስራት የመጠይቁን አላማ ስለሚያዛባ የየራሳችሁን መልስ በመስጠት እንድትተባበሩን በድጋዬ እየጠየቅን ለምታደርጉት ትብብር ከወዲሁ ከልብ እናመሰግናለን፡፡

የቀበሌ ኮድ ቁጥር 1. ☐ 2. ☐ ☐ ☐ 4.

ክፍል አንድ፡- የመልስ ሰጪው አጠቃላይ መረጃ

1.**እድሜ** 1.18-24 ☐ 2. ☐ 5-45 3. ☐ 46-60
2. **ሃይማኖት** 1. ኦርቶዶክስ ☐ 2. እስላም ☐ 3. ፕሮቴስታንት ☐ 4 . ካቶሊክ ☐
   5.ሌለከላይጠቀስ

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3. በእስካሁን እድሜዎ በብዛት የኖሩት የት ነው? 1. በትልቅ ከተማ ዉስጥ ☐
   2. በትንሽ ከተማ ዉስጥ ☐ 3. ገጠር ☐

4. በዚሁ ቀበሌ ምን ያህል ዓመት ኖረዋል?____________

5. የሥራ ሁኔታ 1. የቤት እመቤት ☐ 2. አነስተኛ ንግድ ☐ 3. የቀን ሰራተኛ ☐
   4. የመንግስት ሰራተኛ ☐ 5. የግል ተቀጣሪ ☐ 6.ግብርና ☐ 7. ጡረታ ☐
   8. ሌላ የገቢ ምንጭካለ ይጥቀሱ____________________________________

6. አማካይ ወርሃዊ ገበዎ (የባለቤትዎን ጨምሮ በግምት ምን ያህል ይሆናል)
   1. ከ200 መቶ ብር በታች ☐ 2. ከብር 200-500 ☐ 3. 500 ብር በላይ ☐

7. የትምህርት ደረጃ፡ 1. ማንበብና መጻፍ የሚችሉ ☐ 2. አንደኛ ደረጃ ☐
   3. ሀለተኛ ደረጃ ☐ 4. ሰርተፍኬት/ የዲፕሎማ ምሩቅ/ ☐ 5. ደግሪና ከዛ በላይ ☐

8. የባለቤትዎ የትምህርት ደረጃ፡ .1. ማንበብና መጻፍ የሚችሉ ☐ 2. አንደኛ ደረጃ ☐
   3. ከሀለተኛ ደረጃ ☐ 4. ሰርተፍኬት/ የዲፕሎማ ምሩቅ ☐ 5. ደግሪና ከዛ በላይ ☐

9 እስካሁን ስንት ልጆችን ወልደዋል ______________ ወንድ ________ሴት ___________

10. የአሁኑ የትንሹ ልጅዎ እድሜ ስንት ነው?____________________ ዓመት _________ ወር
11. የትዳር ሁኔታ 1. ባለትዳር ☐ 2. የተፋቱ ☐ 3. ባል የሞተባት ☐
4. ሌላ ካለ _________________

ክፍል ሁለት፡ ስለ ጡት ማጥባት እና ተጨማሪ ምግብ አሰጣጥ መረጃ ምንጭ በተመለከተ

2.1. ስለ ጡት ማጥባት የመረጃ ምንጭ በተመለከተ

12. ልጅ ከመውለደዎ በፊት ስለጡት ማጥባት የሰሙት ነገር አለ? 1. አዎ ☐ 2. የለም ☐

13. ልጆችዎን እንደት ለምንና መቼ ጡት ማጥባት እንዳለብዎት ብዘወን ጊዜ የሚቀርብዎ ማን ነው?
   1. ባለቤቴ ☐ 2. ታላላቅ እናቶች ☐ 3. ሬዲዮ/ቴሌቪዥን ☐ 4. ከልምድ ☐
   5. የጤና ባለሙያ ☐ 6. ማንም አይመክረኝም ☐ 7. ሌላ ካለዎት ____________

14. የአሁኑ ልጅዎትን የወለዱት የት ነው 1. ሆስፒታል/ጤና ጣቢያ ☐ እቤት ☐
   3. ሌላ ካለ____________

15. ልጅዎን የወለዱት ጤና ጣቢያ ወይም ሆስፒታል ከሆነ ወደ ጤና ጣቢያ/ሆስፒታል ሲመላለሱ የምክር አግልግሎት አግኝተዋል 1 አዎ 2. አይደለም ☐ ☐

15.1 ለጥያቄ ቁጥር 15 መልስዎ አለ ከሆነ ይጥቀሱ____________

2.2 ተጨማሪ ምግብ አሰጣጥ የመረጃ ምንጭ በተመለከተ

1. ልጆችዎን እንደት ለምንና መቼ ተጨማሪ ምግብ መስጠት እዳለበት የሚቀርብዎ ማን ወ?
   1. ባለቤቴ ☐ 2. ልምድ ያላቸው ታላላቅ እናቶች ☐ ሬዲዮ/ቴሌቪዥን ☐
   4. ከልምድ ☐ 5. የጤና ባለሙያ 6 ☐ ማንም አይመክረኝም ☐

2. ከወለዱ በኋላ ልጅዎን ለማስከተብ ወደ ጤና ጣቢያ/ ሆስፒታል ሲመላለሱ ስለተጨማሪ ምግብ አሰጣጥ የጤና ባለሙያ የነገሮት ነገር አለ? 1. አዎ 2. የለም☐ ☐

3. ለጥያቄ ቁጥር 2. መልስዎ አዎ ከሆነ ይጥቀሱ____________

____

ክፍል ሶስት፡ የእናቶች ጡት ማጥባት እና ተጨማሪ ምግብን አሰጣጥ ግንዛቤን በተመለከተ

3.1. የእናቶች ጡት ማጥባት ግንዛቤን በተመለከተ

16. ልጆች ወዲያውኑ እንደተወለዱ ምን መጣብ አለባቸው?____________

____

17. ልጆች ተወልደው ከምን ያህል ግዜ በኋላ መጣብ መጀመር አለባቸው? ______ቀን ______ ሰዓት ______ ደቂቃ ____________

18. እንገርን ለአራስ ልጅ መጣብ ጥሩ ነው? 1. አዎ ☐ 2. አይደለም ☐ 3. አላውቅም ☐

18.1 ለመልስዎ አጭር ማበራሪያ ይስጡ____________

____

19. ልጆች የጡት ወተትን ያለ ተጨማሪ ምግብ መጣብ ያለባቸው ተወልደው እደሚያቸው ስንት እስከሚደርስ ነው?__________ ዓመት __________ወር አላውቅም ☐

20. በመጀመሪያዎቹ የ6 ወራት ከጡት ወተትና በጠጦ ከመጣብ የትኛው ለልጅዎ ይበልጥ ጠቃሚ ይመስልዎታል?
   1. የጡት ወተት ☐ 2. በጠጦ መጣብ ☐

21. ለመልስዎ ማበራሪያ ይስጡ____________

____

22. ከ6 ወር በላይ ጡት ከጠቡትና ካልጠቡት ልጆችዎ መካከል የትኞቹ ብዘወን ጊዜ ይታመሙ?
   1. ጡት የጠቡ ☐ 2. ጡት ያልጠቡት ☐ 3. ሌላ መልስ ካለዎት __________

____

23. ልጆችዎን ጡት ማጥባት ለምን ለምን ይጠቅማል?

1. ____________ 2. ____________

3. ____________ 4. ____________

5. ____________

6. ____________

24 ጡት ማጥባት ለአጥቢዋ እናት ጥቅም አለው ? 1. አለው ☐ 2. የለም ☐ 3. አላውቅም ☐

24.1 መልሶዎ አለው ከሆነ ጥቅሙ ይገለፅ ____________

25. ከልጆችዎ መካከል የትኞቹ ለረጅም ጊዜ ጡት ማጥባት አለባቸው ብለው ያምናሉ ?

1. ወንዶች ☐ 2. ሴቶች ☐

25.1 ለመልስዎ አጭር ማብራሪያ ይስጡ ____________

3.2. የእናቶች ተጨማሪ ምግብ አሰጣጥ ግንዛቤን በተመለከተ

4. ልጆች ከተወለዱ ከምን ያህል ጊዜ በኋላ ነው ተጨማሪ ምግብ መሰጠት ያለባቸው?

1. በአንድ ሳምንት ጊዜ ውስጥ ☐ 2. በአንድ ወር ግዜ ውስጥ ☐
3. በሶስት ወር ጊዜ ውስጥ ☐ 4. በስድስት ወር ጊዜ ውስጥ ☐
5. ከስድስት ወር በኋላ ☐ 6. ከዓመት በኋላ ☐ 7. ሌላ ካለ ____________

5. ልጅዎ ምንም ጡት ሳይጠባ ሌላ ምግብ ብቻ ሰጥተው ያውቃሉ? 1. አዎ ☐ 2. አይደለም ☐

6. ለጥያቄ ቁጥር 5 መልሶ አዎ ከሆነ አጭር ማብራሪያ ይስጡ ____________

7. ጡት ለ6 ወራት ያህል ጠበው ተጨማሪ ምግብ ከተሰጠና ምንም ጡት ሳይጠባ በሌላ ምግብ ካደጉ ልጆች መካከል የትኛው ብዙውን ጊዜ ይታመማል?

1. ጡት የጠባው ☐ 2. ጡት ያልጠባው ☐ 3. አላውቅም ☐

8. ልጆችን ተጨማሪ ምግብ መመገብ ምን ጥቅምና ጉዳት አለው?

1. ጥቅም ሀ. ____________ ሐ. ____________
ለ. ____________ መ. ____________

2. ጉዳት ሀ. ____________ ሐ. ____________
ለ. ____________ መ. ____________

9. ለህፃናት ተጨማሪ ምግብ መስጠት ለእናቶች ጥቅም አለው 1. አዎ ☐ 2. የለም ☐

10. ለጥያቄ ቁጥር 9 መልስ አለው "ከሆነ" ጥቅሙን ይገለፁ ____________

11. ከልጆችዎ መካከል ቀደሞ ተጨማሪ ምግብ መጀመር ያለበት

1. ወንዶች ☐ 2. ሴቶች ☐ 3. ሌላ መልስ ____________

12. ለመልሶ ማብራሪያ ይስጡ ____________

ክፍል አራት፡ የእናቶች ጡት ማጥባት እና ተጨማሪ ምግብ አሰጣጥ ተግባርን በተመለከተ

4.1. የእቶች ጡት ማጥባት ተግባርን በተመለከተ

26. ልጅዎ የተወለደ እለት ጡት ከማጥባትዎ በፊት ምን ማቡት ?

1. ለጋቅቤ ☐ 2. የማር ወለላ ☐ 3. የላም ወተት ☐ 4. የተበጠበጠ የወተት ዱቄት ☐
5. አጥሚት ☐ 6. ሌላ መልስ ካለዎት ____________

27. ልክ ልጅዎን እንደወለዱት ከጡትዎ የሚወጣውን እንገር ምን አደረጉት

1. መሬት ላይ አፈሰሱት ☐ 2. ልጄን ማብለት ☐ 3. ሌላ መልስ ካለዎት ____________

28. ልጅም ተወልዶው 6 ወር እስኪሞላው ድረስ በብዛት ምን ማበት ?
1. የጡት ወተት ብቻ ☐ 2. በጡሞ ብቻ ☐ 3. ሀለቱንም ☐
4. ጡትና ለለች ተጨማሪ ምግቦች 5☐ለለ ካለ _____

28.1 ለመልስዎ አጭር ማብራሪያ ይስጡ _____

_____

29. በአሁኑ ጊዜ ጡት እያጠቡ ነው ? 1. አዎ ☐ 2. አይደለም ☐

30. እያጠቡ ከሆነ ለምን ያህል ጊዜ ለማቆማት አቅደዋል? _____ ዓመት _____ ወር

31. ልጅዎን ጡት ማቆማት የጀመሩት ከምን ያህል ጊዜ በኋላ ነው ?
1. ተወልዶ ከ1 ሰዓት በኋላ ☐ 2. ተወልዶ ከምሽ ቀን በኋላ ☐
3. ተወልዶ ከአንድ ቀን በኋላ ☐ 4. ተወልዶ ከ3 ቀናት በኋላ ☐

32. ብዙውን ጊዜ ልጅነን ጡት የሚያጠቡት መቼ መቼ ነው ?
1. ትርፍ ጊዜ ሲኖረኝ ☐ 3. ጡት የሪበው /የፊለገው ሲመስለኝ ☐
2. ልጁ ባለቀሠ ጊዜ ☐ 4. ለለ ሥራ እየሠሪሁ ☐

33. ጡት ማቆማት የሚጀቆመት/ያቆመት መቼ ነው ?
1. በባህላችን መሰረት ልጅ ሀለት ዓመት ሲሞላው ☐ ልጅ መቀማት ሲጠለ ☐
3. እንደገና ሳረግዝ ☐ 4. ወተት ከጡቴ ሲቆምስ ☐
5. ለለ መልስ ካለዎት _____

34. ልጅዎን ለምን ጡት ማቆማት አቆሙ? 1 ጡቱ በቂ ወተት ስለለለው 2. ልጁ ሪሠ ጠለው ☐
3. እኔን ስላመመኝ 4. ሠዎች ያበቃል ስላለኝ ☐
5. ስያስት ወር በቂ ነው☐ . ☐ 6. በሥራ ምክንያት ስላልተመቸኝ ☐
7. ለለ ልጅ ሥላረገዝኩኝ ☐ 8. ለለ መልስ ካለዎት _____

35. በአጠቃላይ ስለጡት ማቆማት ያለት አስተያየት ምንድ ነው ? _____

_____

4.2. የእናቶች ተጨማሪ ምግብ አሰጣጥ ተግባርን በተመለከተ

13. ልጅም ተወልዶው ምን ያህል ጊዜ በኋላ ነው ተጨማሪ ምግብ ለመጀመሪያ ጊዜ የሠጠሽ?
1. ከሀለት ወር በኋላ ☐ 2. ከአራት ወር በኋላ ☐ 3. ከስያስት ወር በኋላ ☐
4. ከዓመት በኋላ ☐ 5 ለለ ካለ _____

14. ለመጀመሪያ ጊዜ የሠጠሽ ተጨማሪ ምግብ ምን ነበር?
1. የላም ወተት ☐ 2 አጥሚት ☐ 3 ገንፎ ☐ 4. ሙነ ☐
5 ፓፓያ 6☐አቮካዶ ☐. ሥጋ 8☐ለለ ካለ _____

15. ተጨማሪ ምግቡን ብዙውን ግዜ ለህጻኑ የሚሰጠሽ መቼ መቼ ነው?
1. ትርፍ ጊዜ ሳገኝ ☐ 2. ጡት ጠበዩ እንዳልጠበ ከተረዳሁ ☐
3. ልጁ ካለቀሰ ☐ 4. በጎን ለለ ሥራ እየሠሪሁ ☐ 5. ለለ ካለ _____

16.ለህጻኑ ተጨማሪ ምግብ የሚመገበው ማን ነው? 1. እናት 2.☐ት ☐
3. አባት ☐ 4. ወንደም ☐ 5. አያት ☐ 6. ለለ ካለ _____

17. በቀን ለምን ያህል ጊዜ ለህጻኑ ተጨማሪ ምግብ ይሰጠዋል?

1. በቀን አንድ ጊዜ ☐
2. በቀን ከሁለት እስከ ሶስት ጊዜ ☐
3. በቀን ከሦስት እስከ አራት ገዜ ☐
4. በቀን ከአራት እስ አምስት ጊዜ ☐
5. በቀን ከአምስት እስከ ስድስት ጊዜ ☐
6 ሌላ ካለ ____________________

ክፍል አምስት ፡ እናቶች ስለጡት ማጥባትና ተጨማሪ ምግብ አሰጣጥ ያላቸው አመለካከትን በተመለከተ

ከዚህ በታች የተዘረዘሩትን ሐሳቦችን በጥንቃቄ በማንበብ በሥነጠረኝ ሬስጌ ከተሠጡት አማራጮች ማለትም “በጣም እስማማለሁ” “እስማማለሁ” “አልስማማም” “በጣም አልስማማም” በማለት ከጥያቄው ፊት ለፊት የ”✓” ምልክት በማድረግ ይመልሡ::

5.1.፡ እናቶች ስለጡት ማጥባት ያላቸውን አመለካከት በተመለከተ

ተ.ቁ	አረፍተ ነገር	በጣም እስማማለሁ	እስማማለሁ	አላውቅም	አልስማማም	በጣም አልስማማም
1	እኔ ልጅ ጡት የማጠባው በራሴ ፍላጎት ነው					
2	በድጋሚ እንዳላረግዝ ብዬ እንጂ ጡ ት የማ ጠ ባት ፍላጎት የለኝም					
3	ልጄን ሌላ የምመግበው ነገር አጥቼ እንጂ ጡት ማጥባት አልፈልግም					
4	በቂ የጡት ወተት ባይኖረኝም ልጄን ጡት ከማጥባት አልታቀብም					
5	ጡት ማጥባት ጊዜን ስለሚሻማ አልወደም					
6	በልጄ ሞግዚት አመጋገብ ስለ ሚተማመንበት ጡት ማጥባት					

	እመርጣለሁ					
7	ፈጣሪ ጡት የፈጠረልኝ እንዳጠባበት ስለሆነ ማጥባትን አልተውም					
8	ከስድስት ወር በላይ ጡት ማጥባት ተገቢ አይደለም					
9	ጡት ማጥባት ከሲታ/አመዳም ያደርጋል					
10	ጡት ማጥባት የጡቴን ቅርፅ ስለሚያበላሽብኝ አልወደውም					
11	እሷ ታጠባለች ብሎ ሰው ስለሚያዝንልኝ አጠባለሁ					
12	ጡት ሳጠባ ቤተሰቦቼ ስለሚያበረታቱኝ ማጥባት እወዳለሁ					
13	ጡት ማጥባት ባህላችን ስለሆነ መተው የለበትም					
14	ጡት ማጥባት አሁን አሁን እየቀረ የመጣ ነገር ነው					
15	ጡት ማጥባት ከልጄ ጋር ስለሚያቀራርበኝ ደስ ይለኛል					
16	ጡት ማጥባት ህጻኑን ጤናማ ጠንካራ ያደርጋል					
17	ጡት ማጥባት አስቸጋሪ አመጋገብ ዘዴ ነው					
18	ባጠቃላይ ጡት ማጥባት ደስ የሚያሰኝ ሄ ደት ነው					

5.2. እናቶች ስለ ተጨማሪ ምግብ አሰጣጥ ያላቸውን አመለካከት በተመለከተ

ተ.ቁ	ዐረፍተ ነገር	በጣም እስማማለሁ	እስማማለሁ	አላውቅም	አልስማማም	በጣም አልስማማም
1	ተጨማሪ ምግብ ልጄን ስለሚያወፍረው ከ6 ወር በፊት ቶሎ መጀመር አለብኝ					
2	በቂ ገንዘብ ስላለኝ ከጡት ወተት ይልቅ ሌላ ተጨማሪ ምግብ በብዛ መስጠት ይሻለኛል					
3	የጡቴ ወተት በቂ ስላልሆነ ተጨማሪ ምግብ መስጠት ይሻላል					
4	ተጨማሪ ምግብ በመስጠት ሌሎች የቤተሰብ አባላት ስለሚያግዙኝ ደስ ይለኛል					
5	ጡት ማጥባት ስለሚያከሳኝ ተጨማሪ ምግብ ለልጄ መስጠትን እመርጣለሁ					
6	ተጨማሪ ምግቦችን መስጠት ልጄን ጤናማ ጠንካራ ያደርጋል					
7	ከስድስት ወር በኋላ ተጨማሪ ምግብ እንጂ የጡት ወተት የሚያፈልግ አይመስለኝም					

Appendix II

ክፍል ሶስት: የጡት ማጥባት እና ተጨማሪ ምግብ አሰጣጥ አካሄድ (trend) በተመለከተ ከእናቶች እና ከጤና ባለሞያዎች ጋር ለሚደረጉ ወይይቶች የተዘጋጀ የመወያያ እና የቃለ–መጠይቅ ነጥቦች

የአወያይ ስም ____________ ቀበሌ ____________ ቀን ____________

____________ ወይይቱ የወሰደው ግዜ ____________

እኔ አሁን እዚህ የተገኘሁት በበለን ወረዳ የሸናሻ ማህበረሰብ ወስጥ ያለውን ጡት ማጥባትና ተጨማሪ ምግብ አሰጣጥ ሁኔታ ለመረዳት ነው፡፡ ይህ ወይይት ትኩረት የሚያደርገው ጡት ማጥባትና ተጨማሪ ምግብ አሰጣጥ አካሄድ ላይ ነው፡፡ በወይይ ሂደታችን ወቅት የሚዝገበሩ ነጥቦች ከታች የተዘረዘሩት ናቸው፡፡

1. የተወያየንባቸው ነጥቦች በመሉ በሚስጥር ይጠበቃሉ
2. ስማችሁ የትም ቦታ አይጻገርም
3. ተሳትፏችሁ በፍቃደኝነት ስለሆነ በፈለጋችሁ ጊዜ ከወይይቱ መውጣት ትችላላችሁ

ተራ ቁጥር	መለያ ቁጥር	የወይይት ተሳትፊዎች አጠቃላይ መረጃ		
		በዚህ አካባቢ የኖሩት ዓመት	የልጆች ብዛት	ምርመሩ
1				
2				
3				
4				
5				
6				
7				
8				

6.1 ዋና ዋና የመወ ያያ ነጥቦች

1. በእናንተ ጊዜ/ዘመን ጋር ሲነጻጸር በአሁኑ ጊዜ ስለጡት ማጥባት እና ተጨማሪ ምግብ አሰጣጥ ሁኔታ በዚህ አካባቢ የሚታይ የተለየ ነገር አለ? ካለ በሶፋት ይዘርዝር፡፡
2. የጡት ማጥባት እና ተጨማሪ ምግብ አሰጣጥ ጠቀሜታና ጉዳት ምን ይመስላል?.
3. አንድ ህጻን ተወልዶ ስድስት ወር ከሞላው በኋላ የአመጋገቡ ሁኔታ ምን መሆን አለበት ትላላችሁ?
4. አንዲት እናት ልጅ ወልዳ ልጇን ከነጭ ዞርሽ ባታጠብ በባህላችሁ እንዴት ትምክከቷታላችሁ?
5. ነባሩን (ባህላዊ) ጡት የማጥባት እና ተጨማሪ ምግብ አሰጣጥ ዘዴን ለማቆየት (ለመቀለስ) ምን በደረግ ይሻላል?

6.2. የቃለ-መጠይቅ ነጥቦች

1. ህፃን የሚባሉ በዚህ አካባቢ እነማንናቸው?
2. በዚህ አካባቢ ከህፃናት አመጋገብ ጋር የተያያዙ ባህላዊ ጎጂ ደርጊቶች አለ? ካሉ ምን ምን ናቸው?
3. ከነዚህ ጎጂ ልማዳዊ ደርጊቶች መነሻ የእናት ጡት ወተትና ተጨማሪ ምግቦች በህፃናት ላይ ያስተለት በሽታዎች ወይም የጠየና ችግሮች አለ? ካሉ ይዘርዝሩ
4. የእናት ጡት እና ተጨማሪ ምግብ አሠጣጥ እወቀት፣ አመለካከትና ደርጊት በዚህ አካባቢ እንዴት ይታያል?
5. በዚህ አካባቢ ህፃናት በቂ የእናት ጡት ወተትና ተጨማሪ ምግብ ያገኛሉ ትላለህ/ ትያለሽ? ካልሆነ ለምን?
6. በዚህ አከባቢ የህፃናት ምግብ አዘገጃጀትን በተመለከተ የንፅህናን ጉዳይ እንዴት ትመለከታለህ/ ትመለከቺያለሽ?
7. በህፃናት አመጋገብ ላይ እናቶ በብዘት የሚያጋጥሟቸው ችግሮች ምን ምን ናቸው?

Questionnaire (English Version)

ADDIS ABABA UNIVERSITY
SCHOOL OF GRADUATE STUDIES
DEPARTMENT OF PSYCHOLOGY

This questionnaire is designed to collect data from mothers who have infants below two years of age and are expected to feed their infants in Bullen woreda. This study focuses on the situation of breast and complementary infant feeding among Shinsha mothers. Your responses in this questionnaire are used only for academic purpose and nothing more. Your answers will be kept confidential. Since the success of this research depends on the accuracy of the responses that you provide please be as honest as possible and give your genuine answer. There is no right and wrong answer. It is also very important if you answer all questions. I would like to thank in advance for your voluntary participation.

GENERAL DIRECTION

1. You do not need to write your name in any of the pages.
2. Put a tick mark "√" on the boxes given for the correct answer you thinks
3. For the open ended questions give your own answer on the spaces provided.

Kebele Code number 1. ☐ 2. ☐ 3. ☐ 4. ☐

Part one: **General back ground information of the respondents**

1. Age _____
2. Religion ☐ 1. Orthodox ☐ 2. Muslim ☐ 3. Protestant ☐

4. Catholic ☐ 5. Others specify _____

3. Where do you live most of your life?

1. Big town ☐ 2. Small town ☐ 3. Rural area ☐

4. How long do you live in this area?_____

5. Occupation: 1. House wife ☐ 2. Petty trade ☐ 3. Daily laborer ☐

4. Government employee ☐ 5. Private firm employee ☐ 6. Farmer ☐

7. Other, specific_____

6. Estimated average monthly income (adding that of husband)

1. Below birr 200 ☐ 2. Birr 200-500 ☐ 3. Above Birr 500 ☐

7. Educational level: 1. Could not read and write ☐ 2. Elementary school ☐

3. Secondary school ☐ 4. Certificate/diploma ☐ 5. Degree and above ☐

8. Husband's Educational level 1. Could not read and write ☐ 2. Elementary school ☐

3. Secondary school ☐ 4. Certificate/diploma ☐ 5. Degree and above ☐

9. Number of children you gave birth _____

10. The age of current infant _____ year _____month(s)

11. Marital status 1. Married ☐ 2. Divorced ☐ 3. Unmarried ☐ 4.Widowed ☐

PartTwo: About sources of information on breast and complementary infant feeding

2.1. About Source of Information on Breast Feeding

12. Have you ever heard of breast feeding prior to giving birth? 1. Yes ☐ 2. No ☐

13. Who informs you about, how, when and why to breast feed?

1. Husband ☐ 2. Elder mothers ☐ 3. Radio /television ☐

4. Cultural experience ☐ 5. Health extension workers ☐ 6.Nobody ☐

7. Others, specify_____ ☐

14. Where do you give birth to your present child? 1. Hospital/ health center

2. Own residence ☐ 3. Other specify_____

15. Is there something that you are told by health extension workers while visiting for cheek up? 1. Yes ☐ 2. No ☐

15.1 If your answer for Q no15 is yes please specify_____

2.2. About Sources of Information on Complementary Feeding

1. Who informs you about, how, when and why to give complementary foods to your infant?

   1. Husband ☐ 2. Elder mothers ☐ 3. Radio /television ☐

   4. Cultural experience ☐ 5. Health extension workers ☐ 6.Nobody ☐

2. Is there something that you are told by health extension workers about giving complementary foods while visiting hospital/health center for vaccination?

   1. Yes ☐ 2. No ☐

3. If your answer for question no.2 is yes what is told to you? _____

_____

<u>Part Three</u>: Concerning Knowledge about Breast and Complementary Infant Feeding

3.1 Concerning Knowledge about Breast Feeding

16. What should infants be fed just after birth? _____

17. After how long should new born infant begin feeding?_____ Days_____ hours_____ minutes

18. Does the feeding of colostrums desirable for infants 1. Yes ☐ 2. No ☐ 3. Don't know ☐

18.1. Justify your answer _____

19. Up to when children should enjoy exclusive breast feeding? 1._____Months 2._____Years 3. Don't know ☐

20. Which food is more preferable for children below 6 months of age?

   1. Breast milk feeding ☐ 2. Bottle feeding ☐ 3.Other

specify_____

21.Justify your reason for question number

20_____

_____

22. Which one of your children often experiences illness?

1. Those who breast fed ☐ 2. Those who bottle fed ☐

3. Specify other_____

23. Mention the importance of breast feeding for infants

1. _____
2. _____
3. _____
4. _____

24. Is breast feeding useful for breast feeding mothers? 1. Yes ☐ 2. No ☐

3. Don't know ☐

24.1 Justify your reason for question number 24_____

_____

25. Which of your children do you think should breast fed longer?

1. Males ☐ 2. Females ☐ 3. Others, specify _____

25.1 Give the reason for your answer of question number 25_____

_____

3.2. Concerning Knowledge about Complementary Infant Feeding

4. When should mothers start to give their infants with complementary food?

1. Within a week ☐ 2.Within a month ☐ 3. Within three months ☐

4. Within six months ☐ 5. After six months ☐ 6. After a year ☐

7. If any_____.

5. Have you ever given complementary foods without breast milk for your infant?

1.Yes ☐ 2.No ☐

6. If your answer for question no 5 is yes, justify_____

7. When you compare infant fed breast milk for 6 month and given complementary food and only given complementary foods which one experience illness?

1. breast fed ☐ 2. Complementary fed ☐ 3. Don't know ☐

8. What are the advantages and disadvantages of complementary feeding to infants?

1. Advantages a._____

b._____

c._____

2. Disadvantages

a._____

b._____

c._____

9. Does providing complementary foods to infants have merits to mothers?

1. Yes ☐ 2.No ☐

10. If your answer to question number 9 is yes, justify your reasons _____

_____

11. Which of your children should start complementary foods earlier?

1. Males ☐ 2. Females ☐ 3. Others, specify_____

_____

12. Give the reason for your answer of question number 11 _____

_____

PART FOUR: Concerning the Issues of Breast and Complementary Infant Feeding Practices

4.1 Concerning the Issues of Breast Feeding Practices

26. What did you fed your child the day he/she has born 1. Fresh butter ☐

2. Honey ☐ 3. Cow milk ☐ 4. Diluted milk flour ☐ 5. Water ☐

6. Other specify_____

27. How do you dealt with the colostrums soon after birth 1. Discarded away ☐

2. Fed my new born ☐ 3. Others, specify_____

28. What did you fed your new born still he/she is six months?

☐ ☐

1. Exclusive breast milk ☐ 2. Exclusive bottle feeding 3. Both

4. Breast and other foods ☐ 5. Specify, others _____

28.1. Justify the reason for your answer of question number 28_____

29. Are you currently breastfeeding? 1. Yes ☐ 2. No ☐

30. For how long do you intended to breast fed? ——————years——— month

31. When did you start suckling your infant? 1. One hour after birth ☐

2. Half a day after birth ☐ 3. One day after birth ☐ 4. Three days after birth ☐

5. A week after birth ☐ 6. Others, specify_____

32. On what occasions do you breast fed your infant?

1. During my leisure times ☐ 2. When infant cries ☐

3. If I thought that the infant is hunger ☐ 4. When someone reminds me ☐

5.While performing other tasks ☐ 6. Others, specify_____

33. When will /did you cease suckling? 1. Two years as per our culture ☐

2. When the child hates ☐ 4. On the diminishing of breast milk ☐

3. When I become pregnant ☐ 5. Others, specify _____

34. Why did you stop breast feeding? 1. Because the breast milk is insufficient ☐

2. Because the child hated ☐ 3. Because of my illness ☐ 4. Because of others advice ☐

5. Because I felt that six month is enough ☐ 6. Because of inconvenience with work

7. Because I become pregnant ☐ 8. Others specify_____

35. What is your comment concerning about breast feeding in general? _____

_____

_____

_____

4.2. Concerning the Issues of Complementary Infant Feeding Practices

13. What did you fed your child the day he/she has born 1. Fresh butter ☐

2. Gruels ☐ 3. Honey ☐ 4. Cow milk ☐ 5. Diluted milk flour ☐

6. Water ☐ 7. Other specify_____

14. What was the first complementary food that you gave to your infant?

1. Cow milk ☐ 2.Gruels ☐ 3.poridges ☐ 4.Mango ☐ 5.Papaya ☐

6.Meat ☐ 7.Avocado ☐

8.Specify if any _____

15. On what time do you provide your infant with complementary foods?

1. During my leisure times ☐ 2. If I thought that the infant is hunger after breast feeding ☐

3.When infant cries ☐ 4.While performing other tasks ☐

5. Others, specify_____

16. Who provides the infant with complementary foods?

1. Mother ☐ 2.Sister ☐ 3. Father ☐ 4 Brother ☐ 5. Grand-mother ☐

17. How often did you provide the infant with complementary foods?

1. Once a day ☐ 2. Two to three times a day ☐ 3.Three to four times a day ☐

4. Four to five times a day ☐ 5. Five to six times a day ☐ 6. Specify if any_____

PART FIVE: **Items Measuring Maternal Attitudes towards Breast and Complementary Infant Feeding**

5.1. Items Measuring Maternal Attitudes towards Breast Feeding

Read the following statements very carefully and write your choice from the given for alternatives which are **"Strongly Agree**" "**Agree" "Don't know"** "**Disagree**" "**Strongly Disagree**" by putting a thick mark **"✓"** on the space provided corresponding to each statement.

S.No	Statement	SA	A	DK	D	SD
1	I breast fed my child on my own interest					
2	I breast fed just only to avoid pregnancy					
3	I breast fed only because I have nothing to feed					
4	Although I don't have sufficient milk, I don't refrain from breast feeding					
5	I hate breast feeding because it is time taking					
6	I prefer breast feeding to the mistrusting feeding of care takers					
7	God created breast on me to feed my child					
8	Breast feeding beyond 6 months is improper					
9	I dislike breast feeding because it makes my appearance thin					
10	Breast feeding distorts the shape of my breast					
11	Because others reveal concern for me I like breast feeding					

12	Encouragement of family members made me love breast feeding					
13	As it is our culture, breast feeding should not be neglected					
14	Now a days breast feeding is becoming old fasion					
15	Breast feeding keeps me with my child in close proximity					
16	Breast feeding makes the child healthy and strong					
17	Breast feeding is a difficult way of infant feeding					
18	Generally breast feeding is an enjoyable practice					

Key: SA, stands for Strongly Agree **A**: for Agree **UK:** for Don't know **D** for Disagree **SD** for Strongly Disagree

5.2. Items Measuring Maternal Attitudes towards Complementary Infant Feeding

S.No	Statement	SA	A	DK	D	SD
1	I provide complementary foods because it makes my infant fat					
2	I have enough money to buy complementary food items instead of suffering myself by breast feeding					
3	My breast milk is not sufficient to my infant so just after birth I like to introduce complementary foods to my infant					
4	Since others can help me by providing complementary foods I like it					
5	Breast feeding makes my appearance thin so I like to give complementary foods to my infant					
6	Providing my infant with complementary foods make him/her healthy and strong					
7	After six months in addition of breast feeding complementary foods are preferable.					

Key: SA stands for Strongly Agree **A**: for Agree **DK** for Don't Know **D** for Disagree **SD** for Strongly Disagree

Appendix III

PART SIX: Focus Group Discussion and interview Guidelines for Mothers and Health

Extension Workers

Name of moderator/facilitator_____ Kebele_____Data _____Time_____

Dear mothers, we are here to learn/understand the important experience from you. The discussion concentrates on the trend of breast and complementary infant feeding. The following guideline principles govern our discussion. Focus group discussion guiding principles

1. All the issues raised here will be kept secret
2. Your name will remain anonymous and
3. Voluntary withdrawal is allowed

Ser No	Code No	Personal data of FGD participants	
		Years you lived in this area	No of children
1			
2			
3			
4			
5			
6			
7			

8			

6.1. Key discussion issues

1. In comparison with your earlier times, what are your general observations concerning breast feeding in this kebele? Discuss
2. What are the reasons for the change, if any, in breast and complementary infant feeding as oppose to earlier time?
3. What should be the feeding situation of the infant after six months?
4. How do you perceive a mother who totally refused to breast fed her new born infant in your culture?
5. What do you think should be done to bring and maintain the customarily existing breast feeding norm?

6.2 Interview Guidelines for health Extension Workers

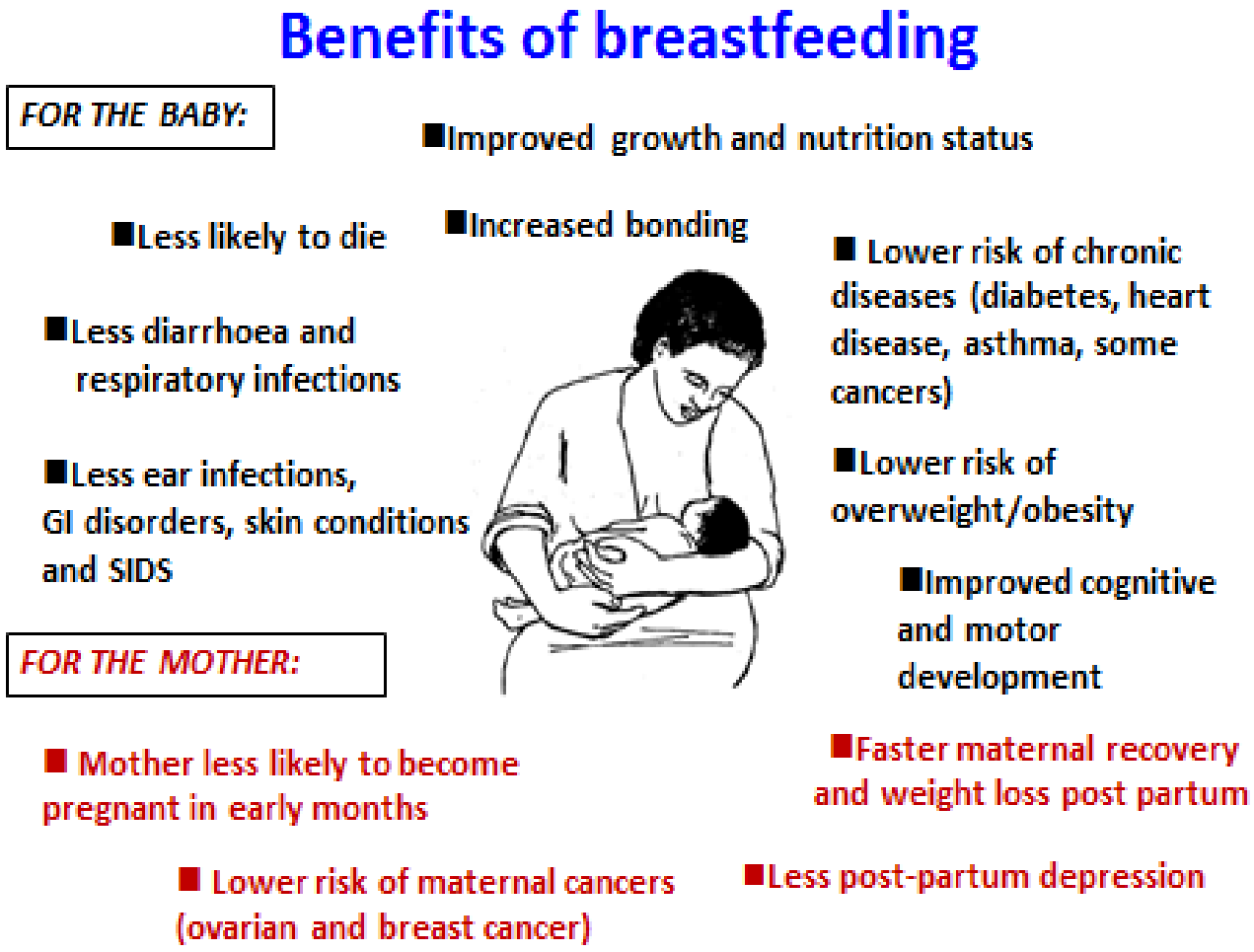
1. Who are considered as infants in this area?
2. Is there any harmful traditional practices in relation with infant feeding in this area? If yes what are they?
3. Is there any sickness or health complication in relation with breast and complementary infant feeding caused by harmful traditional practices?
4. How do you see the breast and complementary infant feeding knowledge practices, and attitudes in this area?
5. Do you think that infant get sufficient breast milk and complementary foods in this area? If no, why?
6. How do you describe the sanitation and hygiene practices in preparation of complementary infant foods in this area?
7. What are common problems that mothers encounter during feeding their infants?

Appendix IV: Frequency, percentage and weighted mean of items measuring mothers' attitude towards breast feeding

S.No	Statements	SAN	%	AN	%	DN	%	SDN	%	Mean*
1	I breast fed my child on my own interest	32	40	36	45	8	10	4	5	1.80
2	I breast fed just only to avoid pregnancy	-	-	8	10	56	70	16	20	3.10
3	I breast fed only because I have nothing to feed	2	2.5	9	11.25	43	53.75	25	31.25	3.52
4	Although I don't have sufficient milk, I don't refrain from breast feeding	19	23.75	53	70.37	6	7.5	2	2.5	1.88
5	I hate breast feeding because it is time taking	3	3.75	7	8.75	50	62.5	20	25	3.08
6	I prefer breast feeding to the mistrusting feeding of care takers	12	15	48	60	19	23.75	1	1.25	2.11
7	God created breast on me to feed my child	19	23.75	45	56.25	12	15	4	5	2.01
8	Breast feeding beyond 6 months is improper	2	2.5	2	2.2	35	43.75	41	51.25	3.43
9	I dislike breast feeding because it makes my appearance thin	9	11.25	18	22.5	26	32.5	27	33.75	2.88
10	Breast feeding distorts the shape of my breast	2	2.5	4	5	35	43.75	39	48.75	3.38
11	Because others reveal concern for me I like breast feeding	3	3.75	15	18.75	43	53.75	19	23.75	2.97
12	Encouragement of family members made me love breast feeding	6	7.5	38	47.5	33	41.25	3	3.75	2.41
13	As it is our culture, breast feeding should not be neglected	15	18.75	44	55	13	16.25	8	10	2.17
14	Now a days' breast feeding is becoming old fashion	1	1.25	2	2.5	38	47.5	39	48.75	3.43
15	Breast feeding keeps me with my child in close proximity	49	61.25	27	33.75	2	2.5	2	2.5	1.46
16	Breast feeding makes the child healthy and strong	66	82.5	11	13.75	1	1.25	2	2.5	1.23
17	Breast feeding is a difficult way of infant feeding	4	5	4	5	28	35	44	55	3.40
18	Generally breast feeding is an enjoyable practice	30	37.5	44	55	5	6.25	1	1.25	1.71

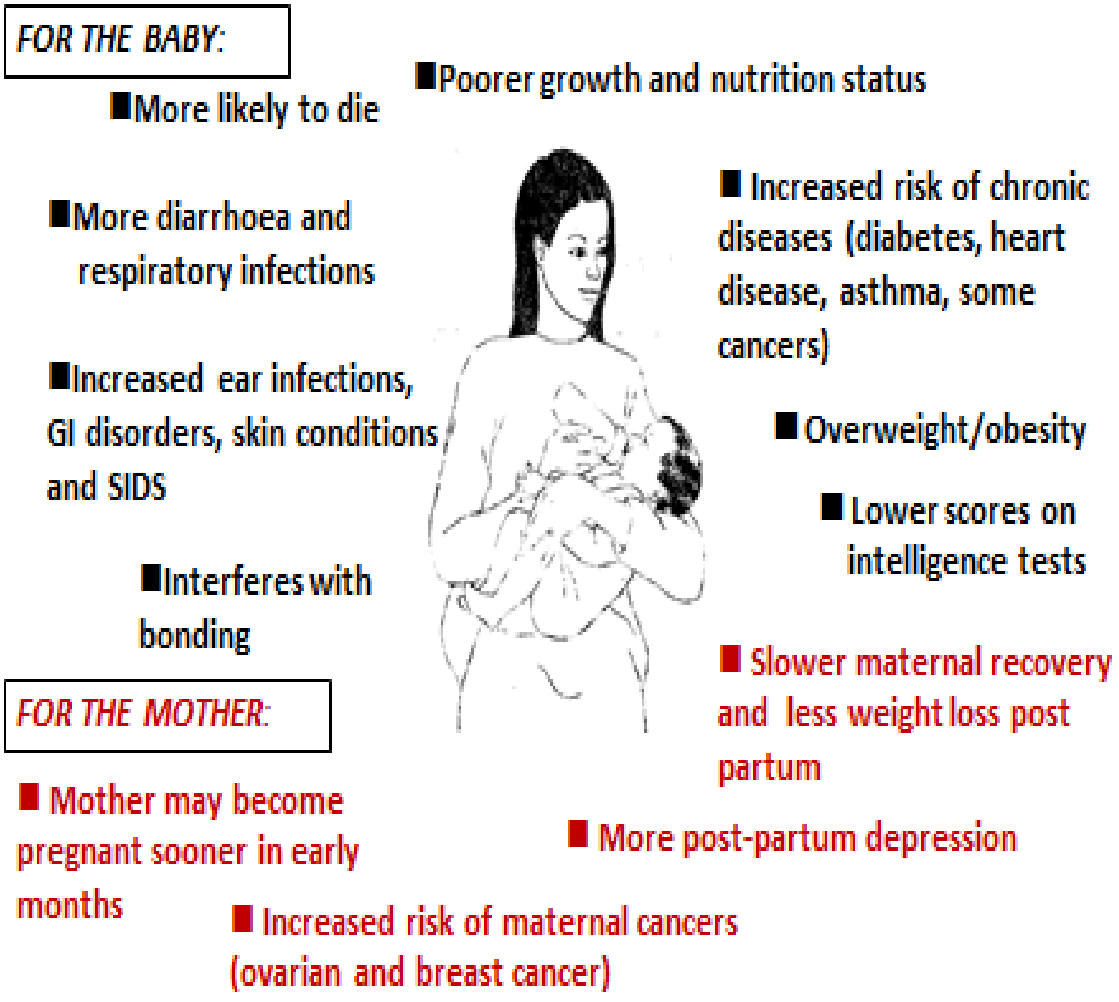
Key: SA =Strongly Agree, A=Agree, D=Disagree, A=Strongly Disagree.

Figure 1. **Benefit /Significance of Breast feeding**



Source: adapted from WHO/UNICEF Integrated IYCF counseling course, 2007.

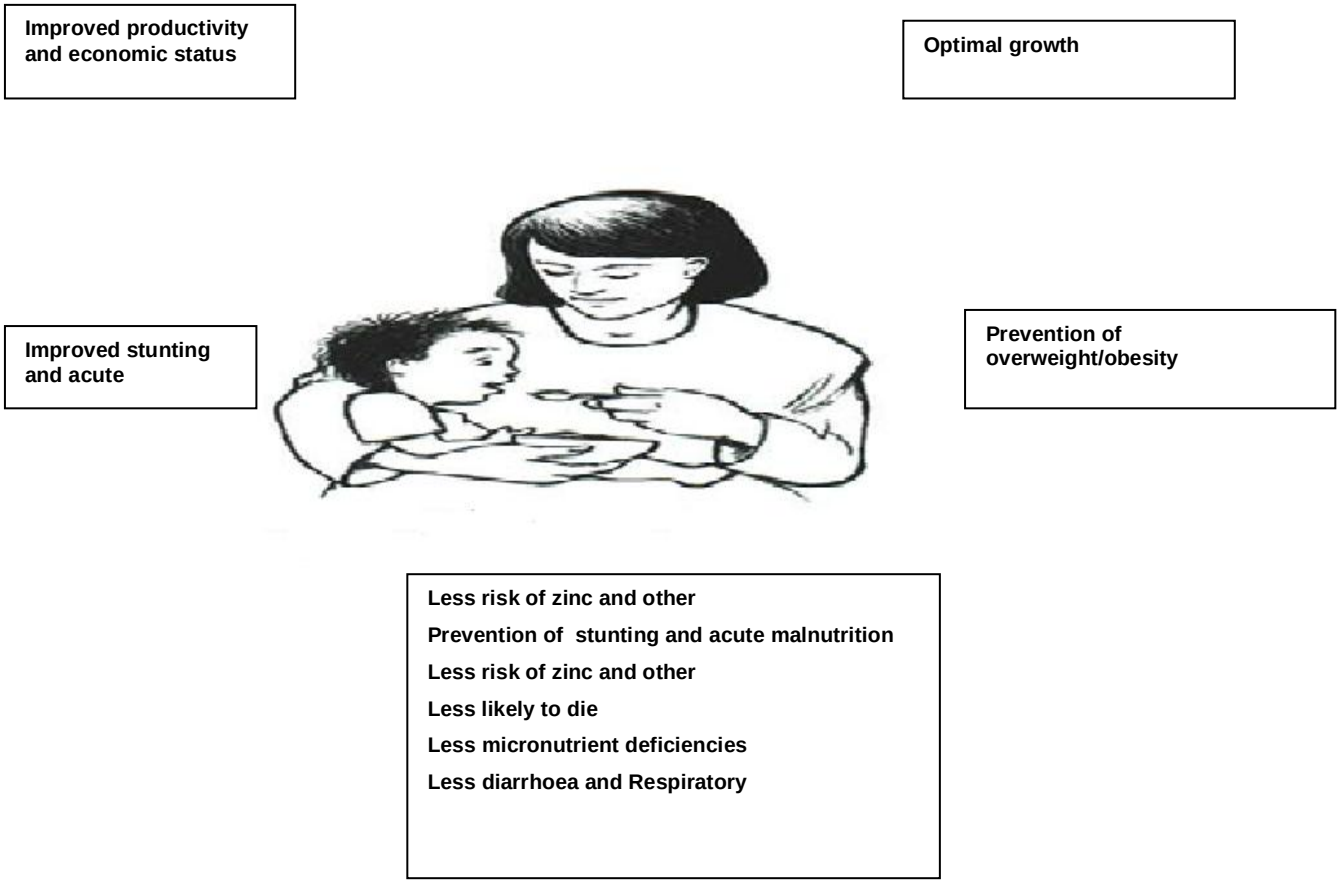
Figure 2 Risks of artificial feeding



Source: adapted from WHO/UNICEF Integrated IYCF counseling course, 2007.

Figure 3. **Benefits of optimal complementary feeding**

(timely, adequate, appropriate and safe



Source: adapted from WHO/UNICEF Integrated IYCF counseling course, 2007.

DECLARATION

I the undersigned, declare that this thesis is my original work and has not been presented for a degree in any other university and that all sources used in this thesis have been dually acknowledged.

Student's name

ASSEFA HIRPA

Signature_____

Date_____