

JIMMA UNIVERSITY
COLLEGE OF HEALTH SCIENCES SCHOOL OF GRADUATE STUDIES

Implementation Evaluation of Nutrition Intervention of under two years age children in Bullen woreda Metekel zone, North West Ethiopia.

BY: GETACHEW MAMO GESHI

An Evaluation Research to be submitted to Department of Health Economics, Management and Policy, Health Monitoring and Evaluation Unit in the Partial Fulfillment of the Requirements for the Degree of Master of science in Health Monitoring and Evaluation.

JIMMA, ETHIOPIA

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Abstract

Background: Breastfeeding contributes to infant nutrition and health through a number of important mechanisms. It provides a complete source of nutrients for the first six months of life, half of all requirements in the second six months of life, and one third of requirements in the second year of life.

Objective: To evaluate the implementation level of the program in Metekel zone Bullen woreda.

Methods and material: community based cross-sectional study was conducted quantitative and qualitative data were collected from April 04 to 15/2016. A total of 312 randomly selected mothers were interviewed. Key informants interview was conducted with health office head, health center head, HEW supervisor, key for nutrition program, women association leaders, health development army and salt supplier and health extension workers (total 11). Moreover, resource inventory and document review were conducted (total of 6 health facilities). Quantitative results were entered using Epidata version 3.1 for data entry and SPSS version 20 for analysis. Univariate analysis was done for descriptive results. Binary and multiple logistic regressions were done to see the association among variables and determinant factor of adherence of mothers. Qualitative data was categorized and analyzed thematically.

Result: Overall, the required resources were available in 74% of the health facilities studied. Service providers were complying with the guideline in 67% of the time. And adherence of mothers with the recommended practice was 72.4%. Rural mothers [AOR, 0.378 CI95 % 0.215, 0.665] and community participation [AOR 2.184 CI95% 1.184, 4.029] were predictors of mothers' adherence.

Conclusion and Recommendations: Overall, three dimensions was (72%) and Judged according to presented criteria as V.good achievement. Intervention recommended to focus on resource availability, compliance and continues community participation mainly women to ensure ownership and practicality.

Key words: adherence, Child, Exclusive breast feeding & complimentary feeding.

Acronyms and Abbreviation

ANC-antenatal care

BF- Breast Feeding

CDC-Center for Disease Control & Prevention

CF-Complimentary Feeding

EBF-Exclusive Breast Feeding

EDHS-Ethiopian Demographic and Health Survey

FMOH-Federal Ministry of Health

HC-Health Center

HDA-Health Development Army

HEWs-Health Extension Workers

HHs-House Holds

HP-Health Post

IEC-Information Education Communication

IYCF-Infant and Young Child Feeding

MDG-Millennium Development Goals

MUAC-Mid-Upper Arm Circumference

NGO-Non Governmental Organization

PNC- post-natal care

RHB-Regional Health Bureau

SDG-Sustainable Development Goals

UNICEF-United Nation International Child Emergency Fund

WHO-World Health Organization

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Operational definitions

- **Adherence-** Mothers' adherence with infant feeding and complementary feeding practices according to recommendations.
- **Availability-** Is the degree of fit between the volume and type of existing services and resources to the client volume and types of needs. It refers to the number of health care service, points which needy people can choose and quantity of demand relative to quantity of supply.
- **Compliance-** is the adherence of the providers to guidelines during ANC and PNC service to pregnant and lactating mothers.
- **Community participation-** Community participation is commonly understood as the collective involvement of local people in assessing their needs and organizing strategies to meet those needs
- **Implementation fidelity** –a degree to which programs are implemented as intended by program developers.
- **Proportion-**those who are included in the numerator are also included in the denominator.
- **Standards of judgment:-**Standards are measurements of judgment about the program that are put or reached consensus by the evaluator and stakeholders through discussion during evaluability assessment in Bullen Woreda.
- **Stock out** –is absence of target supplementary food continuously for 6 months

CHAPTER: 1 Introduction

1.1 Back ground

Under-nutrition is believed to contribute to approximately half of young child deaths in low income countries, as well as to impaired health, growth and development of young children Breastfeeding contributes to infant nutrition and health through a number of important mechanisms. It provides a complete source of nutrients for the first six months of life, half of all requirements in the second six months of life, and one third of requirements in the second year of life [1]. Breastfeeding is also known for providing essential nutrients, protecting against specific illnesses [2, 3].

The intervention is directly related with sustainable development goals 1, 2, 3, 4&5 to eradicate extreme poverty, Breast milk is a low cost, high quality, readily available food for the infant and as such, breastfeeding significantly reduces early childhood feeding costs. To achieve universal primary education, Breastfeeding and adequate complementary feeding contribute significantly to mental, physical and cognitive development and are prerequisites for readiness to learn. Empowers women, increased birth spacing and potentially helps prevents maternal depletion from short birth intervals. Reduce child mortality, Exclusive breastfeeding up to six months of age and breastfeeding up to 12 months was ranked number one, with complementary feeding starting at six months along with continued breastfeeding number three. Improve maternal health; Breastfeeding also contributes to the duration of birth intervals, reducing maternal risks of pregnancy too close together, including lessening risk of maternal nutritional depletion from repeated, closely-spaced pregnancies [2-4].

Complementary feeding is giving other foods in addition to breast milk to babies. These foods should complement, not replace, breast milk. It should be introduced at 6months early introduction displace breast milk and increase risk of diarrhea and late introduction is also dangerous because the child doesn't get to fill energy and nutrient gaps. Optimal complementary feeding is critical in the first 2 years of a child's life because the period since rate of malnutrition usually peak at this time with consequence persist throughout life [3, 4].

To prevent under-nutrition, the WHO and UNICEF created the global strategy for infant and young child feeding and the guiding principles for complementary feeding of the breastfed child which include IYCF recommendations such as exclusively breastfeeding for the first 6 months of life, complementing breastmilk from 6 to 24 months of age with a wide range of safely prepared and nutritious complementary foods, and following good feeding, hygiene and sanitation practices. Information on how to feed children

is often delivered through the health sector, especially via health workers and doctors. However, other channels of information include commercial advertising by food manufacturers, other family members or prominent community members[4, 5].

In Ethiopia infant and young child feeding program is a six year initiative to improve infant and young child feeding practices by increasing rates of exclusive breastfeeding and improving complementary feeding practices. The first two years provide a window of opportunity to prevent child deaths and ensure healthy growth and brain development [4].

The IYCF program is designed to prevent infant under-nutrition through behavior change by promoting optimal breastfeeding and infant and young child complementary feeding practices, as well as good hygiene and health seeking behavior practices. Sub-optimal infant and young child breast feeding and complementary feeding practices can be the result of low levels of knowledge, social-cultural beliefs/influences or inadequate access to nutritious foods, adequate health care facilities or health care products, such as soap [5].

The prevention of under-nutrition via the Infant and Young Child Feeding (IYCF) is one of the programs working to improve nutrition in Benishangul region. The program aim is to contribute to reduce morbidity and mortality among children under 2 through optimal infant and young child feeding (IYCF) practices in Bangladesh, Ethiopia, and Viet Nam by increasing rates of exclusive breastfeeding and improving complementary feeding practices. The intervention aims to reach more than 16 million children under 2 years old in those three countries through various delivery models [4, 5].

The goal of the program is to reduce death, illness, and malnutrition caused by sub-optimal feeding of infants and young children through three main strategies: improving infant and young child feeding policy and regulatory environments, shaping infant and young child feeding demand and practice (community-based approaches), and increasing supply, demand and use of fortified complementary foods and related products [5- 7].

Improving knowledge, attitudes, beliefs and self-efficacy alone may not be sufficient for successful behavior change. Instead a comprehensive package of behavior change techniques are required including informational, performance-based, problem-solving, social support, materials and media techniques. Good training in IYCF counseling skills and culturally appropriate counseling materials are also essential to support these efforts [9, 10].

1.2 Statement of the Problem

In the world more than 10 million children die annually each year, in which 41% of these deaths occur in sub-Saharan Africa [9]. According to EDHS 2011, national infant and under five children mortality rate were 59 and 88 per 1,000. Sub-optimal exclusive breastfeeding is the major contributor for infant and child mortality. It attributes 45% of neonatal infectious deaths, 30% of diarrheal deaths and 18% of acute respiratory deaths. Exclusive breast feeding (EBF) can significantly reduce the burden of under-2 death in Africa where 41% of global under five death occur mainly due to inadequate breastfeeding practices in combination with high levels of disease [10, 11]. Health workers often face challenges when encouraging mothers to feed young children according to recommended practices due to confusing and often conflicting information or barriers related to poverty, habitual behaviors, societal norms, or food availability/affordability [11].

The prevalence of EBF, is low globally (39%), and it is estimated to be 36% in low income countries. Despite reports of increased EBF in most areas (22% to 30% in sub Saharan Africa, and 30% to 45% in Latin America and the Caribbean, excluding Brazil, and Mexico) the prevalence is still low compared to the WHO recommendation [14, 15].

Continued breastfeeding beyond six months, accompanied by sufficient quantities of nutritionally adequate, safe and appropriate solid, semi-solid and soft foods, also helps ensure good nutritional status and protects against illnesses. It has been estimated that optimal breastfeeding of children under two years of age has the potential to prevent 1.4 million deaths in children under five in the developing world annually [16]. Unfortunately, early cessation of breastfeeding in favor of commercial breast milk substitutes, introduction of liquids such as water and juices, needless supplementation and poorly timed introduction of solid, semi-solid and soft foods, often of poor quality, is far too common [17].

Insufficient quantities and inadequate quality of complementary foods, poor child feeding practices, and high rates of infections have a detrimental effect on health and growth in children less than 2 years of age. Even with optimum breastfeeding, children will become stunted if they do not receive sufficient dietary diversity and meal frequency after 6months of age [16, 18]. Meeting minimum standards of dietary quality is a challenge in many developing country settings including Ethiopia, especially in areas where household food security is poor, and it has often not been given enough emphasis. Children may not be fed frequently enough during the day, or the quality of the food may be inadequate [20, 21].

Some studies suggest that introducing solid foods too early may lead to increased risk of chronic disease such as islet autoimmunity (the preclinical condition leading to type 1 diabetes), obesity, adult-onset celiac disease, and eczema; and introduction too late may increase feeding difficulties. In addition, early introduction to solid foods may lead to poor nutrition outcomes such as low iron stores by displacing energy rich and highly available iron in breastmilk, and increasing the risk of diarrheal disease [22].

Poor nutritional status of children and women continues to be a serious problem in Ethiopia. The health sector has increased its efforts to enhance good nutritional practices through health education, treatment of extremely malnourished children, and provision of micronutrients to mothers and children[24].

This evaluation is conducted to provide the gaps that mixed feeding under 6 months infant and late introduction of complementary feeding 7-9 months in the study area identified during evaluability assessment time. Program managers also need evaluation and use for future program improvement.

1.3 Significance of evaluation

Through this evaluation available resources to perform activities were assessed, program implementation was evaluated and possible factors that hinder the service delivery were also identified.

Purpose of evaluation findings;

- ❖ To make informed decision about the program.
- ❖ To program improvement.
- ❖ To Provide gaps/opportunities to stakeholders and,
- ❖ To provide input to conduct outcome evaluation of the program.

CHAPTER -2 Program Description

World food targeted health education/information through health care provider to remind mother about benefits of exclusive breastfeeding for 6 months and danger of putting anything else in the mouth, even water and beyond 6 months old infant complementary feeding to mothers/ caregivers. Breast milk is a low cost, high quality, readily available food for the infant and as such, breastfeeding significantly reduces early childhood feeding costs. Exclusive breastfeeding and continued breastfeeding for two years is associated with reduction in underweight and is an excellent and high quality food source[4, 5].

Exclusive breastfeeding delays the returns of the menstruations and consequently, reduces fertility and reproductive stress. Breastfeeding and adequate complementary feeding contribute significantly to mental, physical and cognitive development and are prerequisites for readiness to learn. Exclusive breastfeeding up to six months of age and breastfeeding up to 12 months was ranked number one, with complementary feeding starting at six months along with continued breastfeeding number three [6,7].

Breastfeeding is the great equalizer, giving every child a fair start on life. Most differences in growth between sexes begin as complementary foods are added into the diet, and gender preference begins to act on feeding decisions. Breastfeeding also empowers women: increased birth spacing and potentially helps prevents maternal depletion from short birth intervals. Breastfeeding is associated with decreased maternal postpartum blood loss, breast cancer, ovarian cancer, and endometrial cancer, as well as the probability of decreased bone loss post-menopause. Breastfeeding also contributes to the duration of birth intervals, reducing maternal risks of pregnancy too close together, including lessening risk of maternal nutritional depletion from repeated, closely-spaced pregnancies. Breastfeeding promotes return of the mother's body to pre-pregnancy status [8, 9].

Program Resources

Program resource for IYCF includes human resource, finance, health facilities, guidelines and manuals, registration books and report formats

Program Activities

Infant and young child feeding program delivers training, distribution of material, give health education/information to mothers/caregivers, to remind mother about benefits of exclusive breastfeeding for 6 months and danger of putting anything else in the mouth, even water and beyond 6 months old complementary feeding to child at the time service provision to mothers/caregivers and educating household to use salt that has been fortified with iodine in cooking.

Program output

Number of health facilities with trained staff, number of materials distributed to health facilities, number of health facilities with MUAC tapes, length board and number of under 2 years children receive supplementary food.

Program outcome

Increasing mothers' awareness about exclusive breast feeding and complementary feeding and increase number of mothers adhered with early feeding recommendation practices.

Program impacts

To contribute to reduction of U2 children morbidity and mortality

2.3 Major Strategies

The program used as a strategy to reach the target beneficiaries/children through health sectors to give health education/information to mother/caregivers. Community mobilization to integrate program intervention with health extension package (HEP) to educate cut off point for EBF &CF at community level.

2.4 Program Goals and Objectives

The program overall goal is to improve the nutritional status, growth, development and survival of infants and young children through promotion and support for optimal infant and young child feeding and care practices. Program aim is to contribute to reduction of national infant morbidity, mortality & stunting initiative of under 2 years child[2].

Program Objectives

- By, 2017 the prevalence of exclusive breastfeeding of children under 6 months increases by 18% from 52% to 70%.
- By, 2017 the prevalence of the early initiation of breastfeeding increases by 20% from 52% to 72%.
- By, 2017 the prevalence of timely initiation of complimentary feeding will increase by 16% from 51%

2.5 program logic model

Logic model is a plausible and sensible model of how the program will work under certain environmental conditions to solve identified problems. It can be the basis for convincing story of the program's expected effects, telling the stakeholders and others the problem the program focuses on and how it is uniquely qualified to address it. Program logic model serves as a useful advance organizer for designing evaluation, focusing on the important program components and identifying what evaluation questions should be asked. It also helps to frame evaluation report[2, 3].

2.6 Program Context

Bullen Woreda is one of the 7 woredas of Metekel Zone Benishangul-Gumuz regional state, located North West part with a distance of 580 km away from Addis Ababa. Metekel Zone has 7 woredas with total population of 424,330. Infant and Young Child Feeding intervention is implemented in all woredas and kebeles and the program effectiveness is also determined by socio cultural settings[10].

2.7 Stage of program development

National Strategy for Infant and Young Child Feeding was developed in 2004 that provides detailed feeding recommendations and guidelines. A National Nutrition Strategy was developed in 2006, and a National Nutrition Program for implementing this strategy on a national scale was introduced in July 2008 in two regions Tigray & Southern nations and scaled up to Benishangul region. The program have six-year

mandate to facilitate change for improved infant and young child feeding (IYCF) practices at scale in Bangladesh, Ethiopia, and Viet Nam; to document how interventions are delivered and their costs and impact; and to disseminate the evidence and lessons learned so that others can adapt and replicate the cost-effective components [11,12].

The intervention in three countries (Viet Nam, Bangladesh, and Ethiopia) over a period of six years (2009–2014) and now extended up to 2017. It is anticipated that in order to meet the Sustainable Development Goals (SDGs) 2020 target, intensified program efforts related to nutrition, especially breastfeeding and complementary feeding, are needed. The program has a 1 year and 2 month duration in Benishangul Gumuz region in all woredas [12].

2.8 Stakeholder Analysis

Attainment of the goal and objectives of infant and young child feeding is largely depends on the collective effort and role played by different stakeholders. It will help to clarify contribution expected from each actor; and to describe possible area of collaboration of internal and external stakeholders that would create collaboration toward the realization of the program strategic objectives. Stakeholders identified, role in the program, communication strategy, role in the evaluation and their perspective described in detail (see annex-1).

Problem statement: Exclusive breast feeding and complementary feeding is low in the region as well in Metekel zone woredas.

Goal: To contribute to reduction of under two year's child morbidity and mortality in Bullen woreda.

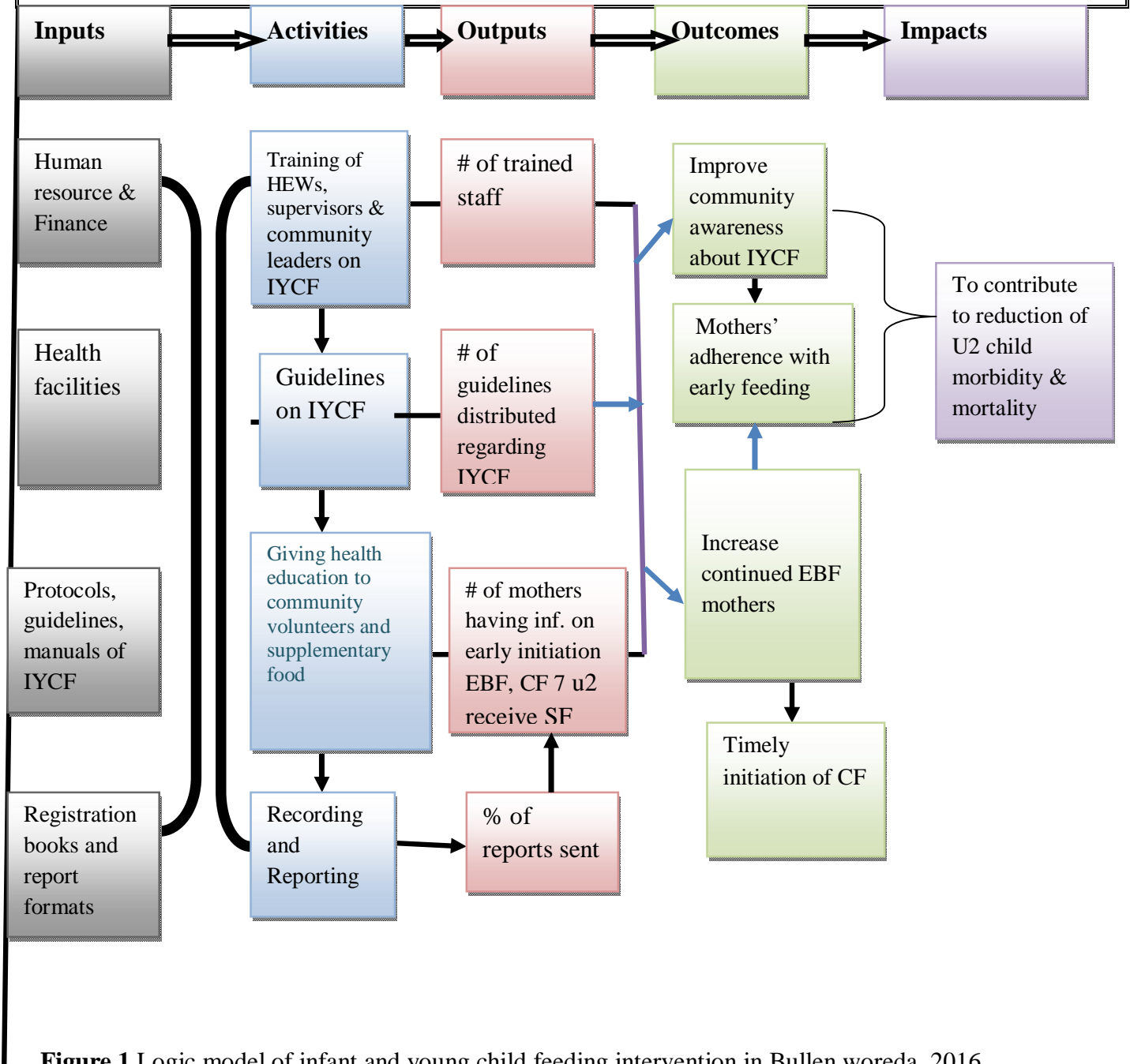


Figure 1.Logic model of infant and young child feeding intervention in Bullen woreda, 2016

CHAPTER 3 Literature Review

3.1 Breast feeding practices

A community based Cross-sectional Study conducted on early initiation of breast feeding, Exclusive breast feeding in four Regions of Ethiopia (Amhara, Oromia, SNNP and Tigray Regions) indicated that the prevalence of early initiation of breast feeding, Exclusive breast feeding, continued breast feeding at age of two years were 50.4%, 70.0%, 76% and 97.2% respectively[24].

A community based cross-sectional survey in Bahirdar city showed Mother Education level, child sex, Parity, family size and time of postnatal care) were independent predictors of exclusive breastfeeding practice in the study area [30]. And also study conducted in Oromia regional state, Illu-Abba-Bora zone at Bedele City showed 91.8% knew the importance of exclusive breastfeeding and 87.3% mothers were had good attitude and strongly agree that the exclusive breastfeeding is advantageous for infants aged less than six months [45].

3.2 complimentary feeding practices

Study conducted in Gamo Gofa Zone South West Ethiopia showed about 59.6% of infant start complementary feeding early before six months and 40.6% started complementary feeding at six months [36]. A secondary analysis of Ethiopian Demographic and Health Survey 2011 showed that Minimum meal frequency for 6–11 months 384 (37.4%) [37]. Community based study done in east Harargie Ethiopia indicates that Exclusive breastfeeding, Complementary feeding were 51.8% and 54.4% respectively [38].

Baseline survey conducted on National Nutrition Program in four Regions of Ethiopia (Amhara, Oromia, SNNP and Tigray) showed about 77.6% have been breastfed for 12-24 months. Only 4.7% of children were fed complimentary feeding like; water, solid/semi-solid foods and coffee/tea which were given to 85.3%, 71.7% and 31.4% of children. Only 5.1% of children were fed more than 6 times per day and 39% were fed 4-6 times per day. Less than half of children were weaned at the age of 6 months were as the other 25% were weaned when they were older than 6 months [39]. Another Study carried out on Timely Initiation of Complementary Feeding Practice in Axum town indicate that timely initiation complementary feeding practices to their child timely were 41.6% and 52.8% respectively [40, 41].

3.3 compliance to the guidelines

Facility based Institutional delivery was very low (about 16%) and as a result prioritization has been given to reaching mothers through community based IYCF interventions. However, the MoH is tremendously increasing facility level deliveries and in connection with this has planned to initiate breast feeding[8].

Health extension workers conduct community participation once per month on health education, to increase the mothers' adherence to exclusive breast feeding and complementary feeding, home visits, health education forums and social mobilization sessions[12].

3.4 Mothers adherence with breast feeding and complimentary feeding

A cross sectional study conducted on early initiation of complimentary feeding, Exclusive breast feeding in four Regions of Ethiopia (Amhara, Oromia, SNNP and Tigray Regions) indicated that Children 6-8 months of age who are receiving solid (mushy) foods (introduction of solid, semi- solid or soft food) was 56.3% Children 6-11 months received food from at least four food sources (Minimum dietary diversity) was 12.9 % [24].

A Community-Based Cross-Sectional Study on Magnitude and Factors Associated with Appropriate Complementary Feeding in Abyi-Adi town of Tigray region showed about 79.7% of mothers introduced complementary feeding at 6 months age. Only 9 (2.1%) mothers introduced complementary feeding early before 6 month, 68 (15.9%) mothers initiated late after 6 Month. Only seventy six (17.8%) mothers offered four or more food groups on the day preceding the study. One hundred seventy one (40.0%) mothers fed their children more than two times the day preceding the study. Only 51(11.9%) of mothers had practice the minimum acceptable diet. The overall prevalence of appropriate complementary feeding practices, combining the four mentioned indicators was 10.75% [32].

Community based cross-sectional study on Feeding patterns and stunting during early childhood in rural Sidama, South Ethiopia showed that Prevalence of timely introduction of complementary foods for 6-8 months old children was 57(72.2%). only 14.4% of the children were fed with complementary diet of

minimum dietary diversity (≥ 4) and also 40.6% of the mothers reported practicing pre-lacteal feeding [33]. Another cross-sectional survey design on the Nutritional Adequacy of Complementary Foods conducted in Wolayita, Southern Ethiopia declare that Only 3.3% had dietary diversity scores greater than three food groups. Very few children (3.3 %) were fed Minimum acceptable diet according to the standard infant [28].

Community based Study conducted in Gojjam West Ethiopia showed about 1.10% of households available with iodized household salt almost all the households (98.7%) have no knowledge on the benefits of iodated salt. Iodized salt is scarce in Ethiopia and almost the entire population use bare salt [46].

Cross -sectional study done in Shebe Sombo woreda, south west Ethiopia declared majority of the households were using only non-iodinated salt 277 (71.2%), a less number 102 (26.2%) of the households were using iodinated salt and a very less percent 10 (2.6%) of the households were using both iodinated and non-iodinated salt, which is a mixed type[47]. Another cross-sectional study done in Metekel zone Wombera woreda north west Ethiopia showed non- iodated 30(60%),insufficiently iodated 15(30%) and adequately iodated 5(10%)[48].

3.5 worldwide studies on IYCF

The global strategy for infant and young child feeding developed by world Health Organization (WHO) and UNICEF to revitalize world attention on the impact that feeding practices have on infants and young children. Malnutrition has been responsible, directly or indirectly, for over 50% of the 10.9 million deaths annually among children under 5 years. Over two-thirds of these deaths occur in the first year of life. Major causes of death among children under five in developing countries, 2008 are totally (acute respiratory infection, diarrhea, malaria, measles, and HIV/AIDS) accounts 46% and deaths associated with malnutrition is 54% [4].

Child deaths that could be prevented with 99 per cent coverage of preventive interventions include exclusive breastfeeding 13%; insecticide treated material 7%, complementary breastfeeding with continued BF 6%, clean delivery 4% and WASH 3%. Breastfeeding has profound benefits for infants that extend beyond childhood, numerous benefits for mothers and benefits for the family. Beyond these well-documented positive aspects for long-term health and well being, breastfeeding has a beneficial impact on the workplace, the health care system and the larger society[9].

Cross sectional study on exclusive breastfeeding practices among mothers in Bale Zone, south east Ethiopia showed that the prevalence of exclusive breast feeding for infants aged less than six months was 71.3%. The median frequency of exclusive breast feeding for infants less than six months per day was 6.8% of infants were breastfed exclusively for 2 months [25]. Another Community based cross-sectional study carried out in Jimma Agaro declared about 42.9% of mothers initiated complementary feeding before 6 months [25].

Community based cross sectional survey on Infant and child feeding practices conducted in Sidama Zone Southern Ethiopia showed Early initiation of breast feeding (first milk given to the child at birth) were 80.1%, Exclusive breast feeding at age <6 months was 56.0%, Continuation of breast feeding at age one was 87.5%.[27]. Another cross-sectional survey design on the Nutritional Adequacy of Complementary Foods conducted in Wolayita, Southern Ethiopia declare that Early initiation of breastfeeding, Exclusive breastfeeding up to 6 months of age were 162(90%) and 37 (20.6%) respectively [28]. And also Study conducted on Exclusive Breast Feeding in Arbaminch showed the prevalence of EBF was 46.5% [29]. A community based cross-sectional survey on Determinants of exclusive breastfeeding practice in Bahirdar city declared Prevalence of exclusive breastfeeding was 49.1% [30]. Study conducted on Assessment of Exclusive Breast Feeding Practice in Mecha District, North West Ethiopia indicates that the prevalence of exclusive breast feeding (EBF) was 47.13% [31]. According to EDHS 2011 Fifty-two percent of infants started breastfeeding within one hour of birth, and 80 percent, within the first day. This percentage falls short of the HSDP IV target of 92 percent of children breastfed within one hour of birth. Breastfeeding within one hour after birth was more common in urban areas (57 percent) than in rural areas (51 percent). In Benishangul Gumuz region the report showed that early initiation of breast feeding, were 42.2%.

According to retrospective study on Infant feeding practices among mildly wasted children in Nias Island, Indonesia, Almost 48% of the mothers did not start to breastfeed their babies within the first hour after delivery. However, the majority of respondents (72%) initiated breastfeeding within the first six hours after birth. Majority of mothers 74 % reported that they introduced liquid foods besides breast milk to their infants during the first seven days of life. Another 14% of infants were introduced to supplementary liquids between in 8 days and < 6 months. Infant formula (32%) and tea (26%) were the preferred supplementary liquids mentioned by the mothers in the study area [15].

On the other hand Survey studies on Exclusive breastfeeding in Rwanda, Nigeria were 80% and 8.7% respectively. The prevalence of early initiation of Breastfeeding in Rwanda in 2005, Zimbabwe in 2005–2006, Uganda in 2006, Ethiopia,2005 were 63.7%,67.5%,39.5% and 66.4% respectively while the prevalence of exclusive breast feeding were less than 80% [26].

Cross-sectional study conducted on infant and young child-feeding practices and their nutritional status in Kapasia in Bangladesh on mothers of 150 under-two children revealed that of the mothers, 67.3% initiated breastfeeding within one hour of birth. Most (82.7%) mothers offered exclusive breastfeeding to their children. Breastfeeding was continued for 98% of the children [23].

3.6 Predictors of exclusive breast feeding /mothers adherence

Study conducted on Patterns and determinants of breastfeeding and complementary feeding practices in Nairobi Kenya showed that child's sex, perceived size at birth; mother's marital status, ethnicity; education level; family planning (pregnancy desirability); health seeking behavior (place of delivery) were factors associated with infant and young child feeding practice [43].

A community -based cross sectional study on exclusive breastfeeding practices among mothers in Bale Zone, south east Ethiopia showed that being unemployed and age of infants of less than two months were independently associated with exclusive breastfeeding [44]. Similar Study on Magnitude and Factors Associated with Appropriate Complementary Feeding in Abyi-Adi town of Tigray region showed about 87% (371/428) of mothers had satisfactory knowledge about complementary feeding.76% (324/428) of mothers had supportive attitude towards complementary feeding [32].

Study on Predictors of non-exclusive breastfeeding at 6 months among rural mothers in east Ethiopia indicate that Non- exclusive breast feeding was more likely to be practiced by mothers that were not married, had no access to health facility, and whose knowledge about infant and young child feeding practice was low [34].

A community based descriptive cross - sectional study in Nekemte Town showed knowledge, attitude and practice of mothers on child nutrition were found to be influenced by socio-demographic factors and information [35]. Similar Study conducted on Early Initiation of Complementary Feeding and Associated Factors in Gamo Gofa Zone South West Ethiopia showed Attitude Education, occupation,

merchant, farmers, PNC follow up for their child in Health service were significantly associated factors for early initiation of complementary feeding in the study area [36].

Another study on Assessment of Exclusive Breast Feeding Practice and Associated Factors in Mecha District, North West Ethiopia showed that having ANC, PNC counseling, early initiation of breast feeding in the first one hour, knowledge and place residence were associated with exclusive breastfeed [31]. Study conducted on exclusive Breast Feeding in Arbaminch also showed early initiation of breast feeding was associated with exclusive breastfeed [29].

Community based study done in east Harargie Ethiopia indicates that timely initiation breastfeeding was associated with an average monthly income, Place of delivery. Complementary feeding was associated with a monthly income, mother who had antenatal care (ANC) practice timely complementary feeding than those who did not follow the ANC service [38]. Study carried out in Axum town showed Married women and attended ANC follow up were positively associated with timely initiation of complementary feeding [32].

Study on Predictors of non-exclusive breastfeeding at 6 months among rural mothers in east Ethiopia indicates that the prevalence of non-exclusive breastfeeding in infants aged less than six months was 28.3% [34]. A community based descriptive cross - sectional study on Knowledge, Perception and Practice of Mothers regarding Child Nutrition in Nekemte Town showed that about 55.4% of mothers practiced complementary food starting from 6 months, while 42.1% introduced complementary BF before 6 months [35]. Study done in South Africa showed community participation is viable way of ensuring accessibility and effectiveness in primary health care programmes[48].

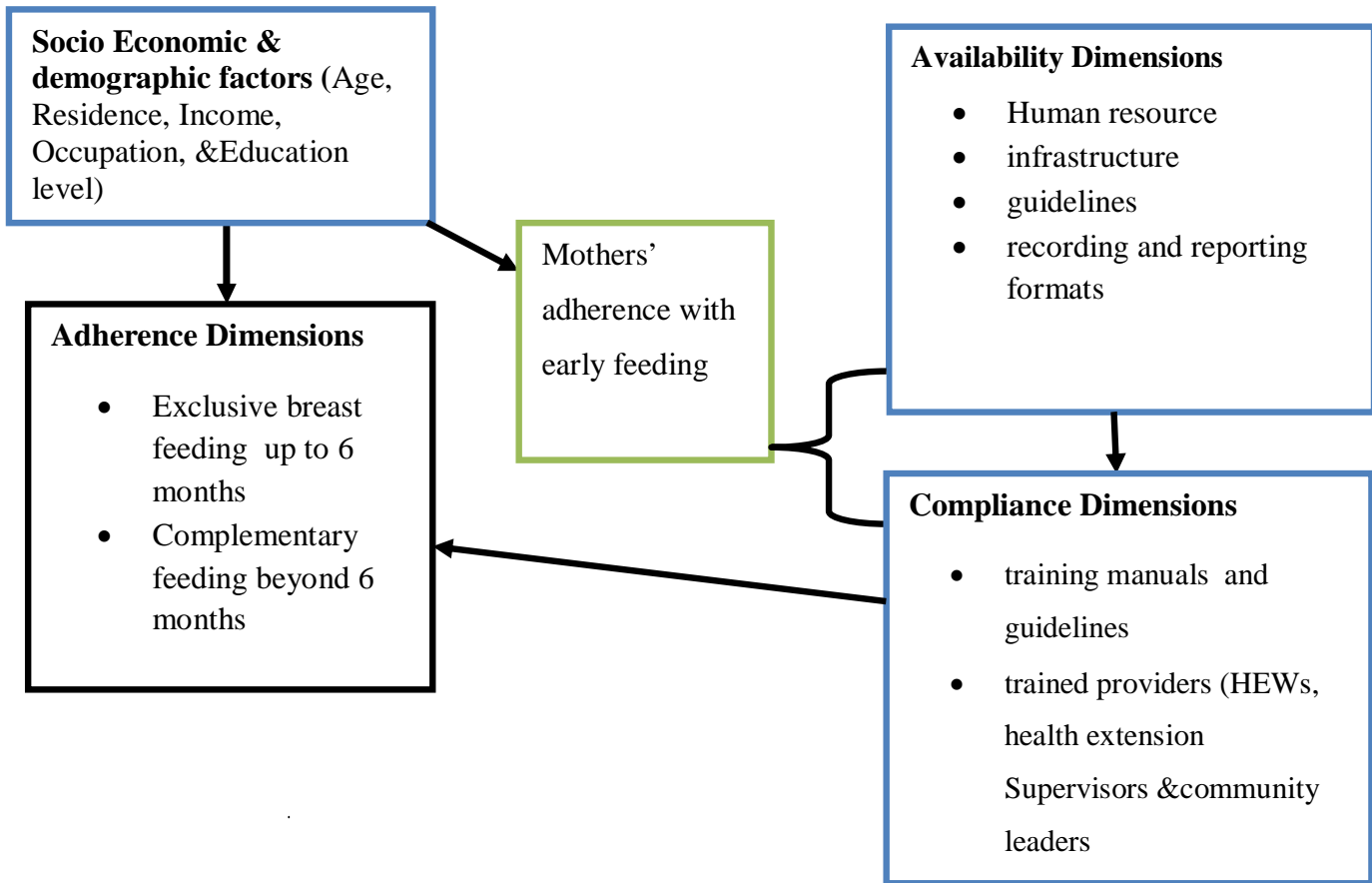


Figure 2. Conceptual framework of infant and young child feeding intervention in Bullen woreda, 2016

Source: adapted from different literature

CHAPTER -4 Evaluation Questions and Objectives

General evaluation question

- To assess implementation level of infant and young child feeding intervention

Specific evaluation questions

- Are the required program resources available according to the plan? If not, why?
- Did service providers complying with guideline? If not, why?
- Do mothers/caregivers adhere to exclusive breast feeding infant? If not, why?
- Do mothers/caregivers adhere to complementary feeding child? If not, why? and
- What are factors associated with adherence to feed under 2 children among mothers?

General evaluation objectives

- The main objective of this evaluation is to determine program implementation level of under 2 years of age infant and young child feeding in Bullen woreda, 2016.

Specific evaluation objectives:

1. To assess the availability of resources.
2. To assess compliance of providers with the national guidelines.
3. To determine adherence of mothers to feed under 6 months infants to exclusive breast feeding.
4. To determine adherence of mothers who started complementary feeding at 6months.
5. To assess factors associated with mothers' adherence to feed under 2 children among mothers.

CHAPTER-5 Evaluation Methods

5.1 Study Area

The evaluation research study was conducted in Metekel Zone, Bullen woreda, Benishangul Gumuz region; North West Ethiopia located 580 km away from Addis Ababa capital city of Ethiopia. The total population of woreda is 60, 005, from this 30,603 where female and 29,402 male .Having 17 health posts & 2 health centers with 19 kebeles. Number of infants under 2 found in the woreda are 3,140 [Bullen woreda Health office report, 2016].

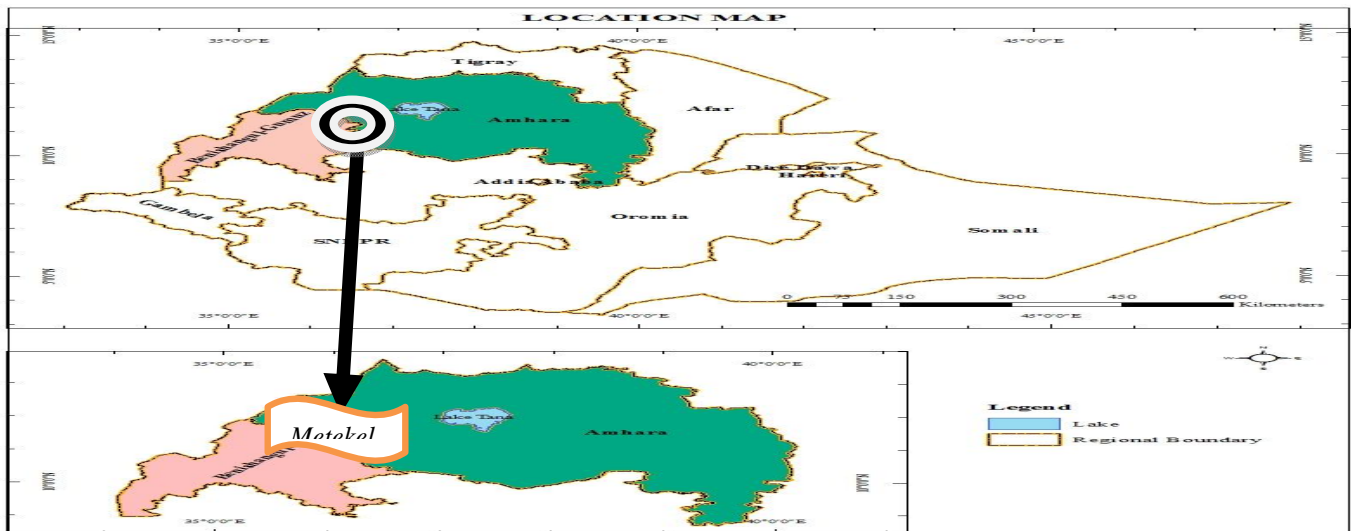


Figure 3. Administrative map of Bullen woreda Metekel zone Benishangul Region, 2016

5.2 Evaluation Research Period

Evaluability assessment and evaluation research plan was done prior to actual evaluation. Evaluability assessment conducted from December 1 to 30/2015 and data collected from April 4 to 15, 2016.

5.3 Evaluation Approach

Formative evaluation approach was used to assess level of implementation of the intervention.

5.4 Evaluation Focus and Dimensions

The focus of evaluation was to assess process components of program input, activities and output which are used to explain program implementation.

Dimensions of this evaluation were availability, compliance and adherence. These dimensions help to measure the achievements of IYCF intervention in Bullen Woreda against their preset Judgment criteria.

5.5 Evaluation Design

Community based cross-sectional study design was used for household survey as quantitative data and complemented by qualitative data from key- informant interview.

5.6 Indicators and Variables for Evaluation

Availability Indicators (Structural indicators)

Number of health center with trained provider

Number of health post with trained HEWs

Number volunteers trained on infant and young child feeding

Number of health facilities with vitamin A capsules

Number of health facilities with scale length boards

Number of health facilities with MUAC tapes

Number of health facilities with supplementary food

Number of U2 children screened for food supplementation

Number of health facilities with target supplementary food stock out days

Number of health facilities with vitamin A stock out days

Number of health facility with reporting format

Number of health facility with registration book

Compliance indicators (Process indicators)

Proportion of children received Measles vaccination

Proportion of children aged 6–23 months who receive vitamin A supplementation

Proportion of HEW who got supportive supervision in the last 12 months

Proportion of breast feeding mothers who were visited by HEW in the last 12 months
Proportion of mothers reached by health education from health workers

Proportion of children screened for food supplementation

Proportion of mothers participated community conversation on child feeding

Proportion of health care providers reminds mother about benefits of exclusive breastfeeding for 6 months

Number of timely reports sent to next level.

Adherence indicators

Proportions of mothers give colostrum to their infant after delivery within 1hrs

Proportion of infants 0–5 months of age who are predominantly breastfed

Proportion of infant received pre-lacteal feeding

Proportion of infant received milk by nipple

Proportion of mothers ever breast feed their child

Proportion of households with available iodized salt inspected

Proportion of children received complementary feeding with continued breast feeding at 1 year of age

Proportion of children received complementary feeding with continued breast feeding at 2 year of age

Proportion of children 0–23 months of age who received age appropriate feeding

Proportion of children received supplementary food

Proportion of infant received exclusive breast feeding up to six months

Proportion of infant received complementary feeding starting from six months

Proportion of children 6–23 months of age who receive an iron-rich food fortified in the home.

5.7 Populations and Sampling

5.7.1 Target Population

All infants under 2 years of age living in the kebeles of woreda are 1357 which are target populations to assess infant and young child feeding in the study woreda.

5.7.2 Source Population

All mothers having children under 2 years old living in selected kebeles were considered.

5.7.3 Study Population

Households having children under 2 years of age were randomly selected who lived for six month and beyond in selected kebeles were surveyed.

5.7.4 Study Units and Sampling Units

Mothers/caregivers with Children under 2 years of age are study units and HHs with under 2 children are sampling units.

5.7.5 Sample Size Determination

Sample size was estimated using single population proportion formula as follows;

- Prevalence= (42.2%) of early initiation of breastfeeding [10]and

Considering assumptions of 95% confidence level, 5% margin of error and adding a non-response rate of 10%.

$$\begin{aligned} n &= \frac{[Z_{\alpha/2}^2 (P \times q)]}{d^2} \\ &= [\frac{1.96^2 (0.42 \times 0.58) }{0.05^2}] \end{aligned}$$

$$0.05^2$$

$$=374$$

Estimated target population are 1357 which is below 10,000 correction formula was used

$$Nf = \frac{n}{(1 + \frac{n}{N})}$$

$$= \frac{374}{(1+374/1357)}$$

$$=294$$

Adding non response of 10% the final sample size =**323** mothers/caretakers children. From 192 complementary feeding mothers 60 households and 4 suppliers of salt were inspected for iodization of salt.

Eleven key-informant interviews were employed study units were;

- ⊕ 1 woreda office head,
- 1health center head,
- ⊕ 2 HDAs,
- ⊕ 2 women association leaders,
- ⊕ 1health extension supervisor,
- 1program focal,
- ⊕ 2HEWs and
- ⊕ 1 for salt suppliers.

5.7.6 Sampling Procedure/ Technique

Household survey -Probability sampling of simple random sampling with sample size 323 children were selected. From 19 kebeles 6 were selected all under 2 children at the time of study period were identified from each kebeles by census and then computer generated ID number were given to the house per each kebele.

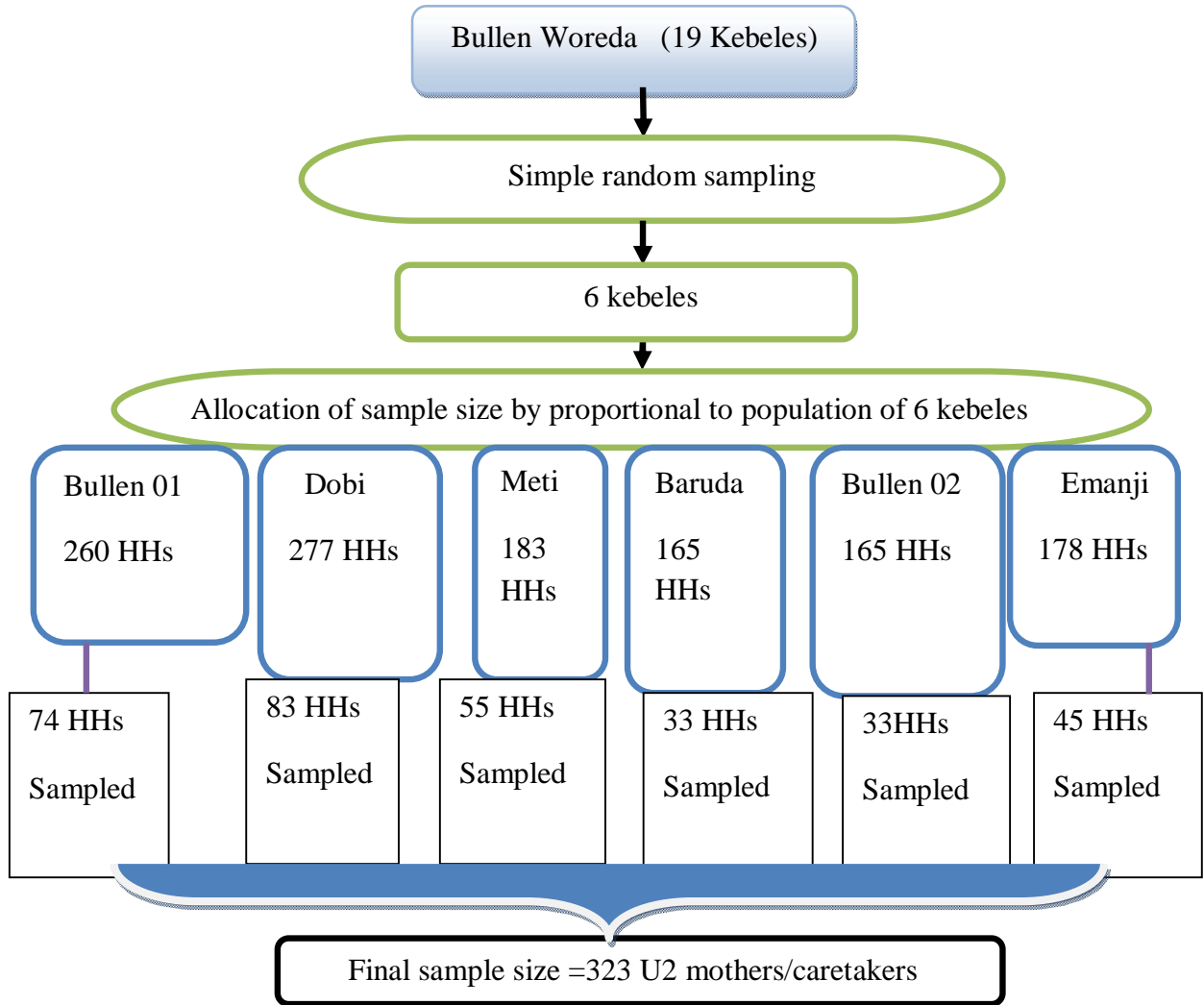


Figure 4. Diagrammatic presentation of sampling procedure of households of Bullen Woreda, 2016

Key informant interview – purposively selected 11 key informants employed for qualitative in-depth interview were 1 woreda office head, 1 health center head, 2 HDAs, 2 women association leaders, and 1 health extension supervisor, 1 program focal, 2 HEWs and 1 for salt suppliers who have knowledge about the community.

Document review and resource inventory - 1 health center and 5 health posts a total of 6 health facilities were assessed for the purpose of resource audit and document review.

5.7.7 Eligibility criteria

5.7.7.1 Inclusion and Exclusion Criteria

- **Inclusion criteria:** Those households lived in the study area for at least six months with under 2 years of children preceding data collection and didn't participated in qualitative study.
- **Exclusion criteria:** Mothers with under 2 years child who are seriously ill (mothers/caregivers) and unable to communicate from any cause were excluded from the study.
- **For qualitative study** - service years < 3 year at study kebele area

5.8 Data Collection

5.8.1 Development of Data Collection Tools

Interviewer Guide- interview guide adapted from World Health Organization, EMDHS2014 and baseline studies conducted in Ethiopia were used to collect data[2,3,16].

Document review –checklist adapted from WHO, EMDHS2014 and baseline studies conducted in Ethiopia and[2, 3],

Resource inventory –checklist adapted from WHO, EMDHS2014 and baseline studies conducted in Ethiopia and[2, 3],

Key informant interview- guiding questioners adapted from baseline studies conducted in Ethiopia were used[2, 3].

Variables

Dependent variable

- Mothers adherence with early feeding

Independent Variables

- Socio demographic factors (age, occupation, residence, education level, income, family size)

- Availability (training manuals and guidelines, trained providers (HEWs, health extension Supervisors & community leaders)
- Compliance to the intervention (adherence to the guideline, community conversation, mothers get certified by health facility)

5.8.2 Data Collectors

Three diploma nurses that are perfect in local language (shinashigna) and know communities norm, two health officers were recruited and assigned as supervisors and one degree holder with health education background was employed.

5.8.3 Data Collection Field Work

Data collectors and supervisors were trained for 1 day on the objective of evaluation and tools of data collection. And data collection was undertaken from April 4- 15, 2016.

5.8.4 Data Management and Quality Control

Pre-testing tool -the questionnaire was pre-tested in Pawi woreda on 5 % of sample size prior to actual data collection. After pretesting incomplete data were corrected, data collectors well understood data collection tools and supervisors checked collected data daily basis and took corrective actions.

Supervision - principal investigator and supervisors were followed the entire process of data collection to take immediate corrective actions daily basis.

Data cleaning and checking -was done at field level and repeated after entry to check for coding error and missing values by principal investigator and error was removed and completeness was checked.

5.9 Data Analysis

Quantitative data – Data were entered into Epidata version 3.1 and exported to SPSS Version 20 for analysis. Results were presented in descriptive statistics in frequency and tables and graphs. Binary logistics was performed to assess the association and significance of each independent variable. Variables with P-value < 0.25 were considered as candidate for multiple logistic regressions at 95 % CI. Overall, Results were judged based on judgment matrix of analysis with three dimensions. Finally frequencies, percentage, graphs and tables were used to present the descriptive results.

Qualitative data- Qualitative data were analyzed thematically for each section of the assessment manually. Qualitative data used to complement quantitative findings.

5.10 Ethical issues

The ethical approval and clearance letter was obtained from college of health sciences Ethical Clearance Committee. And then official permission and letter from Regional health bureau for Bullen Woreda health office was obtained and for health facilities from Bullen Woreda health office. During data collection all respondents were asked their permission and informed consent was obtained privately and individually prior to the interview. Respondents were informed by data collector about the confidentiality that the information they provide is not disclosed to any one and their name was not be written on questionnaire and have right to stop or refuse giving any information. After completion of data collection, all the raw data were handled by principal investigator and stored in EpiData version 3.1 and SPSS version 20 for analysis.

5.11 Evaluation Dissemination Plan

Findings of the evaluation research will be disseminated through presentation to Jimma University Health economics, management and policy M&E unit and invited guest at thesis presentation time. Hard and soft copies will be submitted to Monitoring and Evaluation unit. Hardcopies will be disseminated to program implementers and primary stakeholders and finally, publication on scientific journal will be considered.

CHAPTER -6 Results

6.1 Socio-Demographic Characteristics

From the 323 planned study participants 312 households were interviewed with 96% participation rate. From total 27% were under 6 months and the remaining 73% were 6-23 months age. Majority of the respondents were married, 284(94.0%). The educational status of the mothers showed that 176(56.8%) were unable to read & write and 26(23.4%) can able to read and write. The Predominant occupation was farming, housewife account for 265(85.6 %), merchant 29(9. 2%) and civil servant 18(5.2%) with mean income of 1308.00ETB. Majority of ethnic group 168(54.2%) were Shinasha and (80.8 %) follow Orthodox religion.

Table 1 Socio-demographic characteristics of households/mothers for the evaluation of IYCF in Bullen woreda, 2016(n=312).

Socio-Demographic Status		Frequency	Percent (%)
Educational status of mothers	Not read & write	176	56.8
	Read & write	26	8.4
	1-4 grade	18	5.8
	5-8 grade	30	9.7
	9-10 grade	30	9.7
	College diploma & above	30	9.7
Sex of the child	Female	148	47.4
	Male	164	52.6
Age of the child	Under 6 months	84	26.9
	6-23 months	228	73.1
Religion of mothers	Orthodox	252	80.8
	Protestant	26	8.3
	Muslim	34	10.9
Ethnicity of mothers	Shinasha	168	54.2
	Amhara	104	33.5
	Gumuz	28	9
	Agew	8	2.6
	Oromo	2	0.6

Marital status of mothers	Married	284	94
	Divorced	14	4.7
	Widowed	4	1.3
Occupation of mothers	Housewife	265	85.6
	Merchant	29	9.2
	Gov employ	18	5.2
Residence of the mothers	Rural	230	73.7
	Urban	82	26.3
Water supply	Hand pump	198	63.5
	Pipe	64	20.5
	Spring & river	50	16
Latrine availability	Yes	268	85.9
	No	44	14.1
Family size	Less than 4 per HHs	108	34.6
	5-6 pre HHs	110	35.3
	7-10 pre HHs	94	30.1

6.2 Resource availability

Resources for infant and young child feeding intervention were assessed by reviewing documents and resource audit. The result showed; number of health facilities with Vitamin A was 1 only the reason reported was absence of safe store because of this there is campaign to supply the drug every six month to all health posts. Numbers of health facilities with supplementary food were 2 the reason reported was absence of screened children. Materials for program implementation like MUAC tapes, length board were available in all health facilities.

Health center head and program focal persons reported lack of adequate budget to give training to HEWs and community leaders as planned.

Document review showed that all health facilities had reporting formats, registration books and Supervisors' feedback registration books.

Table 2 Measuring and judging availability dimension of IYCF intervention in Bullen Woreda, 2016, (n=6 health facilities)

Indicator	Number	Required	%	Judgment parameter
Number of health post with trained HEWs	5	8	60	V.good achievement
Number of health center with trained provider	1	2	50	
Number of community volunteers trained on infant and young child feeding	96	120	80	
Number of health facilities with vitamin A capsules	1	6	17	
Number of health facilities with scale length boards	6	6	100	
Number of health facilities with MUAC tapes	6	6	100	
Number of health facilities with supplementary food	2	6	33	
Number of health facility with registration book	6	6	100	
Number of health facility with reporting format	6	6	100	
Number of HDAs trained on infant and young child feeding	21	30	70	
Number of health facilities with target supplementary food with no stock out days	6	6	100	
Number of health facilities with vitamin A with no stock out days	6	6	100	
Total		100	76	
Judgment criteria :<55% poor ,56-69 =Good ,70-84 =V.good,=>≥85=Excellent				

Overall, 76% of the required resources were available which is judged, **V.good achievement** according to the preset criteria (=>70-84%= V.good achievement).

6.3 Compliance

Health service related to the interventions which were given to beneficiary was assessed; the result showed that 186(88.57%) u2 children received vitamin A. Proportion of under 2 years children got measles vaccination were 150(48%). Majority of health extension workers are doing house to house outreach work during the survey and are receiving supportive supervision from their respective supervisor at least once per week. Shortage of budget and transportation for continuous monitoring of the intervention was stated by majority of the experts from kebeles

and health centers to conduct community participation session per month to create awareness about exclusive breast feeding and complementary feeding.

Table 3 Measuring and judging the compliance dimension of IYCF intervention in Bullen Woreda, 2016, (n=312).

Indicators	Number	Required	%	Judgment parameter
Proportion of children received Measles vaccination	150	312	48	Good achievement
Proportion of children aged 6–23 months who receive vitamin A supplementation	186	228	80	
Proportion of HEW who got supportive supervision in the last 12 months	7	12	58	
Proportion of breast feeding mothers who were visited by HEW in the last 12 months	280	312	89	
Proportion of mothers who have awareness about EBF	258	312	83	
Proportion of mothers who have awareness about CF	276	312	88	
Proportion of mothers reached by health education materials from health workers	280	312	89	
Number of U2 children screened for food supplementation	4	60	6	
Proportion of children received supplementary food	4	60	6	
Proportion of health care providers reminds mother about benefits of exclusive breastfeeding for 6 months	264	312	85	
Number of timely reports sent to next level	8	8	100	
Total		100	67	
Judgment criteria :<55% poor ,56-69 =Good ,70-84 =V.good,=>≥85=Excellent				

Overall, service providers were complying with the guideline in 67% of times, judged according to preset criteria as good (=>56-69%=good achievement).

6.4 Adherence

Health service related to the interventions which were given to beneficiary was assessed. The study showed that 252 (80.8%) mothers early initiated within 1hr after delivery. About 276(88.5%) mothers exclusively breast feed under 6 month’s infant. Children aged 6-9months 246(78.85%) mothers feed their children complementary food and continued breast feeding as well. About 252(80.8%) mothers initiated breast milk within 1hours, 30(10%) initiated within 3hours and 22(7%) within 72 hours. Majority266 (85.3%) feed Colostrum and the rest 4(1.3%) feed better, 12(3.9%) water and 2(0.64%) and cow milk after birth within 72 hours of birth (fig.5).

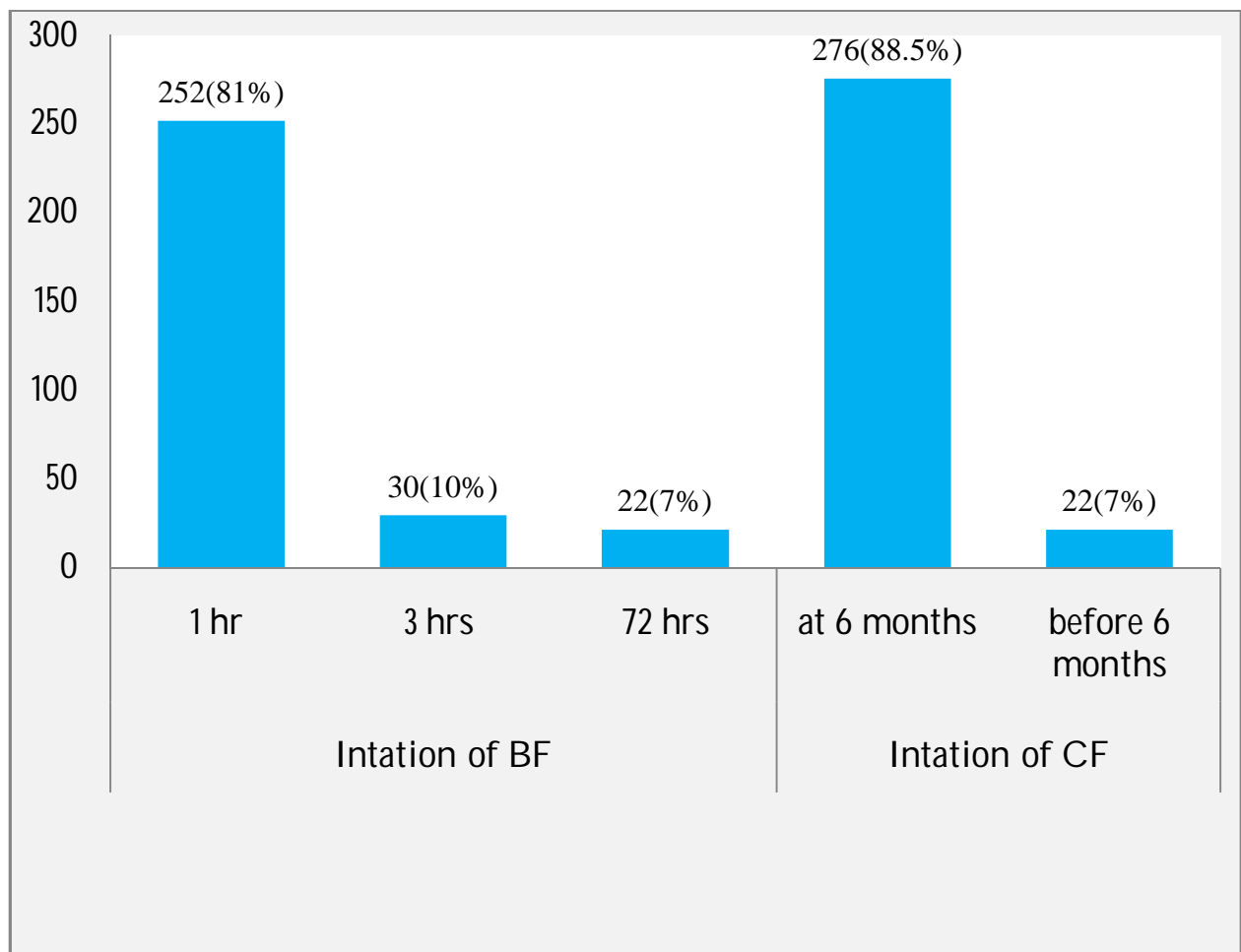


Figure 5 Initiation of breast feeding & complementary feeding, Bullen Woreda, 2016

Adequacy of iodine in salt was assessed house to house level and all suppliers by using MBI KITS international containing 2 solution ampoules of 10ml, 1 color chart, and 1 recheck solution ampoules of 10ml, and 1 white cup. From total of 192(61.5%) complementary feeding mothers excluding those mothers using packed iodated salt the sample of 60(30%) households assessed from these the result showed 33(55%) bare salt,12(20%) insufficiently iodated and 15(25%)adequately iodated salt available. This result is supported by salt suppliers' interview; majority of them replied “we supplied iodized salt to the community but our market competences supplied bare salt and expired by price difference of 0.4cent/Kg because of low community awareness about iodine and its importance finally, we lost and exited the market”.

Table 4.Iodization of household salt in Bullen woreda, 2016 (n=60).

Iodine content	Frequency	Percent (%)
Not-iodized(<5ppm)	33	55
Insufficiently iodized	12	20
Adequately iodized	15	25

Table 5: Measuring and judging adherence dimension for evaluation of IYCF intervention in Bullen Woreda, 2016, (n=312).

Indicator	Number	Required	%	Judgment parameter
Proportion of mothers give colostrum to their infant after delivery within 1hrs	252	312	80	V.good achievement
Proportion of infants 0–5 months of age who are predominantly breastfed	22	312	7	
Proportion of infant received pre-lacteal feeding	18	312	6	
Proportion of infant received milk by nipple	20	312	6.4	
Proportion of mothers ever breast feed their child	0	312	0	
Proportion of households with available iodized salt.	78	312	25	
Proportion of children received complementary	54	228	24	

feeding with continued breast feeding at 1 year of age				
Proportion of children received complementary feeding with continued breast feeding at 2 year of age	156	228	68.5	
Proportion of children 0–23 months of age who received age appropriate feeding	206	312	66	
Proportion of infant received exclusive breast feeding up to six months	276	312	88	
Proportion of infant received complementary feeding starting from six months	246	312	79	
Proportion of children 6–23 months of age who receive an iron-rich food fortified in the home.	160	228	70	
Proportion of mothers participated community conversation on child feeding	190	312	61	
Total		100	72.4	
Judgment criteria : <55% poor ,56-69 =Good ,70-84 =V.good,=>≥85=Excellent				

Overall, mothers adherence with recommended practices was 72.4% which is **V.good achievement** as compared to the preset standards of judgment (⇒70-84%=very good achievement).

Table 6: Measuring and judging of the overall IYCF intervention in Bullen Woreda, 2016.

Evaluation dimensions	%	Weight given	Weighted result	Over all judgment parameter
Availability	100	35	26.6	V.good achievement
Compliance	100	30	20	
Adherence	100	35	25.34	
Total		100%	72%	
Judgment criteria :<55% poor ,56-69 =Good ,70-84 =V.good,=>≥85=Excellent				

Overall, achievement of three dimensions was 72% which is **V.good achievement** according to the standards agreed by stakeholder during stakeholder analysis (=>70-84=V.good achievement).

6.7 Factors associated with adherence to feed u2 children among mothers

To assess factors affecting mothers' adherence, binary logistic regression was done for socio demographic characteristics and program related factors. Then associated variables after multiple logistic regressions with the outcome variable were interpreted.

Table 7: Binary logistic regression of adherence and independent variable, Bullen woreda, 2016 (n=312)

Variables	Binary logistic regression (COR with 95%CI)	p-value
Residence of mothers Rural (230)	0.307[0.181,0.519]	0.000*
Urban (82)	1	
Occupation		
Gov .employee (1)	1.905[0.86,4.221]	0.112
merchant (2)	2.541[0.92,7.019]	0.072
House wife	1	1
Latrine availability Yes (268)	1.662[1.785,3.518]	0.184*
No (44)	1	
Child vaccination Yes (150)	1.43[1.884,2.346]	.143*

No (162)	1	
No (122)	1	
Infants received colostrum Yes(266)	4.759[1.643,13.782]	0.004*
No (46)	1	
Feeding breast will prevent child from illness Yes(274)	3.656[1.245,10.731]	0.018*
No (38)	1	
Knowledge of mothers Yes (258)	6.018[0.2092,17.31]	0.001
No (46)	1	
Community participation Yes (190)	3.134(1.783,5.509)*	0.000*
No(122)	1	

*significant level with one star is candidate for multi variable logistic regressions

This study found residence, child vaccination, breast feeding will prevent child from illness, colostrum feeding and community conversation were found to have significant association with adherence to feed under 2 years child among mothers(Table; 8).

Those variables that have significant association (P-value<0.25) were again taken to multiple logistic regression using backward stepwise Wald method to identify factors for adherence and finally, those factors that have statistically significant association were identified. Accordingly, Residence of mothers was predictor of mothers adherence to recommended feeding practices with [AOR, 0.378 CI95 % 0.215, 0.665]. This implies that adherence of mothers to feed under 2 years age children being in rural setting found 62% less likely than mothers in urban setting.

Community participation [AOR 2.184 CI95% 1.184, 4.029], this implies that mothers who participate health education per month adhere to feed their child 2.184 times more likely than mothers that didn't participate.

Table 8: Multiple logistic regression of predictors of mothers adherence in Bullen Woreda, 2016

Variables	Frequency (n=312)	COR at 95%CI	AOR at 95%CI
Residence	Rural (230)	0.307[0.181,0.519] *	0.378[0.215,0.665]**
	Urban (82)	1	1
Child vaccination	Yes (150)	1.440[1.884,2.346] *	1.199[0.704,2.041]
	No (162)	1	1
Breast feeding will prevent child from illness	Yes (274)	3.656[1.643,13.782]*	1.399[0.425,4.602]
	No (38)	1	1
Community participation	Yes (190)	3.134[1.783,5.509]*	2.184[1.184,4.029]**
	No(122)	1	1
Infants received colostrum	Yes(266)	4.759[1.643,13.782] *	0.431[0.722,7.467]
	No (46)	1	1

*p- value <0.25 ** p –value <0.05

CHAPTER -7 Discussion

7.1 Socio-demographic factors that influence adherence of child feeding

This study found association between residences of mothers with mother's adherence to recommended feeding practices with [AOR 0.378, 95%CI, 0.215, 0.665]. This implies that adherence of mothers to feed under 2 years age children being in rural setting found 62% less likely than mothers in urban setting. Similar study conducted in Mecha District, North West Ethiopia showed that place of residence found 0.38 times [30]. However, this study didn't found association of age, education level, marital status and employment with mothers' adherence with early feeding.

7.2 Availability

This study showed about 160(67.2%) of mothers reported that they have available to and use micronutrient to prepare food to their child. About 194 (86.6%) feed their child 3-4 times per day and 28(12.5%) feed 2 times. Study conducted in Wolayita, Southern Ethiopia declared that only 3.3% had dietary diversity scores greater than three food groups. Very few children (3.3%) were fed Minimum acceptable diet according to the standard infant [27]. The difference may be due to food security situation of the area.

7.3 Compliance

Majority 266 (85.3%) feed Colostrum and the rest 4(1.3%) feed better, 12(3.9%) water and 2(0.64%) and cow milk after birth within 72 hours of birth. This result is better than study conducted in Kapasia in Bangladesh on mothers of 150 under-two children revealed that 67.3% initiated breastfeeding within 1hrs of birth[23].

Majority of the respondents heard about exclusive breast feeding up to 6 months, 276(92.6%) from this, 250(90.5%) of them heard from health extension workers, 20(7.5%) of the respondent mentioned that they heard from health center /health personnel's' and only 6(10.6%) heard from television/radio. This result is supported by expert interview; majority of HEWs served for 3 years and above replied that *“Mothers can do this if they are advised. If they are aware of this they can do age appropriate child feeding”*.

7.4 Adherence

About 252(80.8%) mothers initiated breast milk within 1hours, 30(9.6%) initiated within 3hours and 22(7.1%) within 3days. Majority266 (85.3%) feed Colostrum and the rest 4(22.2%) feed better, 12(66.7%) water 2(11.1%) and cow milk after birth within 3 days. This result is better than cross-sectional study conducted on infant and young child feeding practices and their nutritional status in Kapasia in Bangladesh on mothers of 150 under-two children revealed that of the mothers, 67.3% initiated breastfeeding within one hour of birth [23]. Our study showed about 88% of infant started complementary feeding at six months and 7% started early before sex months. But study conducted in Gamo Gofa Zone South West Ethiopia showed about 59.6% of infant start complementary feeding early before sex months and 40.6% started complementary feeding at six months [36].

Adequacy of iodine in salt was assessed use house to house. The result indicated 33(55%) not adequately iodized, 12(20%) insufficient and 15(25%) adequately iodized salt was available. This study was in line with community based Study conducted in Burie and Womberma woreda, Gojjam West Ethiopia showed about 1.1% of households available with iodized household salt almost all the households (98.7%) have no knowledge on the benefits of iodated salt. Iodized salt is scarce in Ethiopia and almost the entire population use bare salt [46]. Cross-sectional study done in Shebe Sombo woreda, south west Ethiopia declared majority of the households were using only non-iodinated salt 277 (71.2%), a less number 102 (26.2%) of the households were using iodinated salt and a very less percent 10 (2.6%) of the households were using both iodinated and non-iodinated salt, which is a mixed type[47].Another cross-sectional study done in Metekel zone Wombera woreda north west Ethiopia showed non- iodated 30(60%),insufficiently iodated 15(30%) and adequately iodated 5(10%)[48].

Per day about 244(88.1%), 110(84.3%) and 160(67.2%) mothers give their child minimum breast feeding and male frequency respectively. Feeding children by nipple is common in the surveyed community. Nearly quarter of children (24.76%) 0-23 months receive food from a nipple. Majority, 274(89.5%) of the respondent mentioned that breast milk prevent child from disease so that children received breast milk day and night. About 254(83.6%) respondents claimed that child fathers prefer exclusive breast feeding up to six months which is also supported by expert interview as the current available exclusive breast feeding and complementary feeding is accepted by the community. The reason stated for not exclusive

breast feeding was busy of mothers who are government employees who had better knowledge on the benefit of exclusive breast feeding.

7.5 Factors associated with mothers adherence with early feeding

This study found association of community participation [AOR 2.184, 95%CI, 1.184, 4.029] implies that mothers those who participate health education per month were found 2.18 times more likely adheres to feed u2 child than those didn't participate. Study done in South Africa showed community participation is 5.89 times[49], study in Harar 2.7 times[37] more knowledgeable than those who did not receive health education viable way of ensuring accessibility and effectiveness in primary health care programmes.

7.6 Limitation of the evaluation

Limitation of this evaluation is that during data collection there were some history asked which are associated with initiation of breast feeding this may result in recall bias and didn't identify cause and effect relationship.

CHAPTER -8 Conclusion and Recommendations

8.1 Conclusion

This evaluation demonstrated each dimension; that Overall, the required resources were available in 74% of the health facilities studied, health care providers comply with the guideline 67% times and mothers adhere with recommended practices was 72.4% and over all, three dimension was 72% which is V.good achievement as preset criteria.

Finally, factors that affect mothers' adherence to recommended practices were residence and community participation.

8.2 Recommendations

Health care planers

1. Should consider community participation as viable way of ensuring accessibility and effectiveness in primary health care programmes.

Program implementers

2. Ensure community participation mainly women to ensure ownership & participation to increase health awareness, knowledge and skills among community members.

Woreda health office:

3. Based on the finding health care services like vitamin A supplementation, ANC service and measles vaccination were low so, health sector should improve the service.
4. Universal salt iodization is set by government of Ethiopia, nutrition focal should follow practicality.

Health center

5. Health care providers to remained mothers about benefits of breast feeding and complementary feeding at the time of delivery and immunization.

Health post:

6. Continues community conversation sessions on health extension package by availing resources.

Woreda administrative

7. Allocation of adequate budget, regular supervision and giving written feedback to community level implementers.

Kebele administrative

8. To regularly conduct social mobilization sessions
9. Continuously mobilize mothers to participate community conversation to solve health problems.

Further research

10. Outcome evaluation research to show cause effect relations of the intervention.

CHAPTER -9 Meta-Evaluation

Our evaluation research work was assessed and judged based on meta- evaluation standards by original evaluator;

1 Utility- it based the interest of stakeholder & their active participations, for utility purpose of evaluation results.

2 Feasibility- it was cost effective and timely,

3 Propriety-the evaluation was designed and conducted to respect and protect human rights and welfare and ethical approval was obtained.

4 Accuracy- was maintained by using valid data collection tools, training of data collectors and supervision of data collection. Both qualitative and quantitative data analyses were considered and complementarities were applied. Finally, overall meta-evaluation standards were met in our evaluation research.

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11. Annexes

Annex-1

Stakeholder analysis of infant and young child feeding intervention in Bullen woreda, 2016				
Stakeholders	Role in the program	Communication Strategy	Role in the Evaluation	Interest/perspective
Regional Health Bureau	Involved in planning, budget, training, recruiting staff, implementation and monitoring	Formal letter Face to face discussion telephone	<ul style="list-style-type: none"> ○ Define the problem and priority area ○ Describing program activities, context, priorities and outcomes ○ Select evaluation question ○ participating in developing monitoring and evaluation indicator ○ Establish the criteria of success or failure of the program ○ Interpreting and use the finding 	To know the gap in service delivery, Use the finding for program improvement
Zone Health Dep.	Involved in planning, training and monitoring	Formal letter Face to face discussion telephone	<ul style="list-style-type: none"> ○ Define the problem and priority area ○ Describing program activities, context, priorities and outcomes ○ Serving as sources of data 	Use the finding for program improvement
Woreda Health office	Involved in planning, and monitoring	Formal letter Face to face discussion Telephone	<ul style="list-style-type: none"> ○ Define the problem and priority area ○ Describing program activities, context, priorities and outcomes ○ Serving as sources of data 	Use the finding for program improvement
Woreda health centers	Involved in planning, and monitoring	Formal letter Face to face discussion Telephone	<ul style="list-style-type: none"> ○ Define the problem and priority area ○ Describing program activities, context, priorities and outcomes ○ Serving as sources of data 	Use the finding for program improvement
Woreda women and child office	Involved in planning, community mobilization	Formal letter Face to face discussion	<ul style="list-style-type: none"> ○ Serving as sources of data 	

Woreda agriculture	Involved in planning, community mobilization	Formal letter Face to face discussion	<ul style="list-style-type: none"> ○ Define the problem and priority area ○ Describing program activities ○ participating in developing monitoring and evaluation indicator 	
Beneficiaries	Receiving the service	Formal letter Face to face discussion	<ul style="list-style-type: none"> ○ Serving as source of data 	
Health post	Implement plan, training CHDA & religious	Formal letter Face to face discussion Telephone	<ul style="list-style-type: none"> ○ Serving as source of data ○ use the finding 	Use the finding for program improvement

Matrix of information relevance for IYCF evaluation in Bullen woreda, 2016

Evaluation questions	Indicators	Source of information	Methods	Sample size
Are the required program resources available according to the plan? If yes, how? If not, why?		Institution	observation	health facilities
		Institution	observation	health facilities
Did infant and young child feeding intervention reaching target beneficiaries according to guideline? If yes how? If not, why?		Institution	observation	Within data collection interval
		MCH wards	Observation& in-depth Interview	Within data collection interval
Do clients (mothers/caregivers) adhere to exclusive breast feeding? If yes, how? If not, why? and		Community survey	Interview	323 infant paired mothers
Do clients (mothers/caregivers) adhere to complimentary feeding? If yes, how? If not, why?		Community survey	Interview	323 infant paired mothers

Over all Judgment Matrix				
Dimension	%	Value given	Value achieved	Judgment parameters
Availability	100	35%		⇒ ≥85 Excellent achievement ⇒70-84 V.good achievement ⇒56-69 Good achievement ⇒< 55% poor achievement
Compliance	100	30%		
Adherence	100	35%		
Total	100	100%		
Judgment criteria :<55% poor ,56-69 =Good ,70-84 =V.good,⇒≥85=Excellent				

Definition of Indicators

Dimensions	Definitions	Wt. given	Witted result
Availability indicators(13)	Number of health post with trained provider	8	
	Number of health center with trained provider	8	
	Number of community leaders trained	7	
	Number of health facilities with vitamin A capsules	7	
	Number of health facilities with scale length boards	7	
	Number of health facilities with MUAC tapes	7	
	Number of health facilities with supplementary food	7	
	Number of health facility with registration book	7	
	Number of health facility with reporting format	7	
	Number of health facilities with guideline	7	
	Number of HDAs trained	5	
	Number of U2 children screened for food supplementation	5	
	Number of health facilities with target supplementary food stock out days	6	
Number of health facilities with vitamin A stock out days	6		
Compliance indicators (10)			
	Proportion of children received Measles vaccination	10	
	Proportion of children aged 6–23 months who receive vitamin A supplementation	10	
	Proportion of HEW who got supportive supervision in the last 12 months before the survey	10	
	Proportion of breast feeding mothers who were visited by HEW in the last 12 months before the survey	10	
	Proportion of mothers who have awareness about EBF	10	
	Proportion of mothers who have awareness about CF	10	
	Proportion of mothers reached by health education materials from	10	

	health workers		
	proportion of children screened for food supplementation	10	
	Proportion of children received supplementary food	10	
	Number of timely reports sent to next level	1	
Adherence indicators (13)			
	Proportion of mothers give colostrum to their infant after delivery within 1hrs	7	
	Proportion of infants 0–5 months of age who are predominantly breastfed	7	
	Proportion of infant received pre-lacteal feeding	7	
	Proportion of infant received milk by nipple	7	
	Proportion of mothers ever breast feed their child	7	
	Proportion of households with available iodized salt.	7	
	Proportion of children received complementary feeding with continued breast feeding at 1 year of age	7	
	Proportion of children received complementary feeding with continued breast feeding at 2 year of age	8	
	Proportion of children 0–23 months of age who received age appropriate feeding	8	
	Proportion of infant received exclusive breast feeding up to six months	8	
	Proportion of infant received complementary feeding starting from six months	8	
	Proportion of children 6–23 months of age who receive an iron-rich food fortified in the home.	8	
	Proportion of mothers participated community conversation on child feeding	8	

Source: adapted from different literatures

Annex -2 Household survey questioners

Questionnaires

Interviewer instructions of informed consent:

Read to client: hello, my name is _____. I am one of the data collectors for the evaluation research that has been carried out on IYCFR intervention. I would like to interview you in order to better understand how the IYCF service is provided in this health post, your perception and attitude about the service. This information is completely confidential and no names will be taken. You may choose to stop the interview at any time. Do you have any questions about the survey? May I begin the interview now? If yes, continue but if no, stop.

1. Questionnaire Code

DD/MM/YYYY/

002 Name of the Kebele _____/_____/_____

003 Date of interview

004 Name of data collector

Signature _____

Date _____

5. Supervisor name

Signature _____ Date _____

006 Checked by investigator:

Signature _____ date _____

Part I: Question related with maternal Socio-Demographic characteristics

No

Option for response

Question

Completed years in Age _____

101

How old are you

106 What is your education level

month Unable to read & write

4. (1-4-) grade

2. able to read & write

5.(5--10) grade 6 c

diploma & above

107 What is your current occupation?

1. Merchant

4. Farmer 7. Other

(Specify)...

Part II: Questions on Infants socio-

demographic, Infant & child Feeding Practice and its factors

Household income per

201 What is sex of your youngest child

06 Who conducted the delivery of the child? 1. Health professionals 2. TTBA
 3. I/TTRA

07 Have you ever breast-fed your baby after he/she was 1. Yes 2. No (if no
 skin to Q 207)

How long after birth did you first put to the breast? 08 1. <1hr 2. After one
 hours

09 Did your baby receive anything to drink before he/she was 1. Yes 2. No (if no skip to
 Q 211)

first put to the breast? 3. Other reason (specify) _____

11 What was the reason for giving the liquid for a baby? 1-Infant were unwell 2. Mother
 were unwell

212 What did you do with the first breast milk (colostrum)? 1. Fed infant (if fed skip to Q 213) 2.
 Throw it

213 If You didn't give the colostrum what did you feed the child? A. Plain water
 B. Water & sugar
 C. Cow's Milk

(Here Multiple response is possible)

224 How many times did you feed solid, semi-solid and /or soft food between sunrise yesterday and sunrise today? -----

225 Has the child received any flesh foods (meat, fish, poultry and liver/organ meats) or Formula (if iron fortified babies supplements) from sunrise yesterday to sunrise today? 1. Yes
 2. No

226 What materials did you use to feed mashed or fluid foods between sunrise yesterday and sunrise today? did you visit?
 If Yes, Did you receive information/advice on any of the 231

227 Are you still breastfeeding? following topics about breast-feeding while you were following antenatal care during your last pregnancy?

228 If "No" Why did you stop breast feeding for the child

(Here Multiple response is possible)

to a health facility for antenatal care?
 230 If yes, How many times

332 On which issue you have been advised regarding breastfeeding?(Multiple response is possible)

(Here Multiple response is possible)

- a. Initiate breastfeeding immediately after birth within one hour?
- b. Exclusive breastfeeding to be practiced for first 6 months?
- c. No prelacteal feeds to be given?
- d. Correct technique of breastfeeding?
- e. Introduction of solid semi solid and soft food at 6 month
- f. Continue breastfeeding up to 2 years and beyond
- g. Continue breastfeeding during common illnesses of the baby?

Knowledge of the mother about infant and young child feeding practice

- 235 Breast feeding prevents the child from infection and diarrheal disease
1. Yes 2. No 3. I don't Know
1. Yes 2. No 3. I
- 236 Initiation of breast feeding should be within one hour
- don't know
- 237 Exclusive breast feeding should continue up to 6 months of age
- Yes 2. No 3. I don't know
- 238 Introduction of solid semi-solid and soft food should be started at the age of 6months.
- 239 On demand breast feeding should continue to 2 years of child age
1. Yes 2. No 3. I don't know
- 240 Has the baby been unwell in the last two weeks?
1. Yes 2. No (if No is chosen stop here)
- 241 If yes, what condition was the baby suffering from?
1. Diarrhea
4.Cough
2. Common cold
5. Tonsile
3. Malaria
- 242 Did you seek medical care for the baby?
1. Yes 2. No
- 243 If yes where did you seek the medical care?
1. Public health facility
3. Used herbal medicine
2. Private health facility
- 244 Was the illness of the BABY affected
1. Yes 2. No 3. I
- 245 Have you breast fed the child during his illness and
1. Yes 2. No

Thank you

Checklist to Review Document

Resource inventory tool- to assess availability of Infant and young child feeding intervention resources and materials needed for the intervention in Bullen woreda in, 2016

Name of Health facility: -----

Place of kebele/woreda-----

No	Materials/supplies	Yes	No	Remark
	Training manuals available			
	Registration of trained staff on IYCF intervention			
	Stationery /cards			
	Equipments in good condition and operational			
	Registration books for under 2			
	Registration books for pregnant &lactating			
	Target supplementary food to U2 child			
	Vitamin A stock out			
	supplementary food stock out			
	Reporting formats			

Name of observer; -----
position -----Date-----

Thank you

Checklist to assess compliance of provider's to national guidelines in Bullen woreda, 2016

Name of child: -----

Name of health care provider-----

Place of counseling----- child age-----

No	Breastfeeding (0-5 month old child)	Yes	No	Remark
	Health provider reminds mother about benefits of EXCLUSIVE BREASTFEEDING FOR 6 MONTHS and danger of putting anything else in the mouth, even water			
	Health provider assesses and counsels on POSITION & ATTACHMENT			
	Health provider reminds mother how to correctly ASSESS MILK SUPPLY (6 or more urines per day, growing well, active child, sleeps and plays well)			
	Health provider counsels on how to MAINTAIN GOOD MILK SUPPLY(breastfeed frequently and for long time day and night, no water/liquids)			
	Health provider teaches mother how and why to EXPRESS BREASTMILK			
	Health provider LISTENS CAREFULLY to mother's concerns			
	Observer gives FEEDBACK to the health provider in a friendly manner			
	Complementary Feeding (6-23 month old child)	Yes	No	
	Health provider asks about and counsels on the correct QUANTITY and FREQUENCY OF SEMI-SOLID/SOLID food as per child's age			
	Health provider asks about and counsels on feeding ANIMAL FOOD PLUS 3 OTHER FOOD VARIETIES			

	each day			
	<p>Health provider counsels on how to feed a child with POOR APPETITE:</p> <ul style="list-style-type: none"> – Encourage and help child during feeding – Do not force feed – Offer different varieties of nutritious foods that the child likes – Wait until the child is hungry – Take time to feed, talk, and praise the child for eating – Do not give liquids, chips, juice, or biscuits that fill up the child’s stomach 			
	<p>Health provider counsels on how to feed a SICK CHILD:</p> <ul style="list-style-type: none"> – Feed small amount of solid/semi-solid foods frequently – Breastfeed more frequently during the day and night – After recovery from illness, give extra food for at least 2 weeks 			
	Health provider helps mother and family members keep WATER and SOAP permanently near the PLACE OF CHILD FEEDING . Health provider reminds mother to wash hands with soap each time before preparation and feeding the child.			
	Health provider LISTENS CAREFULLY to mother’s concerns			
	Observer gives FEEDBACK to the health provider in a friendly manner			

Name of observer;

Position of observer **Date**

Thank you

Key informants interview guide.

1. How do you see the breastfeeding practice in your locality culturally/religiously?
(Hints: Timely initiation, Exclusive breastfeeding, duration of exclusive breastfeeding, Number of total feeds per 24 hours)
2. If not breast fed exclusively what are the type of food that is given commonly for the child?
3. What is the reason for not breast feeding exclusively from culturally/religiously perspective?
4. How do you rate the breastfeeding practices of mothers in this locality?
5. Would you tell me the major barriers that make a mother not to breastfeed and start complementary timely?(Hin: early initiation, exclusive breastfeeding, timely introduction of solid, semi solid and soft food)
6. During the Childs illness could he breast feed? (probe for extension of BF after recovery)
7. What is the age at which complementary (solid semi solid and soft food) food is started for infants?
8. During the time infants start to eat food items what are the type of food offered to the infants? How many times per day (Hin: probe based on age of the child, for breast feeding infant of age 6 - <9 month, 9 - <24month and for non breastfeeding child 6 - < 24 month) should the child be feed? Any things culture/religious say

Thank you

Data Collection Form (Amharic)

በቤኒሻንጉል ጉሙዝ ክልላዊ መንግስት በመተከል ዞን ቡለን ወረዳ ከሁለት ዓመት በታች (0 እስከ 24 ወራት) ያሉ ህጻናት አመጋገብ ላይ የሚካሄድ ጥናት ቃለ መጠይቅ፡፡

መግቢያ

ጤናይስጥልኝ! ስሜ-----ይባላል ለጥናት መረጃ ሰብሳቢዎች አንዱ ነኝ ጥናቱ እተሰራ ያለው ከጅም ዩኒቨርሲቲ በጤና ክትትልና ግምገማ ድህረ-ምረቃ ትምህርት ከመጡት አቶ ጌታቸው ማሞ ሲሆን ከሁለት ዓመት በታች (0 እስከ 24 ወራት) ያሉ ህጻናት አመጋገብ ላይ ጥናት እያካሄድኩ ይገኛሉ፡፡ ስለዚህ እርስዎ በዚህ ቃለ መጠይቅ በመመለስ እንዲሳተፉ እየጠየኩ የእርስዎ ስም የማይጻፍና የሰጡት መልስ ለማንም ግለሰብም ሆነ ድርጅት ተላልፎ እንደማይሰጥ እያረጋገጥኩ ቃለመጠይቁ ከ15-25 ደቂቃ ሊወስድ ይችላል፡፡ ቃለመጠይቁን የመጨረስ/የማቋረጥ ሙሉ መብትሽ እንደተጠበቀ ሁኖ በቃለመጠይቁ ለመሳተፍ ፈቃደኛ ከሆኑ አጠቃላይ ማናነትዎን የሚገልጻ በመጠየቅ እጅምራለሁ፡፡ ቃለመጠይቁን መቀጠል እችላለሁ?

መልሱ አዎ ከሆነ ጥያቄውን ይቀጥሉ/ይ አይ አልፈልግም ከሆነ ግን አመስግነሽ/ህ ቃለመጠይቁን አቋርጥ/ጩ፡፡

መጠይቁን የሞላው ሰው ስም-----ፊርማ-----

ቀን-----

የተቆጣጣሪው ሰው ስም-----ፊርማ-----

ቀን-----

ማሳሰቢያ

የተሰጠውን መልስ ያክብቡ ወይም በክፍቱ ቦታ ላይ ይጻፉት፡፡

የእናትየዋ መለያ

101. ክልል-----

102. ወረዳ----- 103. ቀበሌ-----

የጉብኝቱ ውጤት

1. ቃለመጠይቁ ተጠናቅቋል
2. ፈቃደኛ አልሆኑም
3. ቃለ መጠይቁ በከፊል ተካሂዷል

ክፍል ሁለት ንዑስ ክፍል-1

ተ.ቁ	ጥያቄ		
201.	የትምህርት ደረጃ	1. ማንበብና መጻፍ ማትችል 2. ማንበብና መጻፍ ምትችል 3.1-4 ክፍል	4.5-8 ክፍል 5.9-10 ክፍል 6. ኮሌጅ ዲፕሎማና ከዛ በላይ
202.	የጋብቻ ሁኔታ	1. ያገባች 2. አግብታ የፈታች	3. ባሏ የምተባት 4. ሌላ
203.	ብሔረሰብ	1. ሸናሻ 2. ጉሙዝ 3. አማራ	4. አገው 5. አሮሞ 6. ሌላ
204.	ሐይማኖት	1. ኦርቶዶክስ 2. ፕሮተስታንት	3. ሙስሊም 4. ሌላ
205.	መተዳደሪያ ሥራዎች ምንድን ነው	1. መንግስት/ ሠ 2. ነጋዴ	3. የቤት እመቤት
206.	የወር/ዓመት ገቢዎች ስንት ነው	1. በወር.....	2. በዓመት.....
207.	መኖሪያ አድራሻ	1. ገጠር	2. ከተማ

208	መጠጥ ውሃ	1.ከቧንቧ 2.የእጅ ፓንፕ	3.ከምንጭ፣ከጉርጌ፣ከወንዝ
209	ሽንት ቤት	1.አለ	2.የለም
210	ቫይታሚን ኤ	1.ወስዷል	2. አልወሰደም
211	ክትባት	1.ጨርሷል	2.አልጨረሰም
212	እድመዎት ስንት ነው	በዓመት-.....	
213	የህጻኑ/ልጁ ጾታና ዕድሜ	1. ሴት.....	2. ወንድ.....

214.	አንድ እናት በቀን ስንት ጊዜ ማጥባት አለባት	1.3ጊዜ 2.6ጊዜ 3.10-12ጊዜ	4.ህጻኑ ሲያለቅስ 5.ሌላ
215	ህጻንን ጡት ማጥባት ከተጓዳኝ በሽታ ይከላከላል	1. አዎ	2.አላውቅም
216	ቢጫውን የጡት ወተት/አንገር ለህጻኑ ይሰጣል/ አይሰጥም	1.አዎ	2.አይሰጥም
	መልስዎት 2 ቁጥር ከሆነ	1.ጥቅሙን ካለማወቅ 2.ባህላችን ስለማይፈቅድ	3.ሓይማኖተ ስለማይፈቅድ 4.ሌላ
217	የህፃኑ አባት ለህጻናት እስከ 6 ወር ጡት ወተት ብቻ እንድትሰጩ ድጋፍ ይሰጥሻል	1.አዎ 2.አይሰጥም	3.ሌላ
218	የቤተሰብ አባላት(እናትና ህጻኑን ጨምሮ) አልጋ አጎበር ይጠቀማሉ	1.አዎ	2.አንጠቀምም
219	ለህጻኑ ገንፎ ስትሰሪ የተለያዩ የምግብ አይነቶች(ምጥን) ትጠቀሚያለሽ	1.አዎ	2.አልጠቀምም
≥22 0	ህጻኑ የሚጠቀመው ወተት /በቀን ስንት ጊዜ ነው	1.የከብት/በቀን 2-4	2.የዱቀት/በቀን 2-4ጊዜ 3.ሌላ
221	ሲወለዱ ክብደታቸው	1.ቶሎ ቶሎ ጡት	2.ተገቢውን

	አነስተኛ (ከ2.5 ኪ.ግ) በታች ሆኑ ህጻናትን እንደት መመገብ ይቻላል	ማጥባት	እንክብካቤ መስጠት 3.ሌላ
222	ማህበረሰብ ውይይት ተሳትፏል ታውቂያለሽ/ጥቅሙ	1.አዎ	2. አላውቅም
	መልስዎት 1 ቁጥር ከሆነ	1.የህጻናትን አመጋገብ ለማሻሻል	2.የጋራ እና ግል ለውጥ ለማምጣት
223	የእርግዝና ወቅት ክትትል አድርገሻል	1.አዎ	2.አላደረሁም

ክፍል ሦስት

301	የህጻኑን ስም በመጥራት የት ነው የተወለደው	1.ቤት ውስጥ	2.ሆስፒታል/ጤና ጣቢያ/ኬላ 3.በግል ክሊኒክ	4.ሌላ
302	መልሱ ቤት ውስጥ ከሆነ በወሊድ ጊዜ የረዳሽ ማን ነው	1.ልምድ አዋላጅ	2. ቤተሰቦቹ	3.ብቻየን
303	የልጁን ስም በመጥራት አጥብተሽው ታውቂያለሽ ወይ	1.አዎ	2.በጭራሽ ከተወለደ አላጠባሁትም	
304	ጡት ማጥባት ያስጀመርሽ በምን ያክል ጊዜ ውስጥ ነው	1.በ 3 ሰዓት ውስጥ	2.በ 3 ቀን ውስጥ	3.በ1 ሰዓት ውስጥ 4.ሌላ
305	አንገር ካልጠባ ምን ተሰጠው	1.ቅቤ	2.ውሃ	3.የከብት ወተት 4.ሌላ
306	ካልጠባ ያልጠባበት ምክንኛት	1.ህጻኑ መጥባት ስላልፈለገ	2.እናትየዎ ማጥባት ስላልቻለች	4. ሌላ

			3.የጡቴ ወተት ባለመውጣት	
307	ህጻኑ አሁን ጡት እየጠባ ነው	1.አዎ	2. አይጠባም	
308	ጡጦ /ኩባያ ትጠቀሚያለሽ	1. የላም ወተት በኩባያ	2.የላም ወተት በጡጦ	3.ሌላ
309	ህጻኑ ተጨማሪ ምግብ የሚጀምረው ከተወለደ በስንትኛ ጊዜ ነው	1. 6 ወር ሲሞላው	2. ከ6 ወር በፊት	3.አላውቅም
	መልሱ 2 ቁጥር ከሆነ	1.እናት/ልጅ ታመው	2.ስራ ለመጀመር	3.ሌላ
310	በቀን ምን ያክል ጊዜ ምግብ ይሰጠዋል	1 .2 ጊዜ	2 .3-4 ጊዜ	3.ሌላ
311	ለሕጻኑ ምግብ ሲዘጋጅ ምን አይነት ጨው ነው ምትጠቀሙት	1. ቤት ያፈራውን	2. አዮዲን	3.ሌላ
312	ምን ያክል ወራት ጡትና ተጨማሪ ምግብ ለህጻኑ ሰጠሽ	1. 6-12 ወራት	2. 6-23 ወራት	3. ሌላ
313	አልሚ ምግብ ይሰጠው ነበር	1.አዎ	2.አይሰጠውም	
	ለምን ያክል	1 . 1 ወር	2 . 2ወር	3.ሌላ
	አልሚ ምግብ ይሰጠው ነበር ስላገገመ አቋርጧል	1.1 ወር	2. 2ወር 3 .3 ወር	4.ሌላ
	አልሚ ምግብ ይሰጠው ነበር ነገር ግን አልወስድልኝ ብሎ ተቋርጧል	1 .1 ወር	1 . 2 ወር	3 .ሌላ

314	በአንድ ቤት ውስጥ የሚኖር የቤተሰብ ብዛት ስንት ነው	1 .4ና ከዛ በታች 2 .5-6	3 .7-10 4.ሌላ	
315	የመጀመሪያ ልጅን ከወለድሽ በምን ያክለ ጊዜ ውስጥ ነው ሁለተኛውን የወለድሽ	1.በዓመት 2. በ2 ዓመት	3. በ4 ዓመት 4. በ3 ዓመት	5.ሌላ
316	ስለ ጡት ማጥባት ዕውቀቱ አለሽ	1.አዎ	2.አላውቅም	
317	አዎ ከሆነ ስለ ምን	1.1 ሰዓት ውስጥ የጡት ወተት ማስጀመርን	2. የጡት ወተትን ብቻ እስከ 6 ወር ማጥባቱን 3.ህጻኑ ሲጠባ እንደት መታቀፍ እንዳለብሽ	4.ተጨማሪ ምግብ በ6 ወር ስለማስጀመር 5. ሌላ
318	በዚህ ሁለት ሳምንታት ውስጥ አልጠባ/ምግብ አልወሰድልሽ ብሎ ነበር	1.አዎ	2. አላለም	
319	አዎ ከሆነ ምን ሁኖ ነው	1.ተቅማት 2.ጉንፍን	3.ወባ 4.ቶንሲል	5.ትኩሳት 6.ሌላ
	ታክም ነበር	1.አዎ	2. አልታከመም	
	ታክሞ ከሆነ የት	1.በመንግስት ጤና ተቋም	2. ግል ክሊኒክ	3.በባህላዊ መዳሀኒት 4.ሌላ
320	ታም ሳለ ጡት ይጠባ ነበር	1.አዎ	2. አልጠባም	
321	ከዳነ በኋላ ጡት መጥባቱን ቀጠለ	1. አዎ	2. አቆመ	3. አላስታውስም

አመሰግናለሁ ጥያቄን ጨርሻለሁ!!!.

Annex-3 Ethical Clearance Letters

