ADDIS ABABA UNIVERSITY COLLEGE OF HEALTH SCIENCE
SCHOOL OF ALLIED HEALTH SCIENCE DEPARTMENT OF
NURSING AND MIDWIFERY

ASSESSMENT OF SICK CHILD FEEDING PRACTICE AND ASSOCIATED FACTORS AMONG MOTHERS OF CHILDREN LESS THAN TWO YEARS OF AGE, IN BURAYU TOWN, ETHIOPIA

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ADDIS ABABA

ASSESSMENT OF SICK CHILD FEEDING PRACTICE AND ASSOCIATED FACTORS AMONG MOTHERS OF CHILDREN LESS THAN TWO YEARS OF AGE, IN BURAYU TOWN, ETHIOPIA

A THESIS SUBMITTED TO THE SCHOOL OF GRADUATE STUDIES OF ADDIS ABABA UNIVERSITIY DEPARTMENT OF NURSING AND MIDWIFERY AS PARTIAL FULFILLMENT OF THE REQUREMENT FOR THE DEGREE OF MASTERS OF SCIENCE IN PAEDIATRICS AND CHILD HEALTH NURSINFG

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This thesis by Hiwot Tadesse is accepted by the Board of Examiners as satisfying thesis requirement for the Degree of Master of Science in paediatrics and Child Health Nursing.

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Dedication

In fondest memory of my parents, Mr. Tadesse Feyisa and Mrs. Tenagne Birmechu who gave their all, to ensure the best future for their children.

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I would like to express my sincere thanks to my principal advisor

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Abstract

Background: Out of the contributing factors of child under nutrition as informed by UNICEF conceptual framework; inadequate intake, caring practices and disease are represented under immediate and underlining causes of under nutrition respectively(1). This indicates infant and young child feeding as a key area to improve child survival and promote healthy growth and development. The first 2 years of a child's life are particularly important, as optimal nutrition during this period lowers morbidity and mortality, reduces the risk of chronic disease, and fosters better development overall.

Objective: To assess sick baby feeding practice and associated factors among mothers of children aged less than24 months of age attending MCH clinic in Burayu town.

Methods:Facility based quantitative cross sectional study was conducted to assess, sick children under 2 years of age, at the health facility.The study has been conducted from April, 2015-May, 2015.Descriptive statistics such as frequencies, proportions were calculated and Odds ratio with 95 % confidence interval has also been calculated to assess the strength of associations.

Result

A total of 362 mothers of children aged <24 months of age were voluntarily included in the study. All respondents were biological mothers of the child. Majority 315(87%) of interviewed mothers were 15-30 years with mean age of 25.41($\pm$3.56) and 220(60.8%) of them have not attended any formal education The proportion (53.6%) of children who have fed more frequently during their time of illness compared to when they are healthy were used to measure sick child feeding according to the recommendation. In this study more

than half 194 (53.6%) of the children were fed more frequently compared to what they fed when they (children) were healthy. Mothers who have not attended any formal education were 0.343 times less likely to practice sick baby feeding than those mothers who have attended formal education **(AOR: 0.343,95% CI: 0.207-0.571; p< 0.00)**. Those mothers who had received counselling about sick child feeding are more likely to feed sick child more frequently**(AOR: 2.95 ;95% CI:1.783-4.908;p<0.00).**

None working mothers practice 2.138 times more likely to feed their sick child more frequently than those who have any work **(AOR 2.138; 95%CI: 1.32,3.343;p< 0.00) ,and** those mothers whose children's age is less than 6 months are 0.22 times less likely practice more frequent feeding for their sick child compared to when their children are healthy **(AOR 0.22;95%CI 0.121,0.402;p<0.00).**

Conclusion

The proportion of sick child feeding is lower but the finding is higher compared to the prevalence of the previous study finding. In consistent with other study findings, maternal education, maternal occupation, Age of the child and sick baby feeding counselling were found to be significant socioeconomic determinants of sick baby feeding practice.

Even though these problems may be alleviated by sustainable socio-economic development through integrated effort of different sectors in the long run, recommendations are forwarded considering short-term solutions based on the findings of the study.Adherence to the recommended sick child feeding practice can be increased by imparting women's education, considering favourable condition to treat their children easily for mothers of young children those who are outside workers, providing guidelines for age specific child feeding and promoting the importance of infant and young child feeding counselling.

Acronym

ANC –Ante natal care

EBF – Exclusive breast feeding

EDHS – Ethiopian demographic health survey

ENA – Essential nutrition action

FMOHE – Federal ministry of health of Ethiopia

HIV – Human immune deficiency virus

IYCF –Infant and young child feeding

KAP – Knowledge attitude and practice

MCH – Maternal and child health

ORT – Oral rehydration therapy

UNICEF – United nations children's fund

WHO – World health organisation

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CHAPTER: ONE

1. INTRODUCTION

1.1. Background the study

Out of the contributing factors of child under nutrition as informed by United Nations Children's Fund (UNICEF) conceptual framework; inadequate intake, caring practices anddisease are represented under immediate and underlining causes of under nutrition respectively(1). It also explained feeding during illness and recovery are the practice identified in developing countries regarding to suboptimal child feeding this contributes founder nutrition which is associated with more than one third of the global disease burden for children under 5 years of age. This indicates infant and young child feeding as a key area to improve child survival and promote healthy growth and development. The first 2 years of a child's life are particularly important, as optimal nutrition during this period lowers morbidity and mortality, reduces the risk of chronic disease, and fosters better development overall.

A study conducted in Guagusa woreda, Awi zone, North west Ethiopia showed prolonged breast-feeding benefits both for mother and infant health, it is the leading preventive child survival intervention by which nearly two million lives could be saved each year through six months of EBF and continued breast-feeding with proper complementary feeding for up to two years or longer(2).

During an illness the need for fluid often increases, a child should be offered and encouraged to take moreand breast feeding on demand should continue. A child's appetite for food often decreases,while the desire to breastfeed increases,and breast milk may became the main source of both fluid and nutrients. A child should also be encouraged to eat some complementary food to maintain nutrient intake and enhance recovery. Intake is usually better if the child is offered his or her favourite foods and if the foods are soft and appetizing.The Federal Ministry of Health of Ethiopia, (FMOHE) recommends increasing the frequency of breastfeeding after illness (3).So the baby will regainhealth and weight

lost during the illness the amount eaten at any one time is likely to be less than usual, so the care giver may need to give more frequent, smaller meals.

Breast feeding makes unique fundamental contribution to the health and nutrition of infants because there is no doubt that some factors present inhuman milk provide resistance against infections(4).

Optimal breastfeeding is so critical that it could save about 800,000 under 5 child lives every year, In similar way countries where stunting is highly prevalent, promotion of breastfeeding and appropriate complementary feeding could prevent about 220, 000 deaths among children under 5 years of age(1).

WHO and UNICEF recommend early initiation of breastfeeding within one hour of birth; exclusive breastfeeding for the first 6 months of life; and the introduction of nutritionally-adequate and safe complementary (solid) foods at 6 months together with continued breastfeeding up to two years of age or beyond (4).

Recommendations have been refined to also address the needs for infants born to HIV-infected mothers. Antiretroviral drugs now allow these children to exclusively breastfeed until they are six months old and continue breastfeeding until at least 12 months of age with a significantly reduced risk of HIV transmission**,(1).** The benefit of early feeding of children with diarrhoea has been known since the late 1940s (5).

1.2. Statement of the problem

A wide range of harmful infant feeding practices are documented even after implementations of infant and young child feeding recommendations in Ethiopia (3). Breast feeding is the single most cost effective intervention to reduce child morbidity and mortality both in developed and developing countries for sick infant and young child(6).As already documented, breast milk provides the ultimate nutrition for a growing child by its many nutritional and immunological benefits which grooms the growing child's immune response to fight infections. Despite all these advantages, prevalence of breast feeding is

declining worldwide and therefore there is a need to promote, protect and support breast feeding as a child survival strategy. More than 10 million children under the age of five die each year; 41% of these deaths occur in sub Saharan Africa and another 34% in South Asia and the major contributor to their death is poor breastfeeding practices (4).

Breastfeeding is universal in Africa, but there are ethnic-specific practices which tend to deprive infants of this nourishment (7). Among certain groups, for example, the newborn infant is denied the rich colostrum for the first few days because of the belief that the yellowish milk is not only dirty but also causes the baby`s head to be big or ugly. This practice deprives the child of the immunity against disease and infections that can lead to death.

The Ethiopian Demographic Health survey 2011, (EDHS) shows that 16 percent of children with diarrhea were given more fluid, food or breast milk than usual, as recommended, more than one-third of children (35 percent) were given the same amount of fluid, food or breast milk as usual and, almost one child in every two (49 percent) were offered less fluid, food or breast milk than usual or were given no fluids at all when they have diarrhea: thisindicates that a large proportion of mothers still engage in the dangerous practice of curtailing fluids and food intake when their children have diarrhea (8). Inadequate and/or inappropriate dietary intake and infectious diseases are the immediate/ direct causes, while these in turn are related to a number of socio-economic and environmental factors, such as environmental sanitation, water supplies and primary health care, and family factors such as the presence of other family members, type of housing, availability of water, household, hygiene, mother's education, infant-feeding practices, decision-making power and maternal work status.

Infant and childcare, along with household food security, adequate health services and a healthy environment are necessary preconditions in solving malnutrition problem. The mother is usually the main caregiver for the infant and the very young child. However, the majority of African women are poor largely because of their limited access to and control of productive resources (9).

Infant nutrition programs worldwide continue to require investment and commitment to improve feeding practices in order to have maximum impact on reducing infantmorbidity and mortality(10,11).

The FMOHE has tried to enhance the practice of optimal breast feeding practice by developing training manuals and implementation guidelines on breast feeding; and incorporated it to the primary health care in line with the health extension program,but there is no guideline concerning sick baby feeding. Despite few local studies conducted in different places in the country, no sufficient study tried to identify sick baby feeding practice and associated factors in babies less than 2 years of age in the study area. Hence, there is a need to carry out a research to come up with sick baby feeding practice. Thus, we know little about the sick baby feeding practice performed by mothers of below two years old babies in the Burayu area. Still the practice is far from the global recommendation. This study is aimed therefore in the assessment of sick baby feeding practice among mothers of less than 2 years of age babies and associated factors in Burayu town.

1.3 SIGNIFICANCE OF THE STUDY

This assessment is aimed to assess the relative common factors to the dietary management of childhood illness in and maternal practices of sick baby feeding, Health workers who work in under five clinics and in the community setting will use the result from this research as a baseline in their counselling/health education session to minimize malnutrition during illness practice and strengthen the good practices. The finding of this study will provide policy makers a significant input by involving a crucial role of sick infant and young children feeding as a tool to combat child malnutrition and immune capacity of children.

NGOs (nongovernmental organizations) will also be benefited with relevant information for future planning and interventions of appropriate strategies to promote and maintain sick baby feeding practices.

CHAPTER: TWO

2. LITERATURE REVIEW

Appropriate complementary feeding promotes growth and prevents stunting among children between 6 and 24 months of age (8). This prevents that infants are particularly vulnerable to malnutrition and infection during the transition period when complementary feeding begins.

The Essential Nutrition Actions (ENA) , represent an action-oriented approach that focuses on promoting seven clusters of nutrition behaviours that have been empirically proven to reduce morbidity and mortality.Although the challenges to improve nutrition are significant and may appear overwhelming, there are a number of Essential Nutrition Actions that when taken together can make a difference to the well-being and survival of young children (6). The main beneficiaries of these actions will be infants and young children under the age of two years. The seven ENA areas include; promoting optimal breastfeeding, promoting optimal complementary feeding at 6 months, nutritional care of the sick child during and after illness, improving women's nutrition, controlling anaemia, controlling vitamin A deficiency, and controlling iodine deficiency.

2.1.SICK BABY FEEDING

Sick baby feeding is to continue feeding during illness and feed more after illness which is to increase fluid intake during illness, including more frequent breastfeeding and longer feeds both day and night(8). During illness by encouraging the sick child to eat soft, varied, appetizing foods, the mother or caregiver should also offer the child's favourite foods for his/her age group and help the child to eat encouraging the child to eat more food after illness is to 'catch-up', Continued breastfeeding along with complementary foods during this period results in a decreased risk of morbidity and mortality especially in populations with high risk of contamination (12,13).

Acute diarrheal diseases are one of the main problems affecting children in the world, reducing their well-being and creating considerable demand for health services, (14,15)

Diarrhoeal disease affects human life both in developed and developing countries (16). This indicates that a strong relationship exists between poverty and unhygienic environment, poverty restricts the mothers to provide age appropriate, nutritionally balanced diets or to modify diets when diarrhoea develops so as to alleviate and repair nutrient losses and to reduce the morbidity and mortality associated with infectious diarrhoea, the clinical and public health practitioner communities must work closely together to identify optimal diagnostic, treatment, and prevention methods. Likewise better understanding of the interaction between persistent diarrhoea and malnutrition as causes of mortality has drawn increased attention to the need to expand the scope of intervention programs, whose therapeutic basis is oral rehydration therapy.

A study conducted in Surat, India showed that variables like maternal and paternal education, knowledge and socioeconomic status and type of family revealed a significant association with newborn`s exclusive breastfeeding situation and feeding when child is ill(17).

2.2. FACTORS AFFECTING SICK BABY FEEDING PRACTICE

Nutritional status is influenced by three broad factors: food, health and care. Optimal nutritional status results when children have access to affordable, diverse, nutrient-rich food; appropriate maternal and child-care practices; adequate health services; and a healthy environment including safe water, sanitation and good hygiene practices(7). As was revealed in this survey only 47 percent of the children below 1 year of children meet the minimal dietary frequency. These factors directly influence nutrient intake and the presence of disease and the interaction between under nutrition and infection creates a potentially lethal cycle of worsening illness and deteriorating nutritional status.

In Ethiopia, exclusive breastfeeding until the infant is six months of age is 49%, and timely complementary feeding is at 54% (16). Continued breastfeeding in Ethiopia for two years and beyond is currently well below the WHO recommended standards.

A community based cross-sectional study was conducted in Arbaminch zuriaworeda , showed that out of 180 mothers whose child had got diarrhea about 31% of mothers could

give appropriate feeding to manage the diarrhea. Overall, the findings support the view that women education level of at least primary should be achieved to reduce childhood diarrheal morbidity. Reducing diarrhea morbidity involves providing better sanitation for the entire population and hygiene of the person caring of the child. Therefore, counseling mothers on the three rules of home treatment; give extra fluid, continue feeding and advise the mother when to return health facility is very crucial for the control and the prevention of the disease(7).

Death rates in third world countries are lower among breastfed babies and breastfed babies have fewer infections than formula milk fed babies (18, 19 ,20)However between 3000 and 4000 infants die in the developing world from diarrhea and acute respiratory infections because they are given inadequate amounts of breast milk every day, infants who are not breastfed have a six fold greater risk of dying from infectious diseases. More than 10 million children die each yearworldwide(3,21). Forty-one percent of these deaths occur in sub-Saharan Africa and 34% in South Asia, in Madagascar, one in ten children dies in the first year of life. A major contributor to their deaths is poor breastfeeding practices.

A study on KAP of infant and young child feeding and health seeking practices in Somalia reveals lack of knowledge, inappropriate beliefs and very close birth spacing before the child reaches two years are the major obstacles to successful breastfeeding (22). In addition annual celebrations of World Breastfeeding Week had some impact on change on belief and behaviours on breastfeeding in parts of urban livelihood zones where these celebrations have taken place in Somalia. Overall, the study found that there was inappropriate or lack of knowledge on proper feeding practices in all livelihood zones and during illness, efforts are made by caregivers to ensure that children get special diets for quick recovery and foods which are believed to aggravate the illnesses, particularly protein foods are often withheld

A cross-sectional study in an urban slum of Delhi, India, showed that, only 68% of mothers continued breast feeding during diarrhoea, only 25% considered ORS as the mainstay treatment and 75% gave ORS to child (23).

Another study conducted in Somalia, stated that ,majority of the females were aware of the advantages (92%) and the disadvantages (85 %) of breastfeeding study of knowledge, attitude and practices (KAP) of lactating mothers onbreast feeding, weaning immunization and dietary practices (22). Furthermore, a recent review of child survival interventions in low-income countries showed that the promotion of breastfeeding was one of the most effective public health interventions, reducing under-five mortality by 13%,(23).

Worldwide, diarrhoeal diseases are a leading cause of paediatric morbidity and mortality, with 1.5 billion episodes and 1.5–2.5 million deaths estimated to occur annually among children aged <5 years,(22). Although the total number of deaths from diarrhoea is still unacceptably high, these numbers have been reduced substantially in the 1980s and 1990s. For example, in 1982, an estimated 5 million deaths/year occurred, and in 1992, the estimated annual deaths declined to 3 million/year. So the substantial portion of the decrease in mortality is attributable to worldwide campaigns to treat acute diarrhoea with oral rehydration therapy (ORT).

The study conducted in Harrar Region explained income of the house hold determine timely introduction of food at the appropriate time, the study revealed that household with higher income practice to the international recommendation(19).

It is believed that working mothers are expected to feed their child less frequently than non-working mother because of their working condition.(24). The Ethiopian government by realizing the importance of child feeding during illness , had developed infant and young child feeding guidelines giving appropriate emphasis to key messages on timely initiation of breastfeeding in(3).

Since then, different interventions like breast feeding promotions and continuing feeding during illness have been given at health institutions and at the community level by community health extension workers and other health care providers. However, these efforts are not based on systematic evidence on the level of existing practice which might be due insufficient study tried to identify sick infant and young child feeding practice and associated factors in the study area. Hence, there is a need to carry out the study to come up the issue with sick baby feeding practice in the study area.

Conceptual frame work

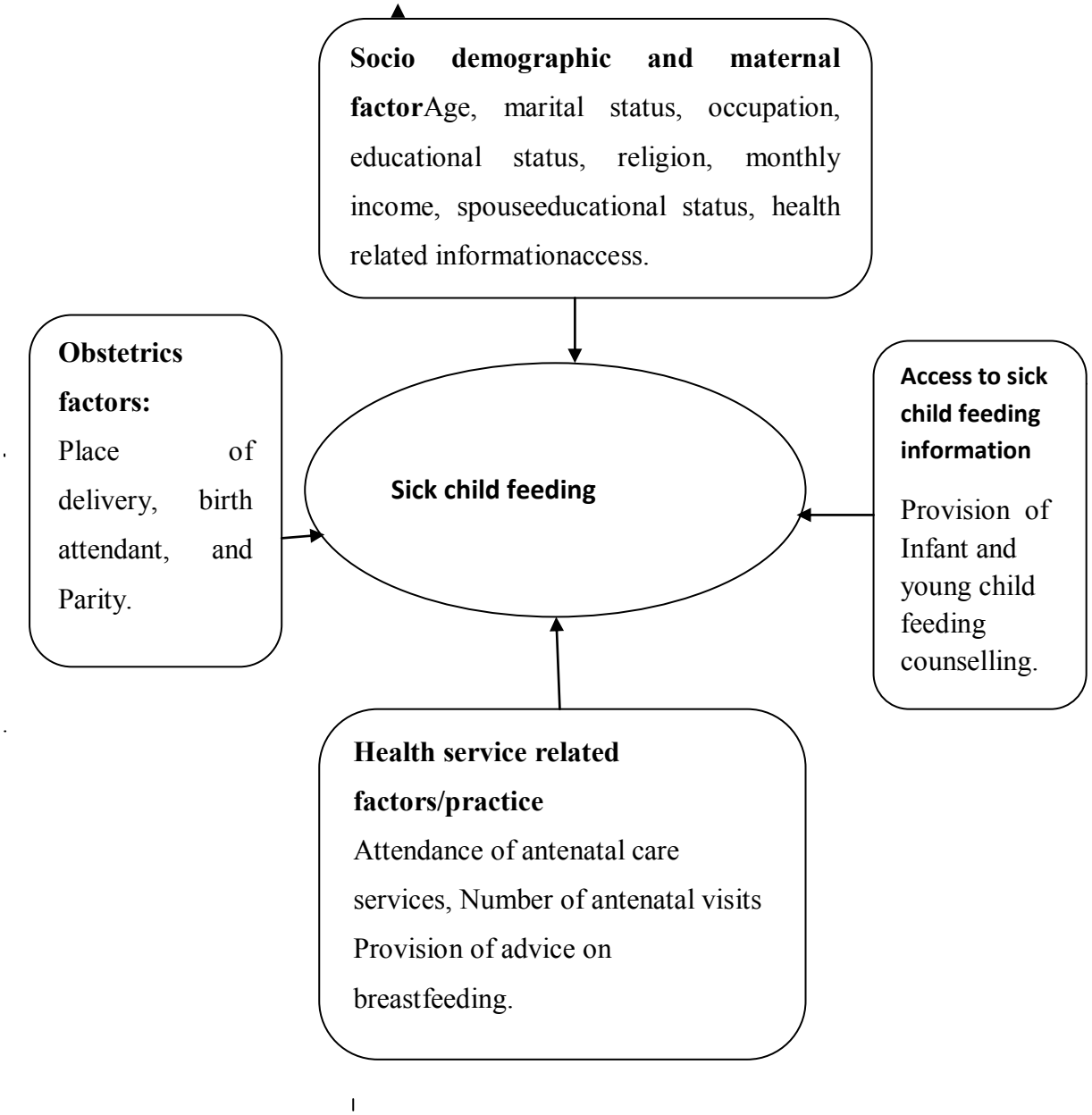

Figure 1.Factors associated with Sick baby feeding practice: Conceptual framework developed based on Literature review

CHAPTER THREE:

3, OBJECTIVES

3.1, General objectives

- To assess sick child feeding practice and associated factors among mothers of children aged less than24 months of age attending MCH clinic in Burayu town.

3.2,Specific objectives

- To determine practice of sick child feeding among mothers of children aged less than 24 months of age in Burayu town.
- To identifyfactors associated with sick child feeding practices among mothers of children aged less than 24 months of age in Burayu town.

CHAPTER FOUR:

4, METHODS AND MATERIAL

4.1, Study area

Burayu is a town located at 12 kilometres at western Addis Ababa,it is one among the twelve city administrations in Oromia regional state.

Total population of Burayu town is estimated to be 88598, according to 2007 house hold survey. Among these 45185 were females and 43413 were males, 14557 were under five and 19670 of the population were women in reproductive age group(15-49). There are 2 health centers and 2 health posts owned by government, and 40 clinics owned by private organizations. The majority of the town population, however, is served by the government-owned and operated health facilities. The study area is selected for the fact that no similar studies were found during literature search.. Health facilityis a better place to get sick children in the specified age group in such short period of time, and the study has been conducted on health facility.

4.2, Study period

The study was conducted from April,15, 2015-May,15, 2015.

4.3, Study Design

Facility based, quantitativecross sectional study design wasusedto assess mothers of children less than 2 years of age who were attending sick babies' clinic, at Burayu health facilities.This design is ideal because of time and resource constraints

4.4. Source Population

- All mothers of sick child aged less than two years of age living in the study area.

4.5. Study Population

- .All mothers of sick baby and young child less than two years of age attendingmaternal and child health clinic at the two governmental health centers in burayu town.

4.6,Eligibility Criteria

4.6.1,Inclusion Criteria

-Mothers with their Index sick child came to health facility and consentedto participate during the study period.

4.6.2,Exclusion criteria

Mothers did not come with her child to health facility and/or having healthy child at the time of study and a mother who was mentally incompetent at the time of studywas not included in the study.

4.7, Sample size

The sample size required for the study was calculated using the formula to estimate sample size:

$$n = \frac{[(Z\alpha/2)^2 p(1-p)]}{d^2}$$

Where: n= required sample sizes

Zα/2 = critical value for normal distribution at 95% confidence interval which Equals to 1.96 (z value at alpha =0.05)

P = established prevalence from previous studies of the topic of interest (Sick child feeding) in the locality, proportion of 31% only appropriately fed child with Diarrhoea(Science journal of public health, 2012) (7)

d = an absolute precision (margin of error) =5%

Non response rate is , 10%

$$n= \frac{(1.96)^2 (0.31)(0.69)}{(0.05)^2}$$

n=329+33=

362

4.8, Sampling technique and procedure

According to survey,about 32 children aged less than 24 months of age flow per day was found ,sample for the study was determined to be 362 in number, Since the given time for data collection was one month(April 15,2015-March15,2015) 640 client could have been interviewed in one month ,which was calculated as approximately mother of every second client has to be interviewed , using simple random sampling method .

4.9 Data collection procedure

Twodata collectors were trained by principal investigator about the purpose of the study, field methods and how to interview as well as fill the questionnaire properly. Interviewwasperformed face to face data collection technique using pretested structured questionnaire developed according to the WHO guide line for feeding infants and young children during illness. Onedata collector has been assigned to each health facility and supervised by principal investigator. Data on feeding sick childpractice has been collected from mothers having babies less than 24 months of age.

4.9.1 Data collection instrument

Datawas collected using standardized structured questionnaire adopted fromfreely accessed WHO and EDHS for this specific study. The questionnaire includes 14questions concerning socio-demographic characteristics, 10questions maternal health related factors,10 questions concerning feeding practice of infant and young children,11 question on feeding practice of infant and young children during illness and 3 question on information on sick baby feeding. Afaan oromotranslation of English version questionnairewas prepared.For the assessment of sick baby feeding practice currently used definitions and recommendations of WHO, the national strategy for IYCF was used. In this study mothers have been requested to provide information regarding how they feed their babies during illness. To estimate the continuity of feeding during illness and feeding more after illness which is toincrease fluid intake during illness, including more frequent breastfeeding and longer feeds both day and night, encourage the sick child to eat soft, varied, appetizing, foods to less than 2 years of age has been used.

4.10 Study variable

4.10.1 Dependent variable: **sick baby feeding practice.**

4.10 .2 Independent variable

- Socio-demographic variables- Age, marital status, occupation, maternal educational status, ethnicity, religion, monthly income, spouse educational status, information access, sex of the child and age of child
- Health service related factors- postnatal care services
- Obstetrics history variables-Attendance of antenatal care services, number of antenatal visits, Place of delivery, birth attendance, Parity and birth interval.

Access to sick child feeding information; Health professionals during ANC (IYCF counselling),Health extension workers,television, Radio and others

4.11. Operational definitions

Sick baby- Is a baby who is not well, has any sort of problem and needs health care and treatment.

Sick baby feeding- is to continue feeding during illness and feed more after illness which is toincrease fluid intake during illness, including more frequent breastfeeding and longer feeds both day and night, encourage the sick child to eat soft, varied, appetizing, foods.

Formal education: primer education and above level of education.

Mother: Biological mothers of the child.

Health service access - An opportunity to get health service at reachable distance and distribution.

Health service information access – Availability of awareness on timely health service

Feed less than usual- to decrease the amount and frequency to feed the child when the child is sick

Feed more than usual- To increase the amount and frequency to feed the child wh en the child is sick.

Increase feeding frequency – to give child any food or breast milk more repeatedly.

Decrease feeding frequency- to feed a child less often

Infant and young children- are infants (birth to1 year old)and children less than 5 years of age.

4.12 Data Management and analysis procedures

Data obtained from facility based survey,waschecked for completeness&inconsistencies, then coded, entered, cleaned and analysedusing Statistical package for Social Sciences, (SPSS) version 21. Descriptive statistics such as frequencies, proportions has been calculated and Odds ratio with 95 % confidence interval hasalso been calculated to assess the strength of associations for most variables in the study, by tables and chart.The strength of statistical association has been measured by adjusted odds ratios and 95% confidence intervals and level of significance p value of 0.05 has been considered as a level of significance for associations.

4.13 Data quality control

Pre-tested and structured questionnaire has been used for data collection. The questionnaire has been reviewed by principal research advisor and commentshas beenincorporated for internal validity. Training for data collectorshas been given. Also Supervision of data collection processes has been held and 10% of the questionnaire was rechecked every day. Finally data was entered.

4.14 Ethical considerations

Ethical clearance was obtained from Addis Ababa UniversityCollage of Health science Department of Nursing and Midwifery Ethical Review Committee,written permission has been obtained from Burayu town Health office. The Data collectors received approporiate training before the research work started.In addition written informed consent was obtained from study participant to confirm willingness for participation after explaining the objective of the study in a local language. The respondents have been notified that they have the right to refuse or terminate at any point of the interview. The information provided by each respondent has been kept confidential. Individual records were coded and accessed only by principal investigator.

4.15Dissemination of the results

The finding of the result will be submitted to Addis Ababa University, Department of Nursing and Midwifery, Burayu Town Health Officewill be communicated about the result; in addition a copy of it will be submitted to the respective facilities. It will be presented in seminars and workshops as well as further effort will be made to publish on peer reviewed journals.

CHAPTER: FIVE

5,RESULT

5.1 Socio-demographic Characteristics

A total of 362 mothers of children aged <24 months of age were voluntarily included in the study. All respondents were biological mothers of the child. Majority 315(87%) of interviewed mothers were 15-30 years with mean age of 25.41(±3.56). About half of the respondents were Oromo 174(48.1). One hundred sixty (44%) of the respondents were orthodox,109(29.3%) of them were protestant and 90(24.9%) religion followers. The vast majority of the respondents 351(97%) were married, 220(60.8%) of them have not attended any formal education,but 220(88.6%) of fathers have followed formal education. Major of the respondents 266 (73.5%) are housewives.

Out of <24 months age children recorded in this study more than half(53.6%) of them were females. Children's average age was 10(SD: ±6.13) months. More than one third of children 115(31.8%) were less than 6 months of age and 135(37.3%) were those who are greater than twelve months of age category. (Table1).

Table 1.Socio-demographic variables of mothers in Burayu town, Ethiopia, 2015.

Background Characteristics		n=362	%
Child's Age (months)			
	<6	115	31.8
	6-12	112	31
	13-23	135	37.3
Child's Sex			
	Male	168	46.4
	Female	194	53.6
Mother's age (years)			
	15 – 19	3	0.8
	20 – 24	151	41.7
	25 – 29	161	44.5
	30 – 34	42	11.6
	35 – +	5	1.4
Ethnicity			
	Oromo	174	48
	Amhara	42	11.6
	Tigre	18	5
	Gurage	81	22.4
	Wolaita	34	9.4
	Other	13	3.6
Mother's Religion			
	Orthodox	160	44.2
	Muslim	90	29.3
	Protestant	106	59.4
	Other	6	1.7
Mother's marital status			
	Married	351	97
	single	8	2.2
	divorced	2	0.6
	widowed	1	0.3

Mother's occupation			
	Housewife	266	73.5
	Government employment	39	10.8
	Business woman	45	12.4
	Daily Labor	10	2.8
	Other	2	0.6
Mother's education status			
Formal Education	Yes	220	60.8
	No	142	39.2
Monthly Income (ETB)			
	<=1000	147	40.6
	1001-2000	114	31.5
	2001-+	101	27.9

Majority 353 (97.5%) mothers of children had ANC visit, less than half of mothers interviewed have got counselling on child feeding. One hundred twenty seven(35.1) of mothers used bottle feeding for their children, 24% and 35.1% of mothers got advise about feeding a child more frequently during illness and continuing feeding after illness respectively .About 342 (94.3%) of mothers gave birth to index child at health institution and assisted by health professionals. More than half of the respondents replied that they heard the information from health professionals during their visit to health institution. (Table;2)

Table 2:Obstetrics and health servicevariables of mothers in Burayu town, Ethiopia, 2015.

parity	**1-2**	**147**	**40.6**
	3-4	114	31.5
	5 & above	101	27.9
History of ANC	Yes	353	97.5
	No	9	2.5
Sick child feeding Counseling	Yes	169	46.7
	No	193	53.3
Source of information on sick baby feeding	Health professionals during health institution visit	266	62.4
	Health extension workers	24	6.6
	Mass media	43	11.9
	Other	29	9.1
Place of delivery	Home	20	5.5
	Health center	253	69.9
	Hospital	89	24.6
Bottle feeding	Yes	127	35.1
	No	235	64.9
Birth attendant	TBA	7	1.9
	Health professional	343	94.7

	Relatives		12	3.3
Media Accesses	Radio	278	76.8	
	Television	248	68.5	
	Magazine, books or news	54	14.9	

5.2,feeding practice of sick children

The proportion of children who have fed more frequently duringtime their illness compared to when they are healthy were used to measure sick child feeding according to the recommendation. In this study more than half 194(53.6%) of the children were fed more frequentlycompared to what they fed when they (children)were healthy.(Figure:2)

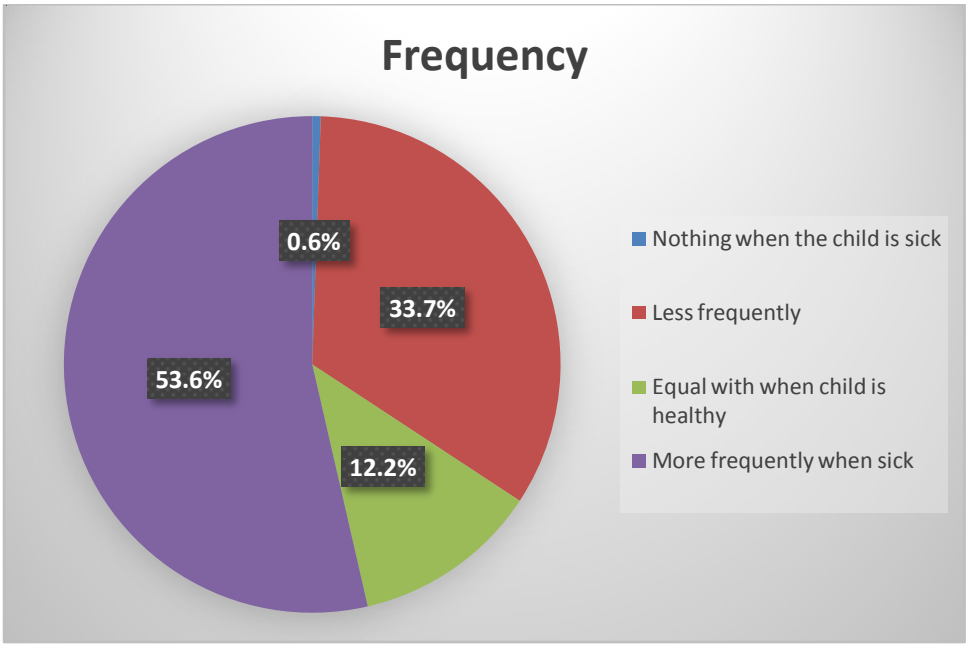

Figure 2sick child feeding practice of mothers in Burayu town, Ethiopia, 2015.

5.3,Factors associated with sick baby feeding practice

The bivariate analysis eight variables, maternal education, occupation of mother ,monthly income of household, access to counsel on sick baby feeding, place of delivery child age, bottle feeding, ANC visits and access to any media were identified as factors associated with sick baby feeding practice for the child aged less than 24 months of age. The table below shows bivariate analysis of maternal factors.

Table3: Logistic regression analysis of sick child feeding practiceamong mothers of children aged less than 24 months, Burayu ,2015 (Bivariate and multivariate analysis)

Variable	Increased frequency feeding during illness		Cured OR (95%CI)p-value	AOR(95%CI)p-value
	Yes. No(%)	No. No(%)		
Maternal education				
Formal education				
Yes	154(65.9)	75(34.10)	3.34(2.15,5.20)0.00	0.343(0.20,0.57)0.00
No	52(36.6)	90(63,4)		
Occupation of mother				
Housewives	158(59.4)	108(40.6)	2.138(1.32,3.43)0.002	0.454(0.258,0.796)0.006
All workers	39(40.6)	57(59.4)		
Access to sick baby feeding counseling				
YES	113(66.9)	56(33.1)	2.61(11.70,4.01)0.00	2.95(1.78,4.90)0.00
No	84(43.5)	109(56.5)		
Child age				
<6m0nths	42(28.7)	91(71.3)	0.23(0.13,0.39)0.00	0.22(0.121,0.402)0.00
6-12months	71(68.9)	32((31.1)		
>12	80(63.5)	46(36.5)	2.04(1.56,2.67)0.00	
Monthly income				

<1000	66(44.9)	81(55.1)	0.87(0.68, 1.128)0.304
1000-2000	46(40.4)	68(59.6)	
>2000	53(52.5)	48(47.5)	
Paternal education			
Yes	172(53.8)	148(46.3)	0.744(0.38, 1.44)0.383
No	25(61)	16(39)	

As shown on the table above it presents multivariate comparison of characteristics of sick baby feeding practice of mothers of children less than 24 months. Maternal education, mother's occupation, access to counselling of sick baby feeding and age of child were the predictors identified at last stage of analysis. Mothers who have not attended formal education were 0.343 times less likely to practice sick baby feeding than those mothers who have attended any formal education **(AOR: 0.343,95% CI: 0.207-0.571; p< 0.00)**. Those mothers who had received counselling about sick child feeding are more likely to feed sick child appropriately **(AOR: 2.95 ;95% CI:1.783-4.908 ;p<0.00).**

Mothers who were housewives were 2.138 times more likely to feed their sick child than those who have any work **(AOR 2.138; 95%CI: 1.32,3.343;p< 0.00).**

Those mothers whose children's age is less than 6 months are 0.22 times less likely practice appropriate feeding for their child **(AOR 0.22;95%CI 0.121,0.402 ;p<0.00).**

CHAPTER SIX

6,DISCUSSION

Encouraging the sick child to eat soft, varied, appetizing foods, the mother or caregiver should also offer the child's favourite foods for his/her age group and help the child to eat encouraging the child to eat more food after illness is to 'catch-up', Continued breastfeeding along with complementary foods during this period results in a decreased risk of morbidity and mortality especially in populations with high risk of contamination (12).

Inadequate and or inappropriate dietary intake and infectious diseases are the immediate direct causes, while these in turn are related to a number of socio-economic and environmental factors(8),The objective of this study is to assess sick baby feeding practice and associated factors among mothers of children aged less than 24 months of age attending MCH clinic in Burayu town

More than half of the mothers fed their child more when they are sick compared to when they are healthy (53.6). One third (33.7%) of them feed lesser for sick child relative to when they are healthy. The proportion of sick child feeding was higher than the prevalence in Arbaminch zuriaworeda (31%)(7). A study in an urban slum of Delhi, India, stated that, only 68% of mothers continued breast feeding during illness(23)

This study provides better understanding of factors determining sick child feeding that are related to socio demographic and health seeking behavior. Several factors were found in this study to influence inappropriate feeding of sick child practice. For example, education of mothers, sick child feeding counseling, occupation of mothers and age of the child were consistent determinants of appropriate sick child feeding practices. Mothers who attended any formal education were believed to be beneficial to mothers as information seeking behavior about infant and young child feeding practices. This study revealed that mothers who have not attended any formal education were less likely to practice sick child feeding compared to those whose mother attend any formal education (table:3) This finding is consistent with that reported in Somalia(22).

Provision of counseling for mothers on the three rules of home treatment; give extra fluid, continue feeding and advise the mother when to return health facility is very crucial for the

control and the prevention of the disease (7). Children of mother who received counselingabout sick child feeding are more likely to feed sick child appropriately compared to children whose mothers did not get advice related to sick child feeding while she was pregnant for the index child or at any visit to health institution. These finding are consistent with those reported in Arbaminch zuria woreda.

As was revealed in study conducted in Arbaminch zuria woreda only 47 percent of the children below 1 year of children meet the minimal dietary frequency (7). This study found a positive association between sick child feeding practices and age of children. Children those who are less than 6 months of age were less likely to get appropriate child feeding during sickness than those who are older than one year of age(3).

Furthermore, this study found a positive association between non-working mother and sick child feeding practice. Mothers who were housewives were more likely to feed their sick child than those who have any work. Maternal working condition was one of the determining factor for child feeding practice, which can positively or negatively affect child feeding practices. This finding is consistent with study those reported in sidama Ethiopia (24).

A study conducted in Gujarat, India explainedpaternal educationrevealed a significant association with feeding when child is ill,the study explained that mothers of children whose fathers attended education practiced the international recommendation(17). This finding is not identified in this; the higher prevalence of respondents'spouses attended only primary education and mostly source of income for the house hold and involvement of fathers in home child care which may be lesser than that of India would have been a potential for inconsistency of the finding. The study conducted in Harrar Region explained income of the house hold determine timely introduction of food at the appropriate time, the study revealed that household with higher income practice to the international recommendation (19) . This finding is not identified in this study; the higher prevalence of respondents income generators were fathers attending only primary education which would have been a potential for inconsistency of the finding. Education of mother, being housewife, getting counselling related to sick baby feeding and children aged greater than 6 months of age were identified as predictor of sick baby feeding practice.

This study assessed mainly sick child feeding practice asking respondents how much food and fluid/breast milk to their child compared to when they are healthy retrospectively and the results of the study are also dependent on the report of mother there is no other way to check the consistency and recall bias would not have been eliminated. Standard tool was used to collect data.

Strength and limitation of the study

Strength

- The multiple factors considered in this study were analyzed using a stepwise logistic regression technique. This technique helps control for mediating and confoundingfactorsand also to identify the most important risk factors for proper intervention.
- The respondents were willing to for the interview because the issues being assessed were not sensitive.

Limitations

- Since the feeding practice of mothers was not scaled, some respondents may have been replying what they know rather than what they actually perform.
- Though the respondents were cooperative for the interview some of them were stressed with their child's illness and not relaxed to interact.
- This study is facility based and excludes children in the same age who were not sick while the study was conducted.
- Amount of meal given at a time and continuity of feeding after illness were not assessed.

6.1,CONCLUSION AND RECOMMENDATION

Conclusion

This study has shown that the proportion of sick child feeding practice is lower but the finding is higher compared to the prevalence of the previous study findings reported from other places. In consistent with other study findings, maternal education, maternal occupation, age of the child and sick baby feeding counselling were found to be significant socioeconomic determinants of sick baby feeding practice.Adherence to the recommended sick child feeding practice can be increased by imparting women's education, considering favourable condition to treat their children easily for mothers of young children those who are outside workers, providing guidelines for age specific child feedingand promoting the importance of infant and young child feeding counselling.

Recommendation

Even though these problems may be alleviated by sustainable socio-economic development through integrated effort of different sectors in the long run, recommendations are forwarded considering short-term solutions based on the findings of the study.

Governmental level

- Promotingwomen's education imparting health education on infants age appropriate feeding.

- Providing guidelines for age specific child feeding which explains child feeding health education by focusing on age distinctive feeding as they demand more frequent breast feeding when they are sick as other age group of children do.

- Mobilization of health professionals who will provide counselling on infant and young child feeding at any visit by promoting on job training of IYCF(infant and young child feeding will have better role in promoting sick child feeding practice. Provision of evidence based information regarding the effect of sick child feeding

and child health outcome may motivate health professionals to provide nutrition education regularly during ANC visit, delivery and any other visits.

- Mobilizing community to enhance sick child feeding practice using the existing one to five health system.

Facility level

- Providing safe environment for mothers who work out of their hometo bring their young child with them and see their children at their working set up so that mothers get their children and feed them/children more frequently when they are sick and any other time according to the recommendation

Researchers

- Further study, to identify factors affecting feeding infant and young children after illness in the area is recommended.

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Annexes

Annex: I Information sheet English version

Addis Ababa university school of nursing and midwifery, study on assessment of sick baby feeding practice among mothers of babies 0-24 months of age and associated factors in Burayu town.

Greeting:

Hello, My name is_____. I am here today to collect data on assessment of sick baby feeding practice among mothers of babies 0-24 months of age and associated factors. The study is being conducted by Hiwot Tadesse from Addis Ababa university school of nursing and midwifery .The objective of this study is to assess sick baby feeding practice and associated factors in Burayu town. I request you to take part in this study and to respond genuinely.

Your cooperation and willingness is greatly helpful in identifying problems related sick baby feeding practice in infants and young children. The study will be conducted through interviews and you are being asked for a little of your time, about 25 min, to help us in this study. Your name will not be written in this form and will never be used in connection with any information you tell us. There is no possible risk associated with participating in this study except the time spent for responding to the questionnaire. All information given by you will be kept strictly confidential. Your participation is voluntary and you are not obligated to answer any question you do not wish to answer. If you feel discomfort with the question, it is your right to drop it any time you want. If you have questions regarding this study or would like to be informed of the results after its completion, please feel free to contact the principal investigator.

Address of the principal investigator:
Hiwot Tadesse
Cell phone: +251 913480829 /E-mail: **hiwiyetade@gmail.com**
Are you willing to participate in this study?
1. Yes - …….. Continue to the next page
2. No- …… Skip to the next participant

Annex: II Information sheet Afan oromo version

Miiltoota

Miiltoo 1: Unka odeeffannoo

Yuniversiitii Finfinnee koolleejjii

Fayyaa gamtoomani kutaa barnootaa

Narsiingii fi midwaayifarii

Qu'annoo

Haadholeen daa'imman umriin isaanii ji'a 0-24 jiranii daa'imman dhukkubsatoo haala ittin soorani fi sababoota walqabatan magaalaa buraayyuu keessatti.

Fayyaa jirtuu:

Heloo: Maqaan kiyya _____

Jedhama kanin as dhufe qu'annoo armaan ollitti dheerame Irratti odeetfannoo funaanuuf dha.

Qu'annoon kan geggeeffamu Hiwoot Taaddasaa yuniversiitii finfinneetti kutaa barnoota fayyaa daa'immaniitiin barattuu digrii 2ffaa ti. Kaayyoon qu'annoo kanaa magaalaa buraayyuu keessatti barmaatilee haadholeen daa'immanii ittiin daa'imman dhukkubsatoo ittiin soorani fi sababoota sanaan walqabatan madaaluti dha. Qu'annoo kana irratti akka hirmaattani fi deebii dhugaa akka kennitanin isin gaafadha. Deggarsi fi hayyamamummaan keessan rakkoolee daa'imman xixiqqaa dhukkubsatoo barmaatilee sooruu tiin walqabatee adda baasuuf baayyee gargaara. Qo'annichi kan geggeeffamu jecha deebiitiin yommuu ta'u qu'annoo kana irratti nu gargaaruuf yeroo keessani irraa hanga daqiiqaa 25 akka naaf kennitanin isin gaafadha. Maqaan keessan unka kana irratti hin barreeffamu. Odeeffannoo

isin nuuf kennitaninis walqabatee tajaajilaaf hin oolu. Deebii deebisuuf yeroo fudhattaniin alatti qu'annoo kana keessatti hirmaachuu keessaniin rakkoon isin mudatu hinjiru. Odeeffannoon kennitan akka icitii cimaatti qabama. Hirmaannaan keessan hayyama keessaniin ta'ee gaaffii kamiyyu deebisuuf hin dirqi siisamtani. Gaaffiin kamiyyu yoo isinitti toluu dide yeroo kamittiyyu dhiisuu ni dandeessu. Waa'ee qu'annoo kanaa gaaffii yoo qabaattan yookin erga xumurameen booda bu'aa isaa odeeffannoo argachuu yoo barbaaddan qu'ataa muummee gaafachuu ni dandeessu.

Teessoo qu'attuu muummee

Hiwoot Taaddasaa

Lakk. Bilbilaa: +251913480829 / Imeelii: hiwiyetade@gmail.com

Qu'annoo kana keessatti hirmaachuuf hayyamamo dha?

1. Eyyen --- Gar fuula itti aanutti darbaa.
2. Miti --- Gara hirmaataa itti aanutti darbaa.

Annex : III Consent form English version

In signing this document, I am giving my consent to participate in the study titled ~~a~~assessment of sick baby feeding practice among mothers of babies 0-24 months of age and associated factors in burayu town, I have been informed that the purpose of this study is to assess sick baby feeding practice and its associated factors in 0-24 months babies. I have understood that participation in this studyis entirely voluntarily. I have been told that

my answers to the questions will not be given to anyone else and no reports of this study ever identify me in any way. I have also been informed that my participation or non-participation or my refusal to answer questions will have no effect on me. I understood that participation in this study does not involve risks.

I understood that Hiwot Tadesse is the contact person if I have questions about the study or about my rights as a study participant.

Respondent's signature_____

If no, skip to the next participant

Date of interview: _____ Time started: _____ Time finished: _____

Interviewer

Name_____Signature_____Date_____

Supervisor's name _____ signature _____

Results of interview questionnaire

1. Completed
2. Refused
3. Partially completed

Annex :IV consent form Afaan oromoo version

Miiltoo : Unka hayyamni ittiin kennamu

Yommuun unka kana mallatteessu qu'annoo mata duree;

Haadholeen daa'imman umriin isaanii ji'a 0-24 jiranii daa'imman dhukkubsatoo haala ittin soorani fi sababoota walqabatan magaalaa buraayyuu keessatti.

Jedhu irratti hirmaachuuf hayyamamaa ta'uu koon mirkaneessa.

Kaayyoon qu'annoo kanaa qorannoo barmaata

Haadholeen daa'imman umriin isaanii ji'a 0-24 jiranii daa'imman dhukkubsatoo haala ittin soorani fi sababoota walqabatan magaalaa buraayyuu keessatti

Akka ta'e odeeffannoo argadheera. Deebiin ani gaaffiiwwan kanaaf kennu nama garabiraatiif akka hin gabaafamne fi eenyumman koo bifa kamiinuu adda akka hinbaafamne natti himamee jira. Qo'annoo kana irratti hirmaachu fi dhiisuun, gaaffii kamiyyu deebisu fi deebisuu diduu kootiif wanti narratti qaqqabukan hinjirre ta'uun isaas natti himamee jira. Qo'annoo kana keessatti hirmaachuun koo rakkoo akka hinqabaannees hubadheen jira.

Waa'ee qo'annichaa irratti gaaffii yoon qabaadhe yookiin akka hirmaataa qo'annichaatti mirgan qabu irratti kanin qunnamuu qabu Hiwoot Taaddasaa ta'uu hubadheen jira.

Mallattoo hirmaataa _____

Yoo hinjiraanne gara hirmaataa itti aanuutti darbaa.

Guyyaa gaaffii jechaa_____

Mallattoo _____ guyaa_____

Maqaa suppervaayizerii_____

Mallattoo _____

Bu'aa gaaffii jechaa

1. Guutameera
2. Didameera
3. Hiraan isaa guutameera

Annex V: Questionnaire English version

PART I. Socio-demographic characteristics of mothers with their index child (age less than 24 months)

No	Question	Response	
101	Mother's age (in years)	_____Years	
102	Marital status	1. Married 2. Single 3. Divorced 4. widowed	
103	What is your religion?	1. Orthodox 2. Muslim 3. Catholic 4. Protestant 5. Others(specify)_____	
104	Ethnicity	1.Oromo 1. Amhara 2. Tigre 3.Gurage 4.wolaita 5.Others specify)_____	
105	Maternal education	1. No education 2. Primary 3.Secondary and higher	
106	Occupation of mother	Housewife 2. Government employee 3. Business woman 4. Private Organization	

		5. Daily labor	
107	Paternal education	1. No education 2. Primary 3. Secondary and higher	
108	Age of the child	……	
109	Sex of the child	……	
110	Do have: A radio A TV Do you read magazines, news or books	 1. Yes 2. No 1. Yes 2. No 1. Yes 2. No	
111	Monthly income of the household	1. <=500 2. 501-1000 3. 1001-1500 4. 1501-2000 5. 2000&above 6. Don't Know	
112	How many children do you have	_____ number	
113	Birth order	_____th	
114	Birth interval between the youngest and his/her immediate elder	1. this is my first 2. _____years	
PART II. Maternal health related factors			
201	Did you visit health	1. Yes 2. No	If no skip

	facility for ANC during your recent pregnancy		to 205
202	Which facility did you get ANC service	1 Health post 2. Public Health Center 3. Public hospital 4. Private clinic 5. private Hospital 6 Other	
203	How many times did you receive (number of antenatal care) during your time of pregnancy for this child?	1. 1-2 2. 3-4 3. >4 4. Don't know	
204	Did you get health education on Infant and young child feeding at any of your visit?	1. Yes 2. No	If no skip to 206
205	What was the information that you acquired during your visit(more than one answer is possible	1.Continue breast feeding even during maternal or child illness 2. Breast feeding should be initiated within one hour 3. Prelacteal feeds should not be given 4. EBF should be practiced	

		for the first six months 5, complementary feeding has to be started after six months 6, feeding has to be more frequent during illness 7,feeding has to be continued after illness 8. Breast feeding should continue until 2 years 6.Other (specify)_____	`
206	Where did you gave birth to this child/Place of delivery	1. Home 2. Hospital 3. HC 4. Other (specify)___	
207	Who help you during delivery?	1. TBA 2. Health extension worker 3. Health professional 4. Relatives 5. Other (specify)_____	
208	Did you receive advice/ information on Breast feeding at Postnatal	1. Yes 2. No	

	care		
209	Why do you bring your child to health center?	1,cough and difficulty of breathing 2,diarrhea 3,fever 4,ear problem	
210	How long since the child got this symptom	1. One day 2. Last two days 3. Last three days 4. Four plus days	

PART III. Feeding practice of infant and young children			
301	Have you ever breast fed the child?	1. Yes 2. No	If yes, skip to 303
302	If no, reason for not breastfeeding? (More than one answer is possible	1. Breastfeeding takes too much time. 2. Breastfeeding means you can't go back to work or school. 3. Breastfeeding will make my breasts sag 4. Breastfeeding is painful 5. My breasts are too small to breastfeed 6. With bottle feeding, the mother knows that the baby is getting enough to eat. 7. Other(specify)_____	
303	Was the child breastfed duringday or at night?	1. Yes 2. No	
304	How many times did you breast feed your childin the last 24	_____ times	

	hours?		
305	Did you give the child additional food or fluid other than breast milk in the past 24 hours	1. Yes 2. No	If no skip to 307
306	What ingredients did you gave?	1. 1. None other than breast milk 2. Grains, roots, tubers (injera, bread, porridge, sweet potatoes, etc) 3. Dairy products (milk, etc) 4. Flesh foods (meat, fish, poultry) 5. fruits 6. vegetables 7. Other (specify)_____	
308	What was the reason for giving additional diet?	1. age >6months 2. mothers felt breast milk alone was insufficient 3. mother was sick 4. child was sick 5. Mother left home for work 6.other(specify)_____	
309	How do you breastfeed?	1. on demand 2. when child cries 3. on schedule 4. on convenience	
310	Why was the child not breastfeed	1. weaned 2.maternal illness 3. breast problem 4.others (specify)_____	
PART IV. Feeding practice of infant and young children during illness			

401	At what age did you introduce any form of food or liquid other than breast milk to this child (including water)?	_____months	
402	Does [the CHILD] take any food or drink other than breast milk in the past 24 hours?	1. Yes 2.No	If yes,
403	How many times was [NAME OF CHILD] fed mashed or pureed food or solid or semi-solid food as a meal or a snack since this time yesterday?	Number of times……	
404	Whatliquids was this child given yesterday during the day and night?	1. None other than breast milk 2. Vitamin drops or medicines as drops 3. ORS 4. Plain water 5. Infant formula (add local brand) 6. Milk (tinned, powdered, or fresh animal milk) 7. Other water based liquids 8. Thin porridge 9. Other specify	Skip to Q406 if answer is 1
405	What foodswere given to the child yesterday during the day and night? (*Tick as many options as are mentioned by the respondent*)	1.None other than breast milk 2.Grains, roots, tubers (injera, bread, porridge, sweet potatoes, etc) 3.Dairy products (milk, etc) 4.Flesh foods (meat, fish, poultry)	

		5.fruits 6. vegetables	
406	Has the child been fed with bottle in the past 24 hours?	1-Yes 2-No	
407	Since this time yesterday, how many times did the child eat food other than liquid? (put number)	_____times	
408	How much liquiddo you give this child to drink when he/she is sick compared towhen s/he is healthy?	1. Nothing to drink 2. Much less than normal 3. Somewhat less 4. About the same 5. More than usual	
409	How much fooddo you give this child to eat when he/she issick compared towhen s/he is healthy?	1. Never given food 2. Much less than normal 3. Somewhat less 4. About the same 5. More than usual	If your answer is,1,2,3,4 skip next question
410	Why you give such amount? Can answer more than one	1.The child is sick to consume 2.The child is no willing 3.feeding too much is not good for sick child 4.I cannot afford to prepare more and variety.	If409 Answer is,5
411	Why you give more than the usual?	1.To promote health of child by giving more food 2. To prevent harm of the disease to the child. 3. to compensate lost weight during illness	

PART V. **Information on Sick baby feeding**			
501	Did you hear any information about infant feeding during illness ;	1,yes 2,No	**If yes**
502	What was the information you heard about feeding during illness?	1,Increase feeding 2,Decrease feeding	
503	From where did you hear this information	1,Health professionals during ANC(IYCF counselling) 2,Health extension workers 3,television 4,Radio 5,others	

Annex: VI Questionnaire Afaan oromo version

Miiltoo:

Kutaa 1: Haala Hawaasummaa haadholee daa'imman umuriin isaanii ji'a 24 gadii

	Gaaffilee	Deebii	
101	Umrii haadhaa(Wagga dhaan)	Waggaa_____	
	Haala gaa'elaa	1. Heerumtuu 2. Hineerumne 3. gursummaa 4. Abbaan manaa kan irra du'e	
103	Amantaan ke maali?	1. Ortodooksii 2. Musiliima	

		3. Kaatolikii 4. Piroteestaantii 5. Kan biro ibsaa___	
104	Qomoon	1. Oromoo 2. Amaara 3. Tigree 4. Guraagee 5. Walaayittaa 6. Kanbiroo ibsaa_____	
105	Barnoota haadhaa	1. Hinbaranne 2. Sadarkaa jalqabaa 3. Sadarkaa lammaffaa fi olaanaa	
106	Hojii haadhaa	1. Haadha manaa 2. Hojjettuu mootummaa 3. Daldaltuu 4. Dhaabbata dhuunfaa 5. Hojjettuu guyyaa	
107	Barnoota abbaa	1.Hinbaranne 2.Sadarkaa jalqabaa 3.Sadarkaa lammaffaa fi olaanaa	
108	Umrii daa'imaa(ji'aan)	…….	
109	Saala daa'imaa	…….	
110	Kanneen qabduu; Raadiyoo Televizhiinii Gaazexaaa,kitaabolee dubbistuu yokiin oduu dhageeffattuu?	 1.Eeyyen 2.Miti 1.Eeyyen 2.Miti 1.Eeyyen 2.Miti	

111	Galiin keessan ji'aan hagam ta'a?	1. <=500 2. 501-1000 3. 1001-1500 4. 1501-2000 5. 2000 fi sanaa olii hinbeeku	
112	Ijoollee meeqa qabdu?	lakkofsaan_____	
113	Daa'imni kun meeqaffaadha?	……fffaaa	
114	Isaa fi angafa isaa gidduu meeqatu jira	1. Kan jalqabaakooti 2. waggaa_____	
Kutaa II. Sababoota fayyaa haadhatiin walqabatan			
201	Yeroo ulfa kee isa boodanaa wallaansa da'umsa duraa tiif dhaabbata fayyaa deemtee turtee	1. eyyeen 2. Miti	
202	Tajaajila da'umsa duraa dhaabbata fayyaa isa kamtu siif kenne	1. buufata fayyaa 2. Wiirtuu Fayyaa kan mootummaa 3. Hospitaala mootummaa 4. Kilinika dhuunfaa 5. Hospitaal dhuunfaa 6. Kan biroo	
203	Si'a meeqa tajaajila argattanii jirtu(Yommuu mucaa kana ulfa turtani si'a meeqa wallaansa da'umsa duraa argattani0 ?	1. 1-2 2. 3-4 3. >4 4. Hinbeeku	
204	Yommuu wallaansaaf deemtanitti waa'ee soorrata daa'imman reefuu dhalatanii fi daa'imman xixiqqoo	1. Eyyen 2. Miti	

	irratti barnoota argattaniittuu?		
205	Yommuu mana yalaa deemtan odeeffannoon argattan maal ture(deebiin tokkoo oli nidanda'ama).	1. Yommuu haati ykn daa'imni dhukkubsatuyyu harma hoosisuu itti fufuu 2. Harma hoosisuun sa'a tokko keessatti jalqabsiifamuu qaba 3. Harma hoosisuun dura nyaanni kennamuu hinqabu 4. Ji'oota ja'an jalqabaatiif EBFn shaakalamuu qaba 5. Nyaanni dabalataa ji'a ja'aan booda jalqabamuu qaba 6. Yommuu dhukkubaa nyaati dafee dafee nyaatamuu qaba 7. Dhukkubaan booda nyaanni iti fufuu qaba 8. Harma hoosisuun waggaa lamaan booda itti fufuu qaba 9. Kan biroon yoo jiraate ibsaa_____	
206	Daa'ima kana eessatti deechan/ bakka da'umsaa	1. Mana 2. Hospitaala 2. HC 4. Kanbiroo ibsaa_____	
207	Yommuu da'umsaa eenyutu isin gargaare?	1. Deessiistuu aadaa 2. Hojjettuu eksteenshinii	

		fayyaa 3. Ogeessa fayyaa 4. Firoota 5. Kanbiroo ibsaa_____	
208	Wallaansa da'umsa booddee irratti gorsa/ odeeffannoo harma hoosisuu argattanii jirtuu?	1. Eyyen 2. Miti	
209	Daa'ima keessan maaliif gara buufata fayyaatti fiddani?	1. Qufaasisuu fi rakkoo afurfachuu 2. Dhukkuba teessisaa 3. Dhaqna gubaa 4. Rakkoo gurraa	
210	Mallattoon akkanaa erga irratti mulachuu jalqabee hangame ta'eera?	1. Guyyaa tokko 2. Guyyoota lamaan darban 3. Guyyoota sadan darban 4. Guyyoota afurii olii	
Kutaa III. Akkaataa Yommuu daa'imman reef dhalatani fi daa'imman xixiqqaa dhukkubsatan ittiin sooraman			
301	Daa'ima keessan harma hoosistanii beektuu?	1. Eyyen 2. Miti	Yoo eeyye jettan gara gaaffii 303tti darba
302	Deebiin keessan miti kan jedhu yoo ta'e sababii maalitiin harma hinhoosisne?(deebii tokkoo oliin ni danda'ama)	1.Harma hoosisuun yeroo dheeraa fudhata 2. harma hoosisuu jechuun deebitee gara mana barumsaatti deebi'uun hindanda'amu. 3. Harma hoosisuun harmi koo akka laafu taasisa 4. Harma hoosisuun nama	

		dhukkubsa 5. harmi ko hoosisudhaaf baayyee xiqqoo dha. 6. Xuuxxodhaan hoosisun nyaata gahaa akka argatu taasisa 7. kan biroon yoojiraate ibsaa.	
303	Mucaa guyyas halkanis harma hoosistuu?	1. Eyyen 2. Miti	
304	Sa'a 24 keessatti daa'ima keessan si'a meeqa harma hoosistu?	Si'a_____	
305	Daa'ima keessaniif sa'a 24 darbe keessatti harma irratti nyaata dabalataa ykn dhangala'aa kennitanittuu?	1. Eyyen 2. Miti	Yoo miti jettan gara gaaffii 307tti darbaa
306	Maal mal kennitaniif?	1. Harmarrakan hafe hoomaa 2. Midhaan nyaataa, hidda(biddeena, daabboo, marqaa, shukkar dinichii kkf0 3. Aannani fi bu'aa aannanii 4. Nyaatota foonii(foon, qurxummii fi handaaqqoo) 5. Fuduraa 6. Kuduraa 7. Kan biro ibsaa_____	

308	Nyaata dabalataa laachuuf sababni maalidha.	1. Umrii>ji'a ja'a 2. Haati harmi qofaan nyaata gahaa akka hintaane itti dhagahama 3. Haati dhukkubsattee turte 4. Daa'imni dhukkubsattee turte 5. Haati hojiif manaa deemtee turte 6. Kanbiroo ibsaa _____	
309	Akkamiin harma hoosistu?	1. Yommuu barbaadu 2. Yommuu boossu 3. Sagantadhaan 4. Yommuu mijatu	
310	Daa'imni maaliif harma hinoone?	1. Aannan kabiroo dhugdi 2. Haati dhukkubsatte 3. Rakkoo harmaa 4. Kanbiroo ibsaa_____	
PART IV. **Barmaatilee daa'imman dhukkubsatan sooruu**			
401	Daa'ma kana nyaata yookiin dhangala'aa harma haadhaan alatti(bishaan illee) kan jaqabsiiftan umurii kamitti? Yoo umurii ji'a tokko isaa/ishee dura ta'ee mallatto kana kaahaa,00	Ji'a……	
402	Daa'imni kun (maqaa) nyaata yokiin dhangala'aa,aannan harmaa	1.Eeyyee 2.Miti	Yoo eeyye jettan

	irratti dabalata sa'aatii 24 darban keessatti fudhate/ttee jiraa jirtii?		
403	Kaleessa yeroo kanaa kaasee hanga yoonaa daa'imni nyaata, daakkamee(bullaa'ee) mana keessatti qophaa'e si'a meeqa nyaate?	Si'a……	
404	Daa'ima kanaaf kaleessa guyyaa fi galgala dhangala'aa gosa kamii tu kennameef?	1. Harmaan ala hoomaa 2. Vitaamina ykn qoricha cobsaa 3. ORS 4. Bishaan qofa 5. Infaant foormulaa(kan biyya keessaa) 6. Aannan qalloo, daakuu, aannan ho'aa) 7. Dhangala'aa bishaaniin walmake) 8. Marqa qallaa 9. Kanbiroo ibsaa	Yoo deebiin 1 ta'e 406 tti darbaa
405	Kaleessa yeroo kanaa kaasee hanga yoonaa daa'imni nyaata dhangala'aan ala si'a meeqa nyaate?	1.Harma haadhaa ala homaa 2.Gosa midhaan garaa garaa,dheedhii (buddeen,daabboo,marqaa, maxaaxisaa, etc) 3.Bu'lee aannanii(baaduu,dhadhaa) 4.foon (foon horii, qurxummii, lukkuu)	

		5.muduraa 6.kuduraa	
406	Sa'a darban 24 keessatti mucaan xuuxxoo tiin dhugee jiraa?	1. Eyyen 2. Miti	
407	Kaleessa yeroo kanaa kaasee hanga yoonaa daa'imni nyaata dhangala'aan ala si'a meeqa nyaate?	Si'a……	
408	Yommuu mucaan dhukkubabsatudaa'imaaf dhangala'aa/nyaata/harmahaadhaa yeroo fayyaaisaarraahangami kennituuf?	1. Waan dhugamu hoomaa 2. Idilee irraa gadii 3. Hanga ta'e gadi bu'aa 4. Walqixa 5. Kan baramen olii 6. Daa'imni dhukkubsatee hinbeeku Kanbiroon yo jirate ibsa_____	
409	Yommuu mucaan dhukkubabsatu daa'imaaf dhangala'aa/nyaata/harmahaadhaa yeroo fayyaaisaarraa hangami kennituuf?	1. Waan dhugamu hoomaa 2. Idilee irraa gadii 3. Hanga ta'e gadi bu'aa 4. Walqixa 5. Kan baramen olii	Yoo deebiin keessan 1-4 ta'e isa ittiaanutti ce'aa.
410	Hanga kana maaliif kennitu? Deebii tokkoo olii kennuu dandeessu	1. Nyaachuuf daa'imni dhukubsataa dha 2. Daa'imni fedha hin qabu 3. Daa'ima dhukkubuuf baayyee nyaachuun gaarii	Yoo deebiin 409 5 ta'e

		miti 4. Sanaa olii fi wanta adda addaa qopheessuuf humna hinqabu	
411	Kan idleetiin olii maaliif kennitu?	1. Nyaata baayyee kennudhaan fayyumaa mucaa jabeessuuf 2. Dhukkubni akka mucaa hinmiinee dhowwuudhaf 3. Yeroo dhukkubaa ulfina hirrate bakka buusudhaaf	
Kutaa V : **Odeeffannoo Daa'ima dhukkubsataa sooruu**			
501	Odeeffannoo akkataa ittiin daa'imni yeroo dhukkubsatu sooramu irratti odeeffannoo qabduu?	1. Eyyen 2. miti	
502	Yeroo dhukkubu waa'ee sooruu irratti odeeffannoo argattan maali?	1. Yeroo dhukkubaa dabalanii(caala) nyaachisuu 2. Yeroo dhukkubaa hir'isanii(kanduratii gadi) nyaachisuu .	
503	Odeeffannoo kana eessaa dhageessani?	1. Yommuu wallansa da'umsa duraa ogeessa fayyaa irraa(Gorsa YCF) 2. Hojjettoota Eksteenshinii Fayyaa 3. Televiizyinii 4. Raadiyoo 5. kanbiroo	

Annex: VII Assurance of principal investigator Declaration

I the undersigned, declare that this MSc thesis is my original work and it has not been presented for a degree in this or any other university. All source materials used for the thesis have been fully acknowledged.

Investigator: Hiwot Tadesse (BSC)

Signature: _____ Date of submission: _____

This thesis has been submitted for examination with my approval as university advisor

Advisor: Fekadu Aga (RN, BSc, MSc., Asst prof)

Signature: _____ Date: _____