



**ADDIS ABABA UNIVERSITY COLLEGE OF HEALTH SCIENCE DEPARTMENT
OF EMERGENCY MEDICINE AND CRITICAL CARE**

HEALTH FACILITIES BASED CROSS SECTIONAL STUDY ON PREVALENCE AND
ASSOCIATED FACTORS OF DIARRHEAL MORBIDITY AMONG UNDER-FIVE
CHILDREN IN ARMED FORCES TEACHING AND REFERRAL HOSPITAL, SIGNAL
AND GOFA HEALTH CENTERS ADDIS ABABA

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TABLE OF CONTENT

Contents	Page
Acknowledgements-----	I
Table of contents-----	II
ABBREVIATION.....	V
ABSTRACT	VI
1. INTRODUCTION	1
1.1. Background.....	1
1.2 Statement of the problem	2
1.3. Rationale/Significance of the study	3
2. LITERATURE REVIEW	4
3. OBJECTIVE.....	7
General objective.....	7
Specific objectives.....	7
4. METHODS.....	8
4.1. Study area and period	8
4.2. Study design.....	8
4.3. Study population.....	8
4.4. The source population	8
4.5. Sample Size determination	9
4.6. Sampling procedure.....	10
4.7. Measurement	10
4.8. Study variables	10
4.9. Data Quality.....	11
4.10. Data Analysis	Error! Bookmark not defined.
5. Operational Definitions.....	12
6. Ethical issues.....	12
1. ANNEX . Conceptual framework.....	28
2. ANNEX2 .QUESTIONNAIRE	29
English version of the questionnaire	29
Amharic version of the questionnaire	39

Abbreviation

AAU	Addis Ababa University
AFRTH	Armed Force Referral and Teaching Hospital
BSC	Bachelor of Science certificate
EDHS	Ethiopian Demographic and Health Survey
SNNPR	Southern Nations Nationalities and Peoples Region
SPSS	Statistical Package for Social Sciences
UNICEF	United Nations Children Emergency Fund
WHO	World Health Organization
SNNP	Southern Nations Nationalities and Peoples

Abstract

Diarrhea remains a major cause of mortality in children under 5 years of age in Sub-Saharan countries in Africa. The objective of this study was to assess the prevalence of diarrhea and associated factors among children under 5 years of age in ARFTH, Gofa and Signal health center of ministry of defense Addis Ababa, Ethiopia. A Health facility-based cross-sectional study was conducted among 348 children under 5 years of age but the sample size calculated was 439, due to the limited duration from April 1 to April 30/2014 and non respondents, only 348 mothers were participated in the study. A questionnaire was used for collecting information on socio-economic characteristics, environmental hygiene and behavioral practices, and occurrence of diarrhea among children under 5 years of age. **Result:** the four-week prevalence of diarrhea among children under 5 years of age was 29.8%. Family income (OR = 2.065, 95% CI: 1.205-3.533), Dipping water user (OR = 34.850, 95% CI: 17.996-67.489), Number of rooms (OR = 2.805, 95% CI: 1.693-4.649), and Shared Latrine (OR = 5.024, 95% CI: 2.997-8.422) were the major risk factors for diarrhea. This study demonstrated that diarrhea morbidity was relatively high among children under 5 years of age seen in Armed Forces Referral and Teaching Hospital, Signal health center and Gofa health center. Efforts to reduce childhood diarrhea should focus on improving household sanitation, ensure availability of private toilet facility and increasing number of rooms, construction of private toilet and avoid unsafe utilization of water.

Methods; Proportional Quota sampling method based on number of patients and level of service used to obtain the study subjects from Armed Forces Referral and Teaching Hospital and Gofa, Signal health center.

1. Introduction

1.1. Background

Diarrheal diseases are the leading cause of preventable death, especially among under-five children in developing countries. Diarrhea is defined as a child with loose or watery stool for three or more times. The frequency and severity of diarrhea is aggravated by lack of access to sufficient clean water and sanitary disposal of human waste, inadequate feeding and washing practice; poor housing conditions and lack of access to adequate and affordable health care(1). The burden is disproportionately high among children in low and middle-income countries. Young children are especially vulnerable to diarrheal disease and a high proportion of the deaths occur in the first 2 years of life. Worldwide, the majority of deaths related to diarrhea take place in Africa and South Asia. In Africa diarrhea is the largest cause of death under 5 years children and a major cause of childhood illness.(14-17).Diarrheal disease is the most common cause of illness(8),and the second, next to respiratory infection, leading cause of under five child death in the world (9). worldwide diarrhea causes approximately 4billion morbidity and 2.2 million deaths per year. Of these death 1.7million are under-five children.(10)In developing countries particularly in under-five children 5-8million death occurs per year. (18) There is a general agreement that the cause of childhood morbidity in developing countries is multi factorial, the child survival depends on the interaction of the socio economic, biological, behavioral and environmental factors, Hence, it is very important to see the relationship and interactions of these factors to understand child survival(2). According to WHO, diarrhea disease causes more than 3million death in 1995 G.C,80%of

them being children of under-five of all diarrhea disease half are due to acute watery diarrhea, 35% of which due to persistent diarrhea and 15% due to dysentery. Primary Cause of death in acute diarrhea is dehydration and loss of fluid & electrolyte. (3) Diarrhea disease makes every demand on health facilities and national health budget in developing countries. Almost 30% of persons seeking treatment are estimated, suffering from diarrhea illness. (3). In Ethiopia some of the factors associated with diarrhea in children such as , obtaining water from storage container by dipping, availability of latrine facilities, living in a house with fewer number of rooms, have been identified, diarrhea is still a major public health problem among children under 5 years old. (42) According to Ethiopian Demographic and Health survey 2011 the prevalence of diarrhea among under-five children was estimated to be 13% in Ethiopia The study would be helpful in planning and implementation of prevention strategies at the community level. Thus, the objective of this study was to assess the prevalence of diarrhea and associated factors among under five children in Army hospital.

1.2 Statement of the problem

Diarrheal disease is the most common cause of death, next to respiratory infection, in the world (9) . A study from sub Saharan Africa and Asian countries demonstrated that diarrhea was the most principal cause of child death (39). A study conducted by Ethiopian Demographic Health Survey 2011 shows that prevalence of diarrhea is 13 percent among under five. were reported to have had diarrhea, and 3 percent had diarrhea with blood in the two-week period before the survey. Diarrhea was most common among children age 6–23 months (23-25 percent). Diarrhea prevalence is highest among children residing in households that drink from unprotected wells (18 percent), those residing in

rural areas (14 percent), and children residing in Benishangul-Gumuz and Gambela (both 23 percent). A study conducted in West Gojam Zone, Ethiopia; indicate that diarrheal morbidity was an independent predictor of stunting for children of under-five years (40). There is significant number of patients coming to Armed Forces Referral and Teaching Hospital (AFRTH) and Gofa and signal military health center with diarrhea complaints.

1.3. Rationale/Significance of the study

Decreasing mortality of under-five children by two-thirds is one of the millennium development goals set by United Nations (13). We like to conduct the study because there is significant number of patients coming to Armed Forces Referral and Teaching Hospital (AFRTH) and Gofa and signal military health center with diarrhea complaints, on the other hand This study will serve as a baseline information for further health oriented action that could be taken. It believe that the study may help to indicate prevalence and associated factors of diarrhea disease, to give clue for the prevention of the diseases and to give information for those who are interested for further study.

2. LITERATURE REVIEW

Diarrhea remains one of the leading cause of morbidity and mortality in children Worldwide, causing 1 billion episodes of illnesses out of 3-5 million deaths annually.(4) In developing countries, morbidity and mortality associated with childhood diarrhea still a challenge. A ten-year review of the global problem of diarrheal disease shown that there are 1000 million episodes and 3 million deaths occurring each year among under-five. (5) A comprehensive analysis of 73 studies from 23 Sub-Saharan African countries showed that children under five years of age experience about five episodes of diarrhea each year. The analysis also showed that prevalence of childhood diarrhea ranged from 10.5 to 19 percent (6). In their study on the determinants of childhood diarrhea in the Republic of Congo, Mock et al found a two-week period prevalence of 18.6 percent in children under-three years of age (11). In rural Zaire, a longitudinal study done on children aged 3-35 months showed annual incidence of 6.3 episodes per child (12). In Addition diarrhea affects children by exposing them to malnutrition .Evidence from Numerous studies on under five children in developing countries suggests that diarrhea episode predispose to malnutrition(20,23,26.27).

In Ethiopia, as in other developing countries, diarrhea disease is one of child health problems. The recent Ethiopian Demographic Health Survey of 2011 reported that the prevalence of diarrhea in under five children was 13 percent. Other studies done in different parts of Ethiopia have also showed that incidence and prevalence of diarrhea is very high among under five children. A study conducted in keffa-sheak zone, southern Ethiopia, found child hood diarrhea prevalence was 15 percent.(28) Other studies done in different parts of Ethiopia have also shown that diarrhea incidence and prevalence is very

high among under-five children. According to a follow-up study in Butajira, the incidence of diarrhea was about two-episodes/person-year. (29)

The factors that potentially determine the occurrence of diarrhea in children include Malnutrition, poor personal hygiene, environmental problems, water availability and quality ,un hygienic feeding practice, improper use of Latrine ,early discontinuation of breast feeding, household income and maternal education.(22,30) For Example, educational level and water quality are both associated with diarrheal disease, However ,water has direct effect on the child exposure to pathogen, but education level has indirect effects and influence on the mothers child care practice.(21,22,23)

Diarrhea morbidity and socioeconomic Factors

Socioeconomic position is a resources-based concept that refers to holding of assets, the income there yield ,and the consumption that such income permits.(32) Well educated mothers their Knowledge and wealth may allow them to use child health care service more effectively than uneducated women.(33)Several study on determinant of child health reveled the child survival in developing country is highly associated with maternal education(31,36,37,38) The association between family income and childhood diarrhea is observed in many studies(2,13,21).A study done in urban area of south west Ethiopia also showed that family income was significantly associated with child hood diarrheal morbidity(7) When many live together, the chance of contact with pathogens increases(2,13,16) .A large number of children in household may more likely of having diarrhea because of crowding.(19)

Diarrhea morbidity and Environmental factor

The relationship between environmental factors and the occurrence of diarrhea in children has been addressed in various studies. Environmental factors including water quantity and quality, availability of toilet facilities, compound hygiene, housing condition, and refuse disposal most Environmental factors usually associated with socioeconomic status, and place of residence. (19,21,23) Poor environmental situation is a major risk factor for diarrheal disease in children exposed to contaminated environment (21).

Diarrhea morbidity and Behavioral factors

Human behavior and beliefs are component of the epidemiologic model of Host-Agent-Environment, this true also for diarrheal disease. (34) Exposure to diarrheal causing organisms may be affected by behavior patterns common to population such as defecation habits and personal hygiene; and by pattern of food preparation, storage and consumption (34,35).

3. OBJECTIVE

General objective

- To assess the prevalence and associated factors of diarrheal disease in under-five children in Armed Forces Referral and Teaching Hospital and Gofa, Signal health centers.

Specific objectives

1. To determine the prevalence of diarrhea disease among under-five children.
2. To identify the associated factors of diarrhea disease among under-five children.

4. Methods

4.1. Study area and period

There are nine military health facilities found in Addis Ababa ,giving medical services for army members and their families. Among these Armed Forces Referral and Teaching Hospital, Signal health center and Gofa health center are selected. Since the majority of mother and children are coming in these health facilities. The study conducted from April1 to April 30, 2014G.C

4.2. Study design

Study designs were institutional based cross-sectional survey to assess prevalence and associated factors of diarrhea disease amongunder five children.

Inclusion Criteria; are all under five children who came to the three health institution during the study period.

Exclusion criteria; children above five years

4.3. Study population

The study population will be under-five children coming in AFRTH ,Gofa and Signal health center, coming with complaints of diarrhea.

4.4. The source population

The source population for this study isall under-five children in Addis Ababa

4.5. Sample Size determination

The sample size was determined by using single proportion formula by considering 22.5% prevalence of diarrhea under-five children obtained from Bezatu M, Yemane B., Alemayew W

“Prevalence of diarrheal and associated risk factors among children under-five years of age in

Easter Ethiopia; Across-sectional study, Open Journal of preventive medicine, Vol.3, no7,446-453(2013). And 95% of confidence interval and 4% of marginal error which is

The formula used to calculate the sample size is:

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

Where:-

- n-sample size`
- $Z_{\alpha/2}$ -95% confidence interval equal to 1.96
- P-estimation of the population proportion 22.5% (42) .
- W-margin of error = 4%,
- $n = \frac{(1.96)^2(0.225)(1-0.225)}{(0.04)^2} = 418$

5% contingency for non-respondent, total sample become 439.

4.6. Sampling procedure

Proportional Quota sampling method used based on number of patients and level of service to obtain the study subjects from Armed Forces Referral and Teaching Hospital and Gofa, Signal health center.

4.7. Measurement

Data collection Technique

Data collected from the study population using structured questionnaire. The questionnaire will be developed in English and translated to Amharic Language. Three BSC Nurses have been trained on how to collect the data.

4.8. Study variables

- Out Come(Dependent) variables:-The occurrence of any episode of diarrhea in a child at the time of the survey.
- Independent variable
 - ✓ sex of child
 - ✓ Age of child
 - ✓ Age of mother/care taker
 - ✓ Education of mother/care taker
 - ✓ Ethnicity
 - ✓ Occupation
 - ✓ Marital status
 - ✓ Religion
 - ✓ Availability of latrine,

- ✓ Number of rooms,
- ✓ Refuse disposal.
- ✓ Feeding practices, duration of breast-feeding, time of introducing
- ✓ Supplementary feeding.

4.9. Data Quality

The questionnaire is developed after reviewing relevant literatures to the subject include all the possible variables that address the objective of the study. The questionnaire is first prepared in English and then will be translated to Amharic and back translated to English to maintain the consistency of the contents of the instrument. .

Data quality control

There are points at which quality of data may be affected unless measures are taken at these points. These points are questionnaire designing, data collection and data **entry**.

4.10. Data processing and Analysis

- Data Processing:- SPSS (Statistical Package for Social Sciences) version 20 was use for the data entry , and cleared and edited. The data presented by graphs, tables and percentage .
- Data Analysis Procedure:- first descriptive analysis was done and then bivariate analysis was done using cross tabs. Besides, logistic regression was conducted to see the factors.

5. Operational Definitions

1. Diarrhea: is defined as having three or more loose or watery stools as reported by the mother/caretaker of the child. Diarrhea in New born breastfed infant frequency of stool normally more than 6/day, in formula fed new born have true diarrhea if stool abruptly increase in number and looseness become watery or contain mucus or blood.
2. Refuse: includes such solid wastes such as , cow dung, home-sweepings; but no human excreta.
3. A child who was receiving no food, solid or liquid, other than breast milk at the time of the survey was considered as exclusively breast-fed .
4. Partial breast-feeding: a child who was receiving food, solid or liquid, in addition to breast milk at the time of the survey.
5. No breast-feeding: a child who was not receiving breast milk at the time of the survey. The child may eat food/liquid that was prepared for adults or prepared separately for him/he

6. Ethical issues

Ethical clearance obtained from Addis Ababa University Department of Emergency medicine ethical clearance committee and permission obtained from minister of defense health directorate, beside letter of recommendation obtained from the bureau of Teaching and Training directorate in order to facilitate cooperation of institutions where the research is conducted.

After explaining confidentiality, the objective and importance of the outcomes of the research to participants, verbal consent in the research requested, the subject agreed he/she had enrolled in the study. Names did not written in the questionnaires and information obtained are anonymous and the collected data are locked in a cabinet where only the investigators could access.

7. RESULTS

Result 1. Prevalence

- Total of 348 pediatric patients were enrolled in this study.
- In this study Prevalence of diarrhea among children under-five years of age was 29.8 %.

Result 2. Factors

7.1. Socio-economic Characteristic

7.1.1. Distribution of study subjects

The distribution of study subjects selected socio-demographic characteristics are presented in this section.

One hundred eighty one were (52%) male children and 167(48%) were females.

Three hundred three (87.3%) children's born to mothers age 18-34. whereas, 45(12.7%) were born to mothers of age above 35 years.

Regarding education of mother/caretaker, Illiterate 55 (15.8%), read and write 232 (66.7%) elementary completed 60 (17.2%) high school completed 1(0.3%) .Religiously, 224 (64.4%) were Orthodox Christian, 83 (23.9%) Muslim and 41 (11.8%) Protestant Christians. Ethnically, Amhara 103 (29.6%) Tigray 123 (35.4) Oromo 88(25.3%) SNNP 34 (9.8) Concerning income of the family 86 (25.4%) a family whose average monthly income was below 1000 Birr; 240(71%) monthly income was from 1000-2000 Birr and 12 (4%) Monthly income was greater than 2000.

Table 1 Distribution of study subjects by socio-demographic characteristics.

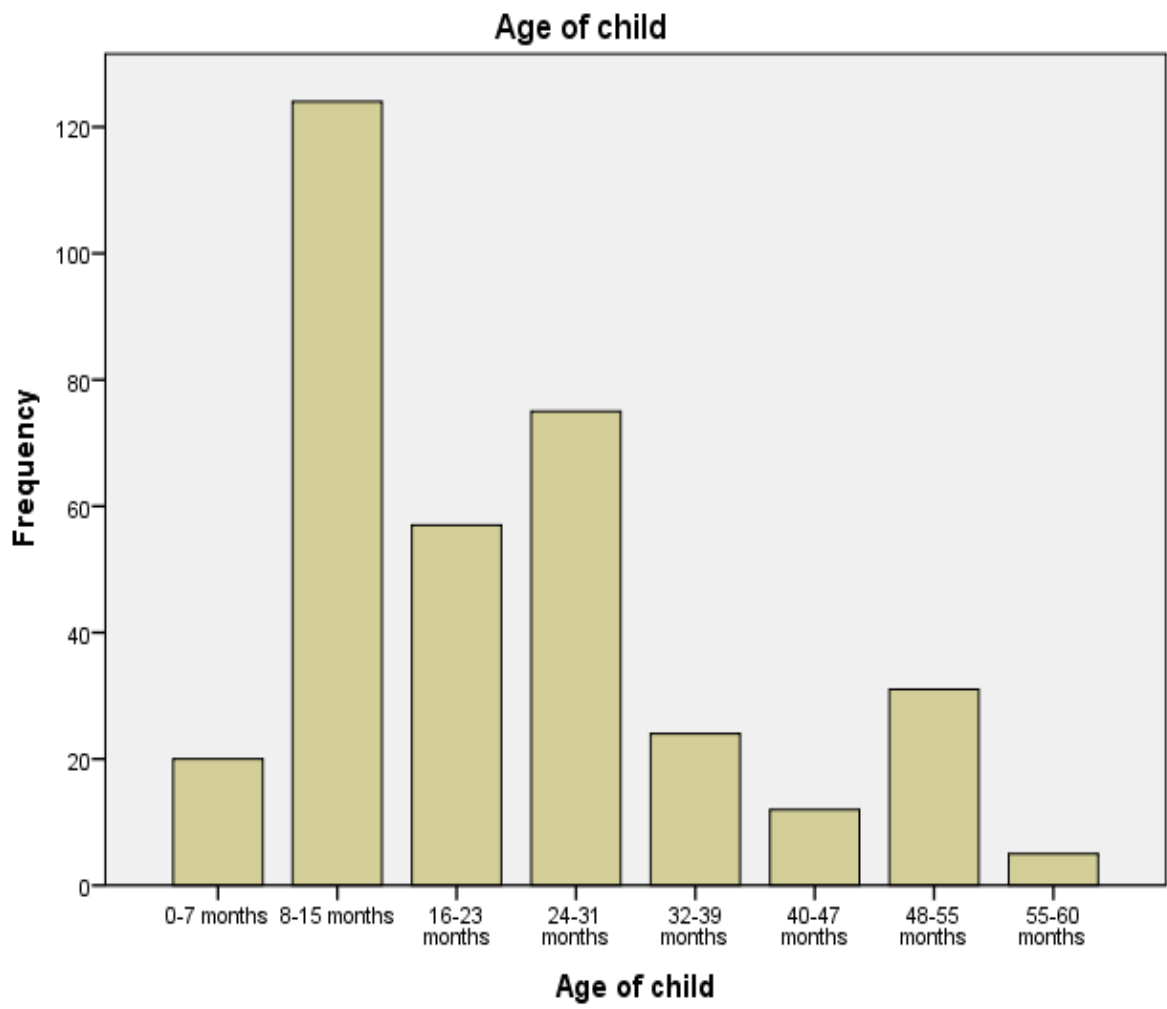
Characteristics	n=348	(%)
Sex of child		
Male	181	(52%)
Female	167	(48%)
Age of mother (year)		
18-22	24	(6.9 %)
23-28	191	(55%)
29-34	88	(25.4%)
35-40	38	(11%)
41-46	6	(1.7%)
Relation of respondent with child		
Mother	317	(91.1%)
Caretaker	31	(8.9%)
Maternal Education		
Illiterate	55	(15.8%)
Read & write	232	(66.7%)
Primary completed	60	(17.2%)
Secondary completed	1	(.3%)
Religion of mother		
Orthodox	224	(64.4%)
Muslim	83	(23.9%)
Protestant	41	(11.8%)
Ethnicity of mother/Caretaker		
Amhara	103	(29.6%)
Tigray 123(35.03%)		
Oromo	88	(25.3%)
SNNP	34	(9.8%)
Monthlyfamily income (in Birr)		
<1000	86	(25.4%)
1000-2000	240	(71%)
> 2000	12	(3%)

7.2 Bivariant results

7.2.1 Association of child caring, hygienic practice and Knowledge variables of mother with the diarrheal status

In this analysis, the odds of developing diarrhea were significantly higher among children whose mothers recently had diarrhea (OR=.077; 95%CI=0.37-.161).

Children who are age 8-15 months developed higher odds of diarrhea (OR=.979; 95%CI=.961-.998) compared to Among under-five children in this study.



7.2.2 Association of socio-demographic variables with the diarrheal status

The odds of developing diarrheal morbidity was with regard to household economy,

Children from households that earn less than 1000Birr per month had greater odds

Of experiencing diarrheal morbidity when comparing to children from households that to earn greater than 2000Birr per month (OR=2.065; 95%CI=1.205-3.3).

In risk of having diarrhea 2.065 times higher in those incomes less than 1000Birr comparing to those earn greater than 1000Birr per month.

Other socio-demographic Characteristics included in the questionnaire were not significantly associated with diarrheal status in the bivariate analysis.

7.2.3 Association of housing and sanitation variables with the diarrheal status.

In the bivariate analysis, the odds of developing diarrheal morbidity was significantly higher among children lived in a house less than two room had higher odds of developing diarrhea morbidity compared to children from household that had more than two rooms (OR=2.805;95%CI =1.693-4.649). In risk of having diarrhea 2.805 times higher in those children lived in a house less than two room compared to children from household that had more than two rooms.

Children whose family don't have their own toilet had higher odds of developing diarrhea morbidity as compared to children from household that had private toilet(OR=5.024;95%CI=2.997,8.422) In risk of having diarrhea 5.024 times higher in those children whose mother had no own toilet compared to whose mother had private toilet. Children whose family drew collected water by dipping had higher odd of getting Diarrhea morbidity(OR=34.850;95%CI=17.996,67.489). In risk of having diarrhea 34.8500 times higher in those family drew collected water by dipping compared to pouring.

7.3 multivariate Analyses

Using the adjusted odds ratio, it was only the water taking practice and mother's diarrhea status were found to be significant factors with:

- Dipping has 24.934 times higher risk of resulting in diarrhea when comparing pouring. AOR 24.934(95%CI(9.318,66.720).
- Mother who had diarrhea status have 9.527 more risk of getting their children when compared without diarrhea. AOR 9.527 with 95%CI(2.878,31.543).

8. Discussion

This study investigated the prevalence and associated factors of diarrhea morbidity in children less than 5 years old in AFRTH and Signal, Gofa health centers of minster of defense Addis Ababa. In this study Prevalence of diarrhea among children under-five years of age was 29.8 % this result in line with cross-sectional study conducted in Eastern Ethiopia was prevalence of diarrhea among children was 22.5%.(42)

Monthly income had association with diarrheal morbidity the odds of developing diarrheal morbidity was with regard to household economy,

Children from households that earn less than 1000Birr per month had greater odds

Of experiencing diarrheal morbidity when comparing to c In risk of having diarrhea 2.065 times higher in those incomes less than 1000Birr compared to those earn greater than 1000Birr per month. in Colombia it was reported that diarrhea episodes decreased significantly for richer households(43)

Education of mother was not significantly associated with diarrheal status in the Present study.

Children living in the house of less than two rooms were found to have significantly higher odds of developing diarrhea the odds of developing diarrheal morbidity was significantly higher among children lived in a house less than 2room had higher odds of

developing diarrhea morbidity compared to children from household that had more than two rooms.

Children who live in houses with one room and two rooms had significant association with childhood diarrheal morbidity.(45) In my study children whose family had no Owen toilet had higher odds of developing diarrhea morbidity as compared to children from household that had private toilet. children from families of no toilet were at higher odds of developing diarrheal morbidity(45).

Children whose family drew collected water by dipping had higher odd of getting Diarrhea morbidity risk of having diarrhea 34.8500 times higher in those family drew collected water by dipping compared to pouring.

Strength and limitation of the study

Strength of the study

Similar study where not done on institutional level in the study population. which gives clue to prevent and control of diarrheal morbidity among under-five children on the study population.

Limitation of the study

Since the study was conducted in Addis Ababa City Administration, therefore, the result couldn't be used to generalize for the whole country

9. Conclusion and recommendations

9.1 Conclusions

The study came up with the conclusion that the prevalence and associated factor of diarrheal morbidity among under-5 children in AFTRH and Signal-Gof[a Health centre where;

- Unavailability of private toilet facility and unsafe utilization of water
- Mother / care taker exposed for diarrheal disease.
- Family living in the house less than two rooms

9.2 Recommendations

The following recommendations are forwarded based on the main findings of the study

- Responsible bodies should strive in getting community have private toilet facility
- Educating households how to use drinking water safely should be given emphasis
- Health education should be given to females who taker of children on transmission methods of dihedral morbidity.

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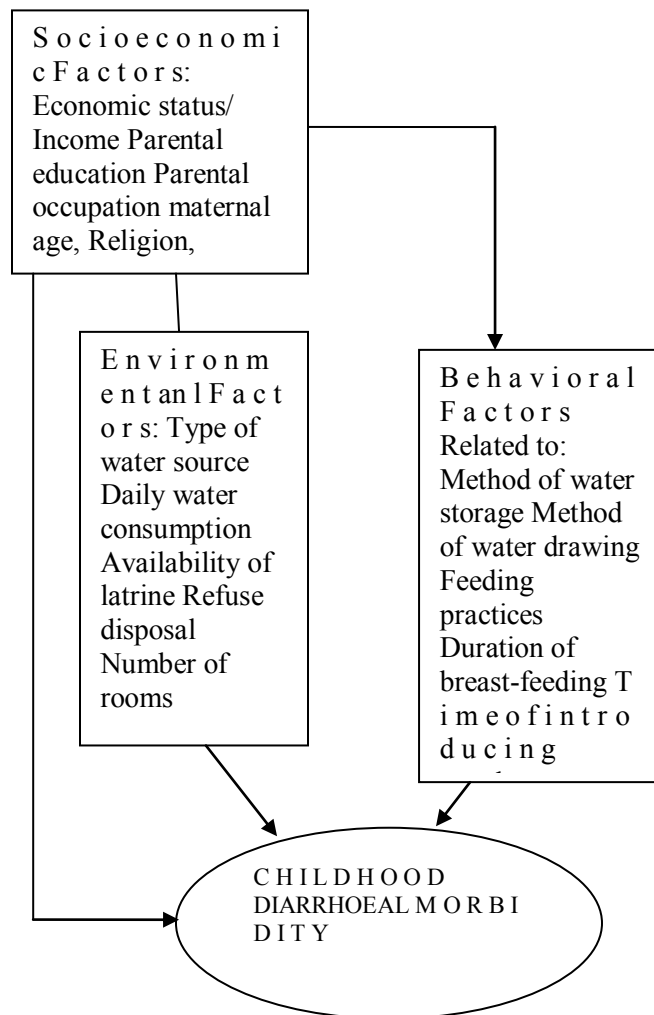
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1. ANNEX. Conceptual framework



2. ANNEX2 .QUESTIONNAIRE

English version of the questionnaire

Addis Ababa university medical faculty department of emergency medicine Questionnaire prepared to assess prevalence and associated factors of childhood diarrhea morbidity in AFRTH, Gofa and signal health center how to approach and interview the care taker of child. If the mother/caretaker is there, briefly explain the purpose of the study by reading what is written on the questionnaire, and ask for her consent. At the end of the interview, tell the respondent that it is the end of the interview, and thank the individual for giving her/his time.

CONSENT

My name is _____. I am student of Addis Ababa University; I am going to collect information for a study on childhood diarrhea. The study is designed by Addis Ababa University to assess the effect of households' socioeconomic, environmental and behavioral factors on the occurrence of childhood diarrhea. I assure you that the information that you are going to give will be kept in secret. Therefore, you are free to respond or not to respond the questions. Your Support and willingness in responding the questions will be very important for the success of this study.

Do you agree to participate in this study? Yes _____ No _____

If no, go to the next care taker.

THANK YOU FOR YOUR COOPERATION.

Questionnaire

Questionnaire prepared to assess prevalence of diarrheal morbidity among under five children

PART1. Demographic and socio-economic characteristics

No	Question	Response	Code	Skip to
Q1.01	Family size	-----In number		
Q1.02	Relation of the respondent to the child	Mother	1	
		Caretaker	2	
Q1.03	Age of the mother/ care taker	-----years		
Q1.04	Marital status of the mother/caretaker Single	Married	1	
		Single	2	
		Divorced	3	
		Widowed	4	
Q1.05	Religion of mother/caretaker	Orthodox	1	
		Muslim	2	
		Protestant	3	
		Others(specify)	4	
Q1.06	Ethnicity of mother/caretaker	Amhara	1	
		Tigra	2	
		Oromo	3	
		SNNP	4	

		Others(specify	5	
Q1.07	<i>Educational level of mother/caretaker</i>	Illiterate	1	
		read and write	2	
		Elementary completed	3	
		High school completed	4	
Q1.08	Occupation of the mother/caretaker	house wife	1	
		Government employee	2	
		Private work	3	
		Merchant	4	
		Others specify	5	
Q1.09	Age of the father	-----year	1	
Q1.10	Educational level of the father	Illiterate	1	
		read and write	2	
		Elementary completed	3	
		High school completed	4	
Q1.11	Occupation of the father	Jobless	1	
		Government employee	2	
		private work	3	
		Merchant	4	
		Others(specify	5	
Q1.12	Average monthly income of the family	ETB.....		
Q1.13	From where do you get information about diarrhea disease?	Radio	1	
		Television	2	
		News paper	3	

		No information	4	
		others(specify)	5	

PART 2.Environmental Health Conditions

No	Question	Response	Code	Skip to
Q2.01	Type of floor material of the living house	Mud	1	
		Cement	2	
		Wood	3	
		Other (specify	4	
Q2.02	Number of rooms in the house	-----		
Q2.03	Is latrine available?	YES		If No, skip to Q205
		NO		
Q2.04	Ownership of the latrine	Privately owned	1	
		Shared with neighbors	2	
Q2.05	If the family has no latrine, where do you dispose human waste?	Open field	1	
		Other (specify)	2	
Q2.06	How do you dispose refuse?	Pit-hole	1	
		Open field	2	
		Burning	3	
		Garbagecan	4	
		Others	5	
Q2.07	From where do you get water for drinking?	Pipe	1	
		Protected	2	

		well/spring		
		Unprotected well/spring	3	
		Other	4	
Q2.08	Type of Water collection container	Pot	1	
		Jerry can	2	
		Plastic bucket	3	
		Iron bucket	4	
		Others(specify)	5	
Q2.09	Capacity of the container, which you used to collect	-----Liters		
Q2.10	How many times did you collect water for drinking yesterday?			
Q2.11	Daily consumption of Water	-----Liters		

PART 3. BEHAVIORAL ASPECTS

No	Question	Response	code	Skip to
Q3.01	Does the child take other food than breast milk?	YES	1	(If No skip to Q305)
		NO	2	
Q3.02	Do you separately prepare food for the child, using a separate material?	YES	1	
		NO	2	
Q3.03	What food/fluid is the child mostly receiving (if the child is not on exclusive breastfeeding)?	Cow's milk	1	
		Adults' food	2	
		Powder mil	3	
		Gruel	4	
		Other	5	
Q3.04	What do you use to feed the child?	Hand	1	
		Bottle	2	
		Cup and spoon	3	
		Cup	4	
		Others	5	
Q3.05	Does the drinking-water storage container have a cover?	YES	1	
		NO	2	
Q3.06	Is there a separate can for taking drinking	YES	1	

	water from the storage container?	NO	2	
Q3.07	How do you take water from the drinking water storage container?	Pouring	1	
		Dipping	2	
Q3.08	Do you know that flies can transmit diseases?	YES		
		NO		
Q3.09	If “Yes”, can you tell me the name of the diseases?	Diarrhea	1	
		Typhoid fever	2	
		Cholera	3	
		Trachoma	4	
		Do not know the names	5	
		Others (specify)	6	
Q3.10	Do you know that excreta of children can be a cause of diseases?	Yes	1	
		No	2	

PART 4. INFORMATION OF THE CHILD

No	Question	Response	Code	Skip to
Q4.01	Age of the child	_____ Months		
Q4.02	Sex of the child	Male	1	
		Female	2	
Q4.03	Where was your child born?	Health institution	1	
		Home	2	
Q4.04	Birth order of the child	First	1	
		Third	2	
		Second	3	
		Fourth&above	4	
Q4.05	Do you(the mother/care taker)have history of diarrhea in the past 2 weeks	YES		
		NO		
Q4.06	Have you ever breast-fed your child?	Yes	1	Skip if no to Q408
		NO	2	
Q4.07	For how long did you breastfed your child?	_____ Months		
Q4.08	What is his/her current breastfeeding status?	Exclusive breastfeeding	1	
		Partial breastfeeding	2	
		Not breastfeeding	3	
Q4.09	At what age the child started supplementary /weaning food?	_____ Months		
Q4.10	Did the child receive measles vaccination? Ask for children of age greater than nine months	Yes, (by the response of the respondent)	1	
		Yes, (by checking the card)	2	

		No	3	
Q4.11	Does the child has diarrhea?	YES	1	
		NO	2	
Q4.12	For how long the diarrhea last?	Less than 14 days	1	
		Greater than 14 days	2	
		NA	3	
Q4.13	If the has diarrhea today, how many times a day he/she passes stool?	Three times	1	
		More than three times	2	
		Don't know	3	
		NA	4	
Q4.14	The type of diarrhea that the child had	Watery	1	
		Blood and mucus	2	
		NA	3	
Q4.15	What actions do you take to treat/stop the diarrhea?	Take him/her to health institution	1	
		Take him/her to traditional healer	2	
		Increase feeding	3	
		Give him/her ORS	4	
		Give him/her cereal based fluids	5	
		Stop/decrease feeding	6	
		Homemade treatment	7	
		Other (specify)	8	
		NA		

Date of interview

Name of health care worker

Signature

Amharic version of the questionnaire

መግቢያ

በአዲስአበባ ዩኒቨርሲቲ ሕክምና ፋክልቲ የድንገተኛ ጤና ትምህርት ክፍል ከአምስትአመት ዕድሜ በታችባሉ ሕፃናት ላይ የሚከሰተውን የተቆማጥ በሽታ ወሳኝ ምክንያቶችን የደሰሳ ጥናት የተዘጋጀ መጠይቅ የስምምነት መጠየቅ ጤና ይስጥልኝ ስሜ----- ይባላል ፣፣ የአዲስአበባ ዩኒቨርሲቲ ተማሪ ነኝ፣፣ ይህ መጠይቅ በሕፃናት ላይ የሚከሰተውን የተቆማጥ በሽታ የሚያመጡ ዋና ዋና ምክንያቶች ለማጥናት በአዲስአበባ ዩኒቨርሲቲ የተዘጋጀ መጠይቅ ነው፣፣ መጠይቁ የሚሞላው በቃለምልልሲ ሆኖ የሚሰጡት ምላሽ ለማንም ግለሰብ ወይም ድርጅት ተላልፎ የማይሰጥና ምስጢራዊነቱ ምላሽ የተጠበቀ ይሆናል ፣፣ ጥናቱ ውጤታማ ሊሆን የሚችለው እርስዎ በሚሰጡት ትክክለኛ መልስ ላይ በመሆኑ ጥያቄዎቹን በጥንቃቄ እንዲመልሱልን ፍቃደኝነትዎን በትሕትና እንጠይቃለን ፣፣

ቃለ-ምልልሱን ለማድረግ ተስማምተዋል? አዎ ተስማምቻለሁ----- አልስማማም-----

ለሚሰጡን ጥናታዊ መለስከል ብእና መሰግናለን

ክፍል አንድ፣ ማህበራዊናኢኮኖሚያዊሁኔታዎች

ተ.ቁ ጥያቄዎችና ማጣሪያዎች አማራጭ መልሶች

101 የቤተሰብብዘት-----

102 መላሽ /ሸኑ ከሕፃኑ ጋር ያላቸውግንኙነት

1 እናት 2 ሌላ አሳዳጊከሀኑ(ይገለፅ)-----

103 የሕፃኑ እናት/አሳዳጊ ዕድሜ----- ዓመት

104 የሕፃኑ እናት/አሳዳጊየጋብቻሁኔታ

1 ያገባች 2 የተፋታች3 ያላገባች 4 ባል በሞትየተለያት

105 የሕፃኑወላጆች/አሳዳጊዎች ሃይማኖት

1.አርቶዶክስ 2.ፕሮቴስታንት 3.ሙስሊም 4 ሌላ (ይገለፅ)-----

106 የሕፃኑወላጆች/አሳዳጊዎችብሄር

1 አማራ 2 ትግሬ 3 ኦሮሞ 4 የደብብሀዝቦችብሄር-ብሄረሰብ 5 ሌላ

(ይገለፅ)---

107 የሕፃኑ እናት/አሳዳጊየትምሕርትደረጃ

1 መደበኛ ትምህርት (የመጨረሻየትምህርትደረጃ ይገለፅ----- 2 መፃፍና

ማንበብ

3 ማንበብ ብቻ 4 ምንም ያልተማረ

108 የሕፃኑ እናት/አሳዳጊየስራ ሁኔታ

1 የቤትእመቤት 2 የመንግስት ሰራተኛ 3 ገቢያሚያስገኝየግልስራ 4 ሌላ

(ይገለፅ)-----

109 የሕፃኑአባት ዕድሜ-----ዓመት

110 የሕፃኑአባትየትምሕርትደረጃ

1 መደበኛ ትምህርት (የመጨረሻየትምህርትደረጃ ይገለፅ)----- 2 መፃፍና ማንበብ

3 ማንበብ ብቻ 4 ምንም ያልተማረ

111 የሕፃናትአባትየስራ ሁኔታ

1 የመንግስት ሰራተኛ 2 ነጋዴ 3 ስራ የለውም 4 ሌላ (ይገለፅ)-----

112 በተቅማጥ ዙርያመረጃከየትነውየሚያገኙት

1ሬድዮ 2.ተሌቮን 3ጋዜጣ 4.ከማህበራዊ ግኑኝነት 5.ሌላ (ይገለፅ)---

ክፍል ሁለት፣ የአካባቢ ጤና ሁኔታ

2.01 የመኖሪያቤቱወለልሁኔታ

1 አፈር 2 እንጨት (ጣውላ) 3 ሲሚንቶ 4 ሌላ (ይገለፅ)-----

2.02 በቤቱ ውስጥ ያሉትክፍሎች ብዛት-----

2.03 ቤተሰብ-መፀዳጃ ቤት 1 አለው 2 የለውም (መልሱ-የለውምከሆነወደ ቅ205 እለፍ)

2.04 የመፀዳጃ ቤቱየባለቤትነትሁኔታ 1 የግል 2 የጋራ

2.05 መፀዳጃ ቤትከሌለቤተሰብየትይጠቀማል? 1 በየሜዳው 2 ሌላ (ይገለፅ)-----

2.06 ደረቅቆሻሻን እንዴት ያስወግዳሉ? 1 በጉድጉዋድ ውስጥ 2 በማቃጠል 3 በየሜዳው

4 በእቃ አጠራቅመው ሌላ ቦታ ይደፋሉ 5 ሌላ (ይገለፅ)-----

2.08 የመጠጥ ውሃ ከየት ያገኛሉ?

1 ከባንባ 2 ከተጠበቀየውሃጉድጉዋድ 3 ካልተጠበቀየውሃ ጉድጉዋድ 4ከወንዝ ሌላ (ይገለፅ)-----

2.9ለመጠጥ የሚሆነውን ውሃ የሚቀዱበት ዕቃ ምን አይነትነው? 1 እንስራ 2 ባልዲ (ፕላስቲክ)

3 ባልዲ (ብረት) 4 ጄሪ ካን 5 ሌላ (ይገለፅ)-----

2.10 ውሃ የሚቀዱበት ዕቃየሚይዘውየውሃ መጠን----- ሊትር

2.11 በቀን የሚጠቀሙት የውሃ መጠን-----

ክፍል ሦስት፣ የሕፃናት አይደለም ልምድና እውቀት

301 ሕፃናት ስሜት ወይንም ሌላ ምግብ ይወስዳል? 1 አዎ 2 የጡት ወይንም ብቻ ነው የሚመጠው (ወ ደ ቅ3.4 እ ለ ፍ)

302 ሕፃናት ስሜት ምግብ ያዘጋጃለታል? 1 አዎ 2 አይዘጋጅለትም

303 ሕፃናት ስሜት ወይንም ሌላ ምግብ የሚወስድ ከሆነ ምን ዓይነት ምግብ ይወስዳል? (ከአንድ በላይ መልስ ሊኖረው ይችላል) 1 የላም ወተት 2 የዱቄት ወተት 3 ከተፈጨ ጥራጥራ የተዘጋጀ ምግብ 4 ለአዋቂ የተዘጋጀ ምግብ 5 ሌላ (ይገለፅ)

304 ሕፃናት ስሜት ምን ዓይነት ዘዴ ይመጣታል? 1 በእጅ 2 በስኒና በማንኪያ 3 በኩባያ 4 በጡጦ 5 ሌላ (ይገለፅ) 3.5 የመጠጥ ውሃ ማጠራቀሚያው/ማምጫው ዕቃ ክዳን አለው? 1 አለው 2 የለውም

306 ተለይቶ የተቀመጠ የውሃ መቅጃ ዕቃ አለ? 1 አለ 2 የለም

307 ለመጠጥ የሚሆን ውሃ ከማጠራቀሚያ ዕቃው እንዴት ነው የሚቀዳት? 1 በማንቆርቆር 2 በመጥለቅ

308 ዝንብ በሽታ ልታስተላልፍ እንደምትችል ያውቃለሁ? 1 አውቃለሁ 2 አላውቅም (መልሱ አላውቅም ከሆነ ወደ 310 እለፍ)

309 የቅ308 መልሱ አውቃለሁ ከሆነ ልታስተላልፍ የምትችለውን የበሽታ አይነት ሊነግሩኝ ይችላሉ? (ይገለጹ)-----

3010 የሕፃናት አይነት ልምድ በሽታ ሊያስተላልፍ እንደሚችል ያውቃለሁ? 1 አውቃለሁ 2 አላውቅም

ክፍል አራት፣ ስለሕፃናት አጠቃላይ መረጃ

401 የሕፃናት ዕድሜ----- ወር

402 የሕፃናት ያታ 1 ወንድ 2 ሴት

403 ሕፃናት ነው የተወለደው? 1 በጤና ድርጅት 2 በቤት ውስጥ

404 ሕፃናት ለእናት የው ሰንተኛ ልጅ ነው ? 1 አንደኛ 2 ሦስተኛ 3 ሁለተኛ 4 አራተኛና ከዝያባ ላይ

405 የሕፃኑ እናት/አሳዳጊ ባለፈው ሁለት ሳምንት ተቅማጥ ነበራቸው 1 አዎ 2 የለም

406 ሕፃናት ከተወለደ ጀምሮ ጡት ጠብቶ ያውቃል? 1 አዎ 2 አያውቅም (መልሱ አ ያውቅም ከሆነ ወደ 407 እለፍ)

407 ሕፃናት ለስንት ጊዜ ያህል ጡት ጠባ?-----ወር

408 በአሁኑ ጊዜ ያለው የጡት አመጋገብ ሁኔታ 1 የጡት ወተት ብቻ ነው የሚመጣበው 2 በከፊል የጡት ወተት ይመጣል 3 የጡት ወተት አይመጣም

409 ሕፃኑ እድሜው ስንት ወር ሲሆን ነው ተጨማሪ ምግብ የጀመረው?-----ወር

4.10 ሕፃናት የኩፍኝ መከላከያ ክትባት ተከትቦ ዋል? (ከዘጠኝ ወር በላይ ላሉ ህፃናት ብቻ የሚጠየቅ) የክትባት ካርድ ካለ ከካርዱ ጋር አመሳክር 1 አዎ (ከመላሽ /ሹ የተገ) 2 አዎ (ከካርድ የተገኘ) 3 አልተከተበም

4.11 የሕፃናት ተቅማጥ ሁኔታ . 1 አዎ 2 የለም

4.12 የሕፃኑ ተቅማጥ ሁኔታ ሁተቅማጡ ለስንት ጊዜ ቆየበት? 1 ከ14 ቀን በታች 2 ከ14 ቀን በላይ 3 አይመለከትም

4.13. በቀን ውስጥ ስንት ጊዜ ያስቀምጠዋል? 1 ሶስት ጊዜ 2 ከሶስት ጊዜ በላይ 3 አላውቅም 4 አይመለከትም

4.14. ምን ዓይነት ተቅማጥ ነው? 1 እንደ ውሃ የቀጠነ 2 ደምና ምግል የተቀላቀለበት 3 ሌላ (ይገለጽ)- 4 አይመለከትም

4.15. ተቅማጡን ለማቆም ለሕፃኑ ምን ዓይነት ገደብ ሊታል? (አማራጮቹን አታንብብላቸው) ከአንድ በላይ መልስ ለኖረው ይቻላል

- 1 ወደ ጤና ድርጅት ወስጂዎቻህ 2 ወደ ባህል ህክምና ወስጂዎቻህ 3
 ወትሮክሚቦላው ምግብ ተጨማሪ እስጦዎቻህ 4 ኢ.አር.ኤስእስጦዎቻህ 5 ከተፈጨ
 ጥራጥሬ የተዘጋጀ ፈሳሽ እስጦዎቻህ 6 ወትሮክምስጦው ምግብ ያነሰ እስጦዎቻህ
 7 በግልመድሃኒት ገዢ ሰጥቼዎቻህ 8 ሌላ (ይገለፅ) 9 አይመለከትም

መጠይቁ የተደረገበት ቀን----- መጠይቁን የሞላ ሰው ስም-----
 ፊርማ-----
 መጠይቁን የረጋገጠው ሰው ስም----- ፊርማ----- ቀን-----

ASSURANCE OF PRINCIPAL INVESTIGATOR

I the undersigned agree to accept all responsibilities for the scientific and ethical conduct of the research project. I will provide timely progress report to my advisor and seek the necessary advice and approval from my primary advisors in the course of the research. I will communicate timely to my advisors all stakeholders involved in the study including any source of funding for this research.

Name of the student: Demelash Ayele

Signature: _____

Date: _____

Approval of the primary Advisor

Name of the primary advisor: Dr. Tigiste

Bacha _____

Signature: _____

Date: _____

