WOLKITE UNIVERSITY

COLLEGE OF MEDICINE AND HEALTH SCIENCE

DEPARTMENT OF NURSING

ASSESSMENT OF KNOWLEDGE, PRACTICE AND ASSOCIATED FACTORS TOWARD HOME BASED MANAGEMENT OF DIARRHEA AMONG CARE GIVERS OF CHILDREN ATTENDING UNDER FIVE CLINIC IN WOLKITE TOWN GOVERNMENTAL HEALTH FACILITY, SOUTHERN ETHIOPIA, 2023

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Title	Assessment of knowledge, practice and associated factors toward home based management of diarrhea among care givers of children attending under five clinic in wolkite town governmental health facility, Southern Ethiopia, 2023	
Study period	May17 – June 18, 2023	
Study area	Wolkite Town Governmental health facility, Gurage zone	

APPROVAL SHEET

TITLE: ASSESSMENT OF KNOWLEDGE, PRACTICE AND ASSOCIATED FACTORS TOWARD HOME BASED MANAGEMENT OF DIARRHEA AMONG CARE GIVERS OF CHILDREN ATTENDING UNDER FIVE CLINIC IN WOLKITE TOWN GOVERNMENTAL HEALTH FACILITY, SOUTHERN ETHIOPIA, 2023

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List of Acronyms/abbreviation

ORS	Oral Rehydration Salt
WHO	World Health Organization
UNICEF	United Nation International Children's Emergency Fund
IMNCI	Integrated Management of Childhood Illness
SSS	Salt Sugar Solution
WKUSTH	Wolkite University Specialized Teaching Hospital
WHC	Wolkite Health Center
EBHC	Edget Ber Health Center
GHC	Gubre Health Center
SNNP	South Nation and Nationality of peoples
NGO	Non-Governmental Organization
SPSS	Statistical Package for Social Science
SDG	Sustainable Development Goal
MDG	Millennium Development Goal
OPD	Out Patient Department
SC	Stabilization Center
NICU	Neonatal Intensive Care Unit
PICU	Pediatric Intensive Care Unit

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ABSTRACT

Background: Diarrhea is the passage of unusually loose/watery stools, usually at least three times in a 24 hour period. It is the second killer of under five children world widely. Proper home management reduce morbidity and mortality due to diarrhea but still there is a gap.

Objective: To assess knowledge, practice and associated factors of home-based management of diarrhea among caregivers of under-five children attending in Wolkite town governmental health facility, Gurage zone, Ethiopia, 2023.

Methods and materials: An institutional based Cross sectional study was employed in Wolkite town governmental health facility from May17 to June 18, 2023. By using single proportional formula the sample size of the study was 391. Systematic sampling technique used to select eligible participants'. Interviewer administered questioners used by data collectors using face-to-face interview. Data were entered into Epi-data version 4.6 and exported to statically software package for social science (SPSS) version 25.0 for analysis. Descriptive analyses, bivariable and multivariable logistic were done to identify factors that are associated with knowledge and practice of caregivers of under-5 on home-based management of diarrhea.

Results: Two third of the respondents had good knowledge and practice. Respondents who were unable to write and read (AOR: 0.036, CI: 0.003, 0.420), Farmers (AOR: 0.049, CI: 0.003, 0.734) and Fathers (AOR: 0.080, CI: 0.01, 0.657), and this with poor health education (AOR: 0.289, CI: 0.98, 0.848) were significantly associated to poor knowledge. Education status (AOR: 0.038, CI: 0.004, 0.397), relation of care giver (AOR: 50.091, CI: 0.015, 0.567), hand washing practice (AOR: 0.103, CI: 0.027, 0.393), water purification (AOR: 0.139, CI: 0.029, 0.670) were significantly associated to practice.

Conclusions: Two third of the respondents had good knowledge and practice. Educational status, occupation, relation of care giver and health education given about diarrhea were significantly associated with knowledge. Relation of care giver, educational status, hand washing practice and water purification were significantly associated with practice of caregivers. So, it's important to give health education programs for the care givers.

Key word: knowledge, factors, home based, diarrhea management, Wolkite.

1. INTRODUCTION

1.1 Background

World Health Organization define diarrhea as the passage of unusually loose or watery stools, usually at least three times in a 24 hour period[1]. It is caused by many pathogens which are bacteria, viral and protozoa from these Major bacterial pathogens are E. coli, Shigella, Campylobacter and Salmonella[2]. The most leading cause from other etiology is rotavirus which had an estimated of 40% hospital admission[3]. Rotavirus is the most common cause of acute watery diarrhea in newborns and young children, despite a demonstrable effect of rotavirus vaccine introduction, rotavirus remained the top cause of acute watery diarrhea[4].

Cryptosporidium is Protozoan pathogen which is mostly found in children and HIV positive patients. The other cause is vibro cholerae that is responsible for most death in Africa and Asia[1]. Additional causes are Shigella (most frequent cause of dysentery), Giardia lambia and entamoeba histolytica, lactose intolerance and intestinal diseases[5]. The most common method of transmission is the fecal-oral route, which involves either direct contact with infected feces or consumption of fecal-contaminated water or food[5].

Acute watery diarrhea which last less than 14 days, invasive (bloody) diarrhea, or chronic diarrhea (lasting for more than 14 days) are all possible types of diarrheal disease. This classification makes it easier to handle diarrhea in children[6].

Inadequate breast feeding, bottle feeding and eating food hours after cooking are the risk factors for acute watery diarrhea. Also drinking tainted water, failing to wash hand, not properly disposing of human wastes are risk factors for chronic diarrhea in addition to this malnutrition, recent initiation of animal milk, and immune system dysfunction such as AIDS are risk factors[5].

Diarrhea treatment is based on the severity and frequency of diarrhea also on degree of dehydration status; if no dehydration it can managed at home by giving additional fluids like breastfeed frequently, give ORS or clean water and food based fluid like rice water[7]. Integrated Management of Childhood Illness (IMCI) guidelines advise the use of Oral

Rehydration Salt (ORT), along with continued feeding, and zinc for appropriate Diarrhea case management[8].

Preventative measures includes encouraging exclusive breastfeeding, enhancing supplemental feeding techniques, promoting personal and household hygiene, improved water supply and sanitary infrastructure, giving health education for better diarrhea case management, Measles and rotavirus vaccines[9]. In order to lower diarrheal morbidity and mortality, UNICEF and WHO produced a report on diarrhea in 2009 that contained a number of important strategies for both prevention and treatment[1]. Additionally it include the total packages like increasing access to clean water, promoting cleanliness throughout the community, routine immunization against rotavirus and measles, vitamin A supplementation, encouraging breastfeeding, and therapy with zinc[10].

1.2 Statement of problem

Diarrhea is the second killer of under five children worldwide[11].There are around 1.7 billion cases of diarrhea disease and nearly 7,600,000 under five children died every year world widely[12].

In Africa, every under-five child experiences five episodes of diarrhea per year, and around 800,000 children die of diarrhea and dehydration each year. Additionally, Sub-Saharan Africa is the region where high rates of child mortality were reported[13].

Recent data revealed that in developing countries there is no much reduction in diarrhea related morbidity so this emphasizes the need for strengthening of comprehensive diarrheal disease prevention strategy at primary level including improvement of water quality, hygiene and sanitation, along with provision of oral rehydration solution and zinc supplements, and vaccine and cost effective interventions[14].

In Ethiopia, diarrhea is a significant and second-leading cause of child mortality, making it a serious public health concern. an estimated 73,700 children under the age of five died from diarrhea each year[15, 16]. Numerous studies revealed that factors such as socioeconomic status, complementary feeding techniques, water storage equipment types, mothers' poor handwashing habits, lack of handwashing facilities, the length of

breastfeeding and improper waste disposal practices were significant predictors of diarrheal episodes[17].WHO and UNICEF recommended that countries should develop a 3–5 year plan to reduce mortality rates, assess progress by monitoring usage rates of ORS and zinc supplementation, using the media to promote and refine messages on prevention, home based management[18].

Although the Sustainable Development Goals (SDGs) strategy is in the works and the Millennium Development Goals (MDGs) have seen significant progress over the past 15 years and plan to eliminate it on 2030, diarrhea is still a problem in many parts of the world[19]. Even though the Ethiopian Ministry of Health and the relevant regional health offices place a lot of attention on improving child health from easily preventable and treatable diarrheal illness, it kills many children in Ethiopia[19].

Therefore, to improve the quality of diarrheal case management at home within the community, there is need to investigate the level of knowledge, practice and associated factors related to home based management of diarrhea among care givers and this study show the gap of health extension visit and education service on the knowledge, practice and associated factors on home based management of diarrhea among care givers attending under-five clinic at Wolkite town health facility, Gurage zone, SNNP, Ethiopia.

1.3 Significance of the study

The importance of this study is to know about the caregivers understanding towards home based management of diarrhea, practices and associated factors that affecting the health of under five years and to get change in the subject therefore this findings will have importance for nursing profession and other health workers who work in clinic and in community setting to understand about the subject by providing information about the associated factors on home based management.

Also it will help to give health education campaign and counseling session aimed at raising the awareness of care givers, understanding and to minimize associated factors with it. Additionally, this findings will assist the participant and community to practice and improve their knowledge in care of their children by offering practical recommendations for Wolkite governmental health facilities and health extension workers. It will also act as additional information for future researchers who want to conduct additional research on the subject.

2. LITERATURE REVIEW

2.1 Caregivers knowledge in home treatment of childhood diarrheal disease.

The Study conducted in Indonesia, only 38% of the mothers identified two or more precise signs of dehydration[20]. Similarly study conducted in Iran revealed that 52% and 47% of all mothers claimed that diarrhea may have resulted from consuming contaminated food and teething respectively[21]. The study done in Pakistan showed that 76% of caregivers knows the main clinical of diarrhea[22]. The study done in Cambodia showed that most participants (85.1%) have a good knowledge[23]. The study conducted in Nigeria showed that 78.5%of caregivers were able to define diarrhea also 28.4% and 29.9% of caregivers said that poor hygiene and tainted food, respectively, were the causes of diarrhea[24].

The study conducted in Dire Dawa showed that 65.2% of caregivers have good knowledge[25]. The study conducted in Assosa only 37.5% of mother have good knowledge[26]. The Study conducted in Fagita Lekoma District shows that 72.7% and 51.6% of the caregivers said that treating diarrhea at home was impossible and did no t know what kind of fluids were used for diarrhea treatment[27]. Also, The study conducted in Enema district showed that 34.4% of participants knew the definition of diarrhea, also 51.5% and 50.5% thought washing hands would prevent diarrhea and believed that it is a communicable disease[28].

2.2 Caregivers practice in home based management of childhood diarrheal disease

The study conducted in Iran showed that during diarrhea 64%, 33.7%, 2.3% of mothers continued to breastfeed more often, dilute their milk when they have diarrhea and quit breastfeeding respectively[21]. The study conducted in Bangladesh showed that 90% mother give ORS and 53.06% correctly prepared it [29]According to the study conducted in India, 69% of mothers continued to do breast feeding throughout the incident and the remainder women either stopped or paused breastfeeding[30].

Study conducted in Gondar, 20.8% of caregivers gave salt-and-sugar solution to their children who had diarrhea and 44.0% of caregivers gave rice water[31]. The study conduct in Dire Dawa revealed that 26.1% and 60.3% of the mothers breastfed their child more than usual and less than usual during diarrhea episode respectively additionally, it showed that 58% of respondents reported poor practices for managing and preventing diarrhea in young children at home [25].The study conducted in Ginchi town revealed that 59% of care givers have a good home-based management practice of diarrhea[32].

2.3 Factor associated with knowledge of Caregivers

The study conducted in Nepal showed that age, occupation, educational status were significantly associated to knowledge of care giver [33].The study conducted in India, Bankura district showed that knowledge was highly associated with care giver socioeconomic class, educational levels, and occupation[13].

Study conducted in Fenote selam town revealed that mothers who were over 45 years old, uneducated, employed in a private company and widowed were all significantly linked with poor knowledge of diarrhea and its treatment [34]. Similarly, the study conducted in Fagita lekoma showed that caregivers' ages, marital status, level of education, occupation, a source of information, and the number of children independently associated to awareness of diarrhea. It also reveal that less significant association with the number of children[27].

2.4 Factor associated with practice of Caregivers

The study conducted in brazil found that house type, waste disposal, type of toilet has association with prevention of childhood diarrhea[35]. The study conducted in Palestine found that factors such as exclusive breastfeeding, maternal education level, family income per month, source of drinking water, and caregivers' hand-washing habits a relation with under-five child diarrhea[36]. Similarly the study conducted in Bangladesh showed that level of education and access to media strongly associated with proper hand washing practice [29].

Study conducted in Botswana revealed that home based diarrhea management practice among caregivers was significantly associated with gender and level of education[37]. Similarly, the study found in Botswana showed that practice among caregivers was significantly associated with gender and level of education[37].

The study conducted in Fnote selam showed that age between 36 and 45, being illiterate and working for a private company were all strongly linked to poor diarrhea management techniques[34].The study conducted in Kalu district revealed that household who get health extension program have low diarrhea on their child. This showed that health extension programs has a significant association with under five diarrhea management[38].

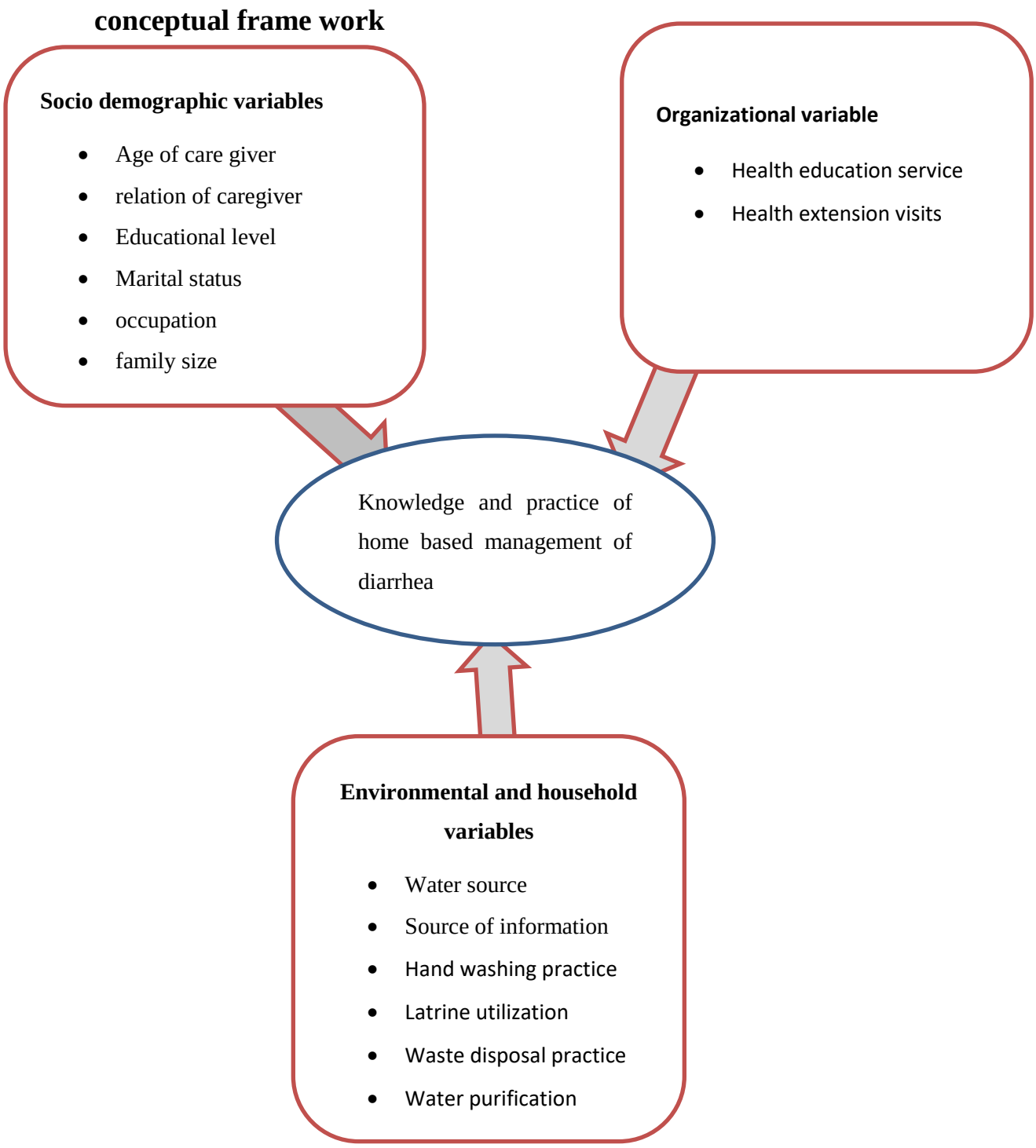

Figure 1: conceptual frame work of the study on knowledge, practice and associated factor of mothers/care givers on home based management of under five children attending in under five clinic Wolkite town health facility. Gurage, southern region, Ethiopia, 2023 which is adapted from different literatures [27, 32, 34].

3. OBJECTIVE

3.1 General objective

To assess knowledge, practice, and associated factors of home-based management of diarrhea among caregivers of children attending under-five clinic in Wolkite town governmental health facility, Southern Ethiopia in, 2023

3.2 Specific objectives

To determine the knowledge of care givers towards home based management of childhood diarrhea among caregivers of children attending under-five clinic in Wolkite town governmental health facility, Southern Ethiopia in, 2023.

To determine the practice of care givers towards home based management of childhood diarrhea among caregivers of children attending under-five clinic in Wolkite town governmental health facility, Southern Ethiopia in, 2023.

To determine factors associated with knowledge of caregivers towards home based management of childhood diarrhea among caregivers of children attending under-five clinic in Wolkite town governmental health facility, Southern Ethiopia in, 2023.

To determine factors associated with practice of caregivers towards home based management of childhood diarrhea among caregivers of children attending under-five clinic in Wolkite town governmental health facility, Southern Ethiopia in, 2023

4. METHODS AND MATERIALS

4.1 Study area

Wolkite is a town in south-western Ethiopia which is the administrative center of Gurage zone in the Southern Nations, Nationalities and Peoples' Region (SNNPR), this town has an elevation between 1910 and 1935 meters above sea level. Based on the 2007 Census conducted by the Central Statistical Agency, this town has a total population of 28,866, of whom 15,074 are men and 13,792 women. Wolkite is a town has 1 specialized teaching hospital which is Wolkite university specialized and teaching hospital (WKUSTH) and 3 local governmental health centers, those are Wolkite health center (WHC), Edget Ber health center (EBHC), Gubre health center (GHC).

4.2. Study design and Study period

Institution-based cross-sectional study design was conducted from May 17 – June 18, 2023

4.3. Population

4.3.1 Source population

All care givers attending under-five pediatric clinic in all Wolkite town governmental health facility.

4.3.2 Study population

All care givers attending under-five pediatric clinic whose child had diarrhea during the study time in all Wolkite town governmental health facility.

4.4 Eligibility criteria

4.4.1 Inclusion criteria

All care givers attending under-five pediatric clinic whose child had diarrhea during the study time.

4.4.2 Exclusion criteria

All care givers attending under-five pediatric clinic whose child were needs urgent referral.

4.5 Sample size determination

The required sample size of the study was determined using single population proportion with the following assumption of confidence level of 95% ,5% marginal error, with an estimate of the proportion of population=59%=0.59[32] ,which is the proportion of number of good homebased management practice of diarrhea for children under the age of 5.

n = sample size

P = an estimate of the proportion of population=59%=0.59[32]

d = the margin of sampling error tolerated (0.05)

Z = standard score corresponding to 95% CI= 1.96

n = (Zα/2)2 p (1-p)/d^2

= $(1.96)^2(0.59)\ (1-0.59)/0.05^2=372$

5% of non-response rate added then, Final sample size: 372+18.6 =391

4.6 Sampling technique

In Wolkite town there are 4 governmental health facilities those are 1 specialized teaching hospital and 3 health centers. According to past 12 months there are a total of 404 flow of under-five diarrhea from all health facilities. At Wolkite University specialized and teaching hospital, Gubre health center, Edgetber health center, Wolkite health center 73, 61, 182, 88 under five children with diarrhea respectively. Participant care givers were proportionally selected from each of the 4 health facilities. Finally, systematic random sampling method was employed to select eligible participants' from those who presents during data collecting time.

The sampling interval of one for each health centers. K was calculated by dividing the source population to the total sample size of each health institutions and this interval was used to select study subjects.

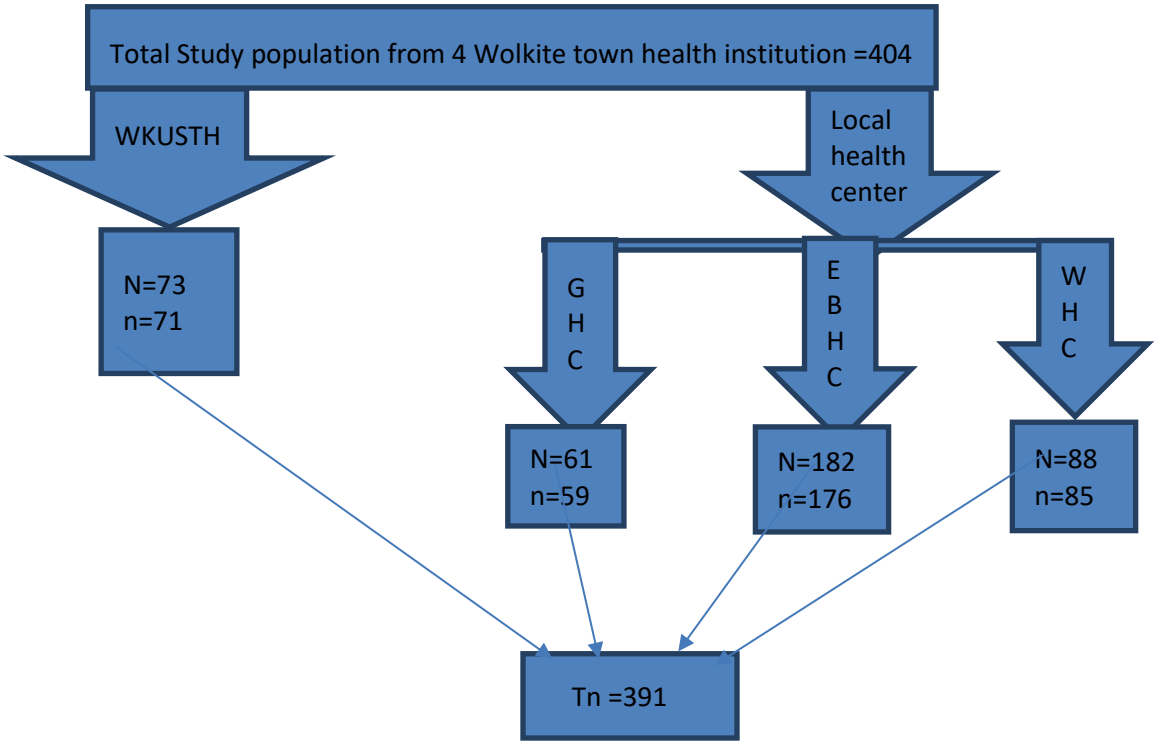

Figure2: schematic presentation of sampling procedure in Wolkite town governmental health facilities. Gurage zone, southern region, Ethiopia 2023.

4.7 Study variables

4.7.1 Dependent variables

Knowledge on home based management of diarrhea.

Practice on home based management of diarrhea.

4.7.2 Independent variables

Socio demographic variables: Age of care giver, residence of caregiver, Educational level, marital status, occupation, number of child

Environmental and household variables: Water source**,** Hand washing practice**,** Waste disposal practice, Latrine utilization**,** Water purification.

Organizational variable: Health education service**,** Health extension visits

4.8 Operational definitions

Diarrhea: children under the age of five who had three or more loose or watery stools for twenty-four hours during data collection, as reported by the children's mothers/caregivers[1].

Good knowledge- those caregivers who were answer the mean and above the mean of the knowledge items [32].

Poor knowledge- those caregivers who were answer below mean of the knowledge items.

Good practice- caregivers who able to answer the mean and above the means of the practice items[32].

Poor practice-those caregivers who answer below the means of practice items.

Home management of diarrhea: This refers to practices undertaken for the treatment of diarrhea[32].

4.9 Data collection tools and procedures

Data was collected from the study subject by using Structured, interviewer administrated and developed by principal investigators. It was prepared in English and Amharic language which was used during interview. The questions and statements are arranged according to particular objectives of the study. The questionaries' included: part I- about Socio demographic data, part II- about caregiver's knowledge on home management of diarrhea in children and part III- about caregivers practice on home based management of diarrhea and part IV about household, environmental and health facility and related factors. Finally data was collected by data facilitator through face to face interview after having common understanding on how to collect the data

4.10 Data processing and analysis

Data was cleaned and coded after data collection. And then, data entry and recoding were done by epi data manager version 4.6 and exported to Statistical Package for Social Science

(SPSS) software version 25 for analysis. Descriptive statistics such as frequency, percent and standard deviation were used to describe the study population in relation to relevant variables. A bivariable and multivariable logistic regression analysis were done.

First, bivariable logistic regression was used to assess the association of one independent variable with the dependent variable. Variables with a P- value ≤ 0.25 in bivariable analysis were a candidate for multivariable logistic regression analysis. A multivariable logistic regression model was used to identify potential significant associated factors after controlling of all possible potential confounders. And then, variables with a P- value < 0.05 at 95% Cl were declared as statistically significant. Finally, the study was presented by statements, figures and tables.

4.11 Data quality control

To ensure the data quality, first we were given attention to check all questionnaires for completeness and discuss for one day before data collection on objective, relevance of the study, methods of interview, confidentiality of information and informed consent. Then the vagueness and logical flow were corrected after significant comment and suggestion by advisors. Frequent check on data collection process was made to insure completeness and consistence of the information that was gathered, any error that found during the process was corrected immediately. Then pretested for consistency of understanding the survey tool and modifications was done accordingly. The pretest was conducted on 5% of the actual sample size (20 caregivers) in Butajira health center. The collected data was submitted on regular basis to supervisors and data was checked for completeness, consistency and error was corrected before processing and analyzing data.

4.12 Ethical consideration

An official letter was taken from Wolkite university department of nursing which is given to Wolkite town governmental health facility for getting acceptance to do the study before starting data collection on study subject. The purpose and objective of the study was explained to the participants before starting interview. Confidentiality and privacy of the respondent was ensured so, the name of the respondents was not be included and ensuring

to participants that their identification was not be pubic and no bad effect on them because of they participated on the study. After this, verbal informed consent was obtained from them. Participation in the study was on voluntary bases, if participants unwilling to participate in the study and those who wish to quit from the study at any point on time was informed to do so without any restriction.

4.13 Dissemination Plan

Final result of the study will be presented and submitted to Wolkite University, College of Medicine and Health Science, department of nursing to serve as reference material for subsequent researches and teaching purposes. The study finding will be submitted to all Wolkite town governmental health facility. The paper will be presented at different conference in the university and scientific conferences. Attempt will be made for publication of the study on peer-reviewed national or international Journal.

5. RESULTS

5.1. Socio demographic characteristics

A total of 391 caregivers were included in this study, of which371 participants gave a complete response with the response rate of 94.8%. More than three fifths (61.2%) of the participants were between the ages of 25-35, mean of the age is 32 ±SD of 7. Regarding child caregiver's relationships, the majority of the respondents 287 (77.4%) were mothers. Concerning the educational status of the respondents, around one-thirds (32.6%) caregivers able to write and write. In terms of caregivers' occupations status, 133 (35.8%) were housewives (Table 1).

Table 1: Socio-demographic characteristic of the caregivers in Wolkite in Wolkite town health facility, Gurage zone, southern Ethiopia, 2023, (n=371)

[a] sibling

Variables	Category	Frequency	Percentage
Age	15-24	53	14.3
	25-35	227	61.2
	36-45	74	19.9
	45 and above	17	4.6
Relation of caregiver to child	Mother	287	77.4
	Father	36	9.7
	Grand mother	31	8.4
	Other[a]	17	4.6
Residence	Urban	257	69.3
	Rural	114	30.7
Marital status	Single	24	6.5
	Married	306	82.5
	Divorced	23	6.2
	Widowed	18	4.9
Educational status	Unable to write and read	99	26.7
	Read and write	121	32.6
	Primary school	69	18.6
	Secondary school	42	11.3
	College and above	40	10.8
Occupation	Governmental employee	79	21.3
	Private employee	61	16.4
	House wife	133	35.8
	Merchant	39	10.5
	Farmer	59	15.9
Family size	Less than or equal to four		
	Five and above	199	53.6
		172	46.4

ORS: Oral Rehydration Fluid

5.2 Knowledge of caregivers about diarrhea and its management

In this study in terms of respondents' knowledge, about 257 (69.3%) had good knowledge of home-based diarrhea management in children under the age of 5. Majority of caregivers (90.3%) heard about ORS, from those 40.6% heard from friends followed by 32.5% from the health center. With regard to respondents' knowledge of the cause of diarrhea, 101(34.4%) caregivers stated that contaminated foods (food poisoning) are the most common cause of diarrhea in children under the age of 5. More than half of respondents (213; 57.4%) said mortality and morbidity in children under the age of 5 are due to the impact of diarrhea (Table 2).

Table 2: Knowledge on caregivers of under-five children on Home-based management of diarrhea for among caregivers in Wolkite town health facility, Gurage zone, southern Ethiopia, 2023, (n=371)

Variable	Category	Frequency	Percentage
What is diarrhea?	Frequent passing of watery stool (3 or more times) per day	181	48.8
	Frequent passing of non-watery stool	97	26.1
	Blood in stools	60	16.2
	Mucus in stool	29	7.8
	Other[b]	4	1.1
Is diarrhea serious	Yes	295	79.5

	No	76	20.5
Do you know cause of diarrhea	yes	294	79.5
	No	77	20.5
Cause of diarrhea?	Poor hygiene	84	28.6
	Food poisoning/ contaminated food	101	34.4
	Contaminated water	46	15.6
	Teething	35	11.9
	Intestinal parasite	19	6.5
	Flies	5	1.7
	Other[c]	4	1.4
Effect of diarrhea?	Mortality and morbidity	213	57.4
	Growth retardation	129	34.8
	Have no knowledge	29	7.8
Is diarrhea preventable?	Yes	322	13.2
	No	49	86.8
How diarrhea prevented?	Proper breast-feeding	105	32.6
	Proper hand-washing	127	39,4
	Safe disposal of the stools of young children	49	15.2
	Child Immunization	41	12.7
Sign of dehydration	Yes	217	41.5
	No	154	58.5

Sign and symptoms of diarrhea?	Becoming weak or lethargic	124	33.4
	Fever and blood in stool	105	28.3
	Marked thirst of water	73	19.7
	Poor feeding repeated vomiting/ vomiting every where	50	13.5
	Reduced urine output	15	4.0
	Other[d]	4	1.1
Did your child eat food?	About the same	133	35.8
	More than usual	147	39.6
	Much less	91	24.5
Hear about ORS	Yes	335	90.3
	No	35	9.7
Source of information about ORS?	Health post	18	5.4
	Health Center	104	31.0
	Hospital	35	10.4
	Mass media (TV, radio…)	50	14.9
	Friends	128	38.2
Importance ORS	To increase the diarrhea	25	6.7
	To decrease the diarrhea	180	48.5
	To prevent dehydration	162	43.7
	I have no idea	4	1.1
When to start ORS	Yes	226	39.1
	No	145	60.9

When to stop giving ORS	Yes No	217 154	58.5 41.5
How to prepare ORS	Yes No	211 160	56.9 43.1

[b] any amount of watery stool

[c] Evil eye

[d] excessive crying

ORS: Oral Rehydration Fluid

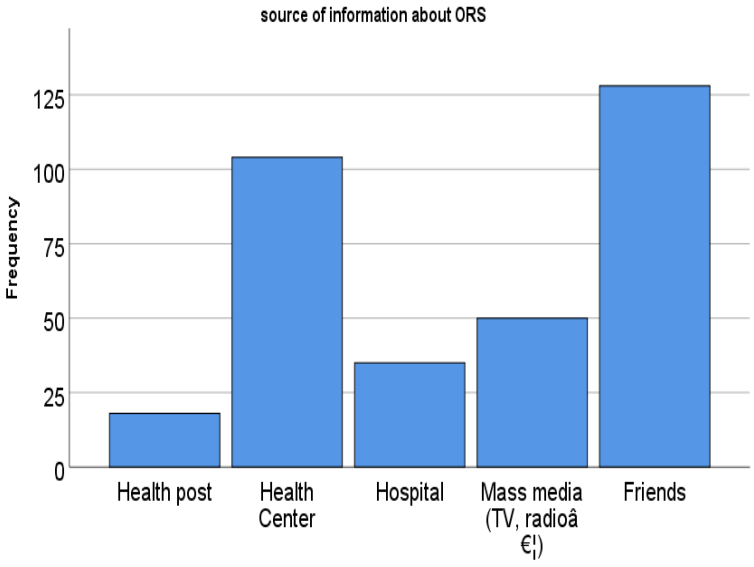

Figure 3: source of information of caregivers in Wolkite town governmental health facilities, Gurage, southern region, Ethiopia, 2023, (n=371).

5.3 Home-based management practice of diarrhea for children under the age of 5

In this study, 251 (67.7%) of respondents had a good homebased management practice of diarrhea for children under the age of 5. More than half of the respondents (202; 54.4%) said feeding should be continued while a child is suffering from diarrhea. About 212 (57.1%) give more fluid than normal. When asked how long keep prepared ORS more than half (220; 59.3%) of caregivers used prepared ORS for one day (24 hrs.). Almost half (193; 52%) of respondents give ORS after passing every loose stool, while 12 (3.2%) haven't idea. Before preparing ORS more than half (60.6%) of respondent wash their hands with soap and water (Table 3).

Table 3: Home-based management practice of diarrhea for children under the age of 5 among caregivers in Wolkite town health facility, Gurage zone, southern Ethiopia, 2023, (n=371)

Variables	Category	Frequency	Percentage
what you do	Stop feeding	132	35.6
	Continues feeding	202	54.4
	Don't know	37	10.0
Type of diet give	Normal family diet	177	47.7
	Dry food (Kita, bread, etc)	185	49.9
	Coffee powder	9	2.4
child drink water	About the same	134	36.1
	More than usual	212	57.1
	Much less	25	6.7
Available recommended home-made fluid	Salt with water	160	43.1
	Rice water	158	42.6
	Soup	42	11.3
	Juice	11	3.0
Receive ORS	Yes	335	90.3
	No	36	9.7
How prepare ORS	1 sachet of ORS by500ml (2 glasses) of water	6	1.6
		21	5.7

	1 sachet of ORS by 75 ml (3 glass) of water 1 sachet of ORS by 1000mls (4 glasses) water 1 sachet of ORS by 1500mls (6 glasses) water 1 sachet of ORS by 2000mls (2 litter) of water	205 46 93	55.3 2.4 25.1
How often give ORS	Once a day 2 – 3 times a day 4 – 5 times a day 6 & above times a day After the passing of every loose stool I have no idea	21 37 38 70 193 12	5.7 10.0 10.2 18.9 52.0 3.2
Amount of ORS solution	As much as the child can drink A cup of 100ml Don't know / can't answer Other (specify)[f]	189 156 25 1	50.9 42.0 6.7 0.3
For how long keep ORS	24 hrs (1 day) 48 hrs (2 days) 72 hrs (3 days) 96 hrs (4 days)	220 121 24 6	59.3 32.6 6.5 1.6
Type of Water to prepare ORS	Previously boiled and cooled water Drinking water Highland water	94 177 100	25.3 47.7 27.0
Hand wash before preparing ORS	Yes No	225 146	60.6 39.4
use SSS	Yes No	228 143	61.5 38.5

[f]Above as the child can drink

ORS: Oral Rehydration Fluid

SSS: Salt Sugar Solution

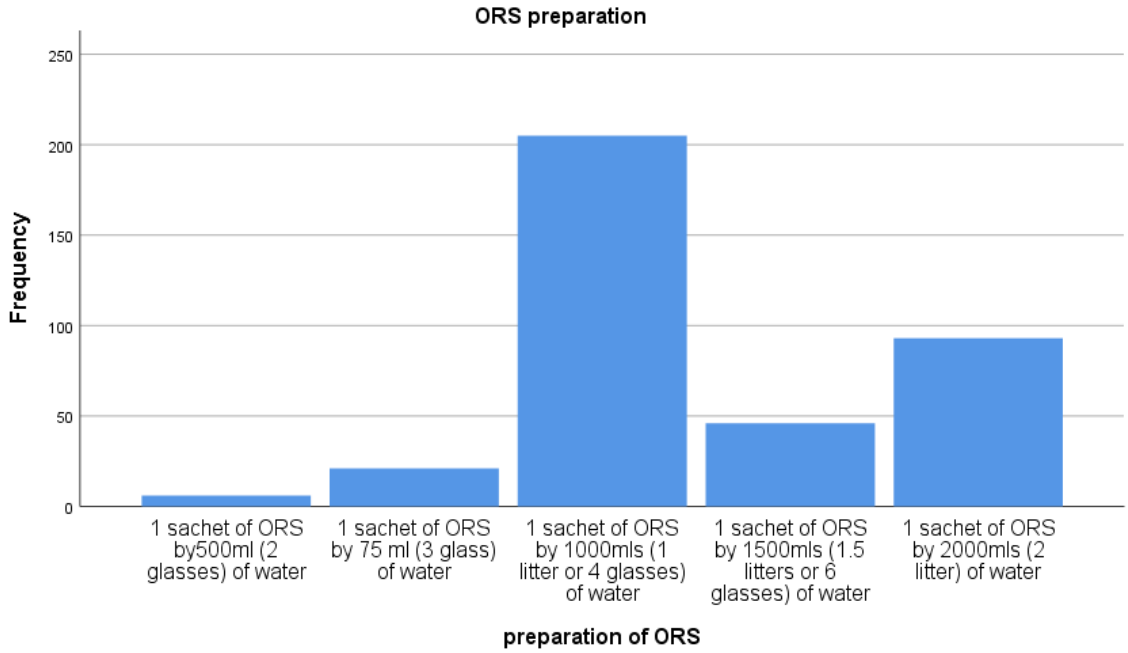

Figure 4: ORS preparation practice by caregivers in Wolkite town governmental health facilities, Gurage, southern region, Ethiopia, 2023, (n=371).

Table 4: Household, environmental and health facility related questions toward home-based management of diarrhea for caregivers of under-five children in Wolkite town governmental health facilities, Gurage, southern region, Ethiopia, 2023, (371).

Variables	Category	Frequency	Percentage (100%)
breast feed	Yes	316	85.2
	No	55	14.8
complementary feeding	Yes	244	65.8
	No	127	34.2
when start complementary	Before 6 months	85	34.8
	After 6 months	133	54.5
	I do not remember	26	10.7

water source	Tape water	258	69.5
	From river	24	6.5
	From underground	70	18.9
	Other[g]	19	5.1
water purification	Yes	114	30.7
	No	257	69.3
types of method purification	Boiling	92	80.7
	Chlorine	9	7.9
	Wuha Agar	7	6.1
	Other[h]	6	5.3
latrine facility	Yes	328	88.4
	No	43	11.6
Latrine utilization	Yes	217	66.2
	No	111	33.8
waste disposal space	Yes	216	58.2
	No	155	41.8
waste disposal practice	Yes	110	50.9
	No	106	49.1
Health extension visit	Yes	214	57.3
	No	157	42.3
Health education	Yes	114	47.0
	No	101	53.0

[g] highland water, spring water
[h] filtration

5.4 Factors Associated with knowledge of Caregivers in Home based Management of Diarrhea

To identify factors associated with the knowledge of caregivers on the diarrheal management logistic regression was used with 95% CI and P-value < 0.05. Age of care giver, family size, Relation of care giver, residence, educational status, occupational status,

marital status, health education, source of information and health extension visit were significantly associated with the outcome variable in the bivariate analysis.

In the multivariate analysis, educational status, the occupation of caregiver, relation of care giver and health education about diarrhea were significantly associated with maternal/caregiver's knowledge. Caregivers who were able to write and read with formal education were by 96.4% less likely to have a good knowledge on home-based management of under-five diarrhea (AOR: 0.036, CI: 0.003, 0.420) compared to those who attended college and above. In this study, farmers were by 95.1% less likely to have good knowledge (AOR: 0.049, CI: 0.003, 0.734) as compared to governmental employ. In relation who were father were by 92% less likely to have a good knowledge on home-based management of diarrhea (AOR: 0.080, CI: 0.01, 0.657)) in children under the age of 5 compared to those who are mothers in the child care relationship. The other factor that is significantly associated with knowledge on home-based diarrhea management in children under the age of 5 is health education which is given be health extensions. Those who did not get health education were by 71.1% less likely to have a good knowledge on home-based management of diarrhea in children under the age of 5 (OR: 0.289, CI: 0.98, 0.848) compared to those who get health education.

Table 5. Bivariable and multivariable logistic regression analysis showing Factors associated with knowledge on home-based diarrheal management in under 5 years among caregivers in Wolkite town governmental health facilities, Gurage zone, south Ethiopia, 2023, (n=371).

Variable	Categories	Knowledge level		COR (95%CI)	AOR (95%)	p-value
		Good	Poor			
age	15 -24	40(80.0%)	10(20.0%)	1	1	
	25-35	156(70.9%)	64(29.1%)	0.609(0.287,1.292)	1.009(0.2,5.094)	0.991

	36-45	51(67.1%)	25(32.9%)	0.510(0.20,1.184)	0.465(0.073,2.947)	0.416
	Above 45	10(40.0%)	15(60.0%)	0.167(0.058,0.480)	1.245(0.076,20.480)	0.878
Relation of caregiver	Mother	223(77.7%)	64(22.3%)	1	1	
	Father	14(38.9%)	22(61%)	0.183(0.088,0.377)	0.080(0.01,0.657)	0.019*
	Grand parents	10(32.3%)	21(67.7%)	0.137(0.062,	1.709(0.165,17.642)	0.653
	Other	10(58.8%)	7(41.2%)	0,452(0.166.1.233)	0.261(0.030,2.300)	0.227
Residence of care giver	Urban	211(82.1%)	46(17.9)	1	1	
	Rural	46(69.3%)	68(59.6%)	0.147(0.90,0.241)	0.473(0.153,1.461)	0.193
Marital status	Married	226(74.8%)	76(25.2%)	1	1	
	Single	15(65.2%)	8(34.8%)	0.469(0.20,1.099)	0.533(0.065,4.389)	0.559
	Divorced	8(32%)	17(68%)	0.158(0.065,0.380)	0.308(0.071,1.266)	0.101
	Widowed	8(38.1)	13(61.9)	0.243(0.094,0.628)	0.805(0.054,11.961)	0.875
Educational status	Unable to write and read	24(24.25)	75(75.8%)	0.46(0.16,0.130)	0.036(0.003,0.420)	0.008*
	Able to write and read	101(83.5%)	20(16.5%0	0.721(0.252,2.067)	0.486(0.039,6.102)	0.578

	Primary school	59(85.5%)	10(14.5%)	0.843(2.66,2.667)	0.443(0.028,6.946)	0.562
	Secondary school	38(90.5%)	4(9.5%)	1.357(5.463,1.357)	0.503(0.031,8.142)	0.629
	College and above	35(87.5%)	5(12.5%)	1	1	
Occupation	Governmental employ	71(89.9%)	7(10.1%)	1	1	
	Private employ	49(80.3%)	13(19.7%)	0.460(0.17,1.209)	0.220(0.017,3.092)	0.266
	House wife	87(65.4%)	47(34.6%)	0.213(0.094,0.481)	0.124(0.010,1.559)	0.106
	merchant	25(66.7%)	13(33.3%)	0.225(0.084,0.606)	0.072(0.05,1.132)	0.061
	farmer	24(40.7%)	35(59.3%)	0.077(0.32,0.189)	0.049(0.003,0.734)	0.029*
Family size	less than or equal to four	138(69.3%)	61(30.7%)	1	1	
	Five and above	119(69.2%)	53(30.8%)	0.992(0.638,1.5444)	0.209(0.672,6.538)	0.208
Source of information	Health post	17(94.4%)	1(5.6%)	1	1	
	Health center	85(81.7%)	19(18.3%)	9.864(1.727,76.514)	0.748(0.039,14.219)	0.847
	Hospital	26(74.3%)	9(18.3%)	2.596(1.505,4.795)	0.393(0.010,15.168)	0.616

	Mass media	38(76.3%)	12(25.7%)	1.676(0.74,3.879)	0.304(0.014,6.700)	0.304
	Friends	81(63.3%)	47(36.5%)	1.837(0.875,3.858)	0.319(0.020,5.213)	0.319
health extension visit	no visit	100(63.7%)	57(36.3%)	0.637(0.408,0.994)	0.570(0.04,92.11)	0.570
	have visit	157(73.4%)	57(26.6%)	1	1	
health education	no	64(63.4%)	37(36.6%)	0.391(0.209,0.728)	0.289(0.98,0.848)	0.024*
	yes	93(81.6%)	21(18.4%)	1	1	

$*$ indicates significantly associated variables (p value <0.05).
COR: crude odds ratio; CI: confidence interval; AOR: adjusted odds ratio.
1 = Reference

5.6 Factors Associated with Practice of Caregivers in Home Management of Diarrhea

To identify factors associated with the knowledge of caregivers on the diarrheal management logistic regression was used with 95% CI and p-value < 0.05. In bivariate analysis, the age of caregivers, relation of care giver, marital status, family size, educational status, occupational status, residence, hand washing practice, drinking water source, water purification practice, latrine utilization and waste disposal practice were associated with the outcome variable practice.

In the multivariate analysis, relation of care giver, educational status, hand washing practice and water purification practice were significantly associated with caregivers practice in the home management of diarrhea. Caregivers who were able to write and read (formal education) by 96.2% less likely to have a good home-based management practice of diarrhea (AOR: 0.038, CI: 0.004, 0.397) in children under the age of 5 compared to those who attended college and above (higher education). In the child care relationship, being fathers were by 90.9% less likely to have a good home-based management practice of diarrhea in children under the age of 5 (AOR: 50.091, CI: 0.015, 0.567) compared to those who are mother. Care givers who had not hand washing practice were by 89.7% less likely have good practice (AOR: 0.103, CI: 0.027, 0.393) than who had proper hand washing practice. Caregivers who did not used water purification method 86.1% were less likely have good practice (AOR: 0.139, CI: 0.029, 0.670) than who used water purification practice.

Table 6: Bivariable and multivariable logistic regression analysis showing Factors associated with home-based diarrheal management practice in under 5 years among caregivers in Wolkite town governmental health facilities, Gurage zone, south Ethiopia, 2023, (n=371).

Variable	Categories	practice level		COR (95%CI)	AOR (95%CI)	p-value
		Good	Poor			
age	15 -24	40(80.6 %)	10(20.0 %)	1	1	
	25-35	15068.2 %)	70(31.8 %)	0.536(0.253,1.133)	0.415(0.043,4.026)	0.448
	36-45	51(67.1 %)	25(32.9 %)	0.510(0.220,1.184)	0.293(0.026,3.335)	0.323
	Above 45	1040.0%)	15(60.0 %)	0.167(0.058,0.480)	0.141(0.005,3.788)	0.243
Relation of caregiver	Mother	218(76.0 %)	69(24.0 %)	1	1	0.091
	Father	14(38.9 %)	22(61.0 %)	0.201(0.098,0.415)	0.091(0.015,0.567)	0.010*

	Grand parents	9(29.2%)	22(71.0%)	0.129(0.057,0.294)	0.786(0.058,10.735)	0.857
	Other	10(58.8%)	7(41.2%)	0.452(0.166,1.233)	0.143(0.013,1.600)	0.115
Residence of care giver	Urban	207(80.5%)	50(19.5%)	1	1	1
	Rural	44(38.6%)	70(61.4%)	0.152(0.093,0.247)	0.643(0.136,3.044)	0.577
Educational status	Unable to write and read	29(29.3%)	70(70.7%)	0.073(0.028,0.193)	0.038(0.004,0.397)	0.006*
	Able to write and read	100(82.6%)	21(17.4%)	0.840(0.313,2.255)	0.432(0.042,4.454)	0.481
	Primary school	53(76.8%)	16(23.2%)	0.585(0.208,1.641)	0.290(0.029,2.960)	0.297
	Secondary school	35(83.3%)	7(16.7%)	0.882(0.269,2.895)	0.254(0.014,4.693)	0.357
	College and above	34(85.0%)	6(15.0%)	1	1	0.016
Occupational status	Governmental employ	71(89.9%)	810.1%)	1	1	
	Private employ	46(75.4%)	15(24.6%)	0.346(0.136,0.880)	1.729(0.218,13.707)	0.604
	House wife	89(66%)	44(33.1%)	0.228(0.101,0.515)	2.397(0.312,18.432)	0.401
	merchant	23(59.0%)	16(41.0%)	0.162(0.061-0.427)	0.469(0.059,3.7420)	0.475
	farmer	2237.7%)	37(62.7%)	0.067(0.027,0.165)	0.327(0.048,2.245)	0.255
Family size	less than or equal to four	130(65.3%)	69(34.7%)	1	1	
	Five and above	121(70.3%)	51(29.7)	1.259(0.912,1.952)	1.954(0.654,6.775)	0.291
Marital status	Married	225(74.3%)	78(25.7%)	1	1	
	Single	11(45.8%)	13(54.2%)	0.293(0.126,0.682)	0.715(0.08,6.3760	0.764

	Divorced	7(28.0%)	18(72.0%)	0.135(0.054,0.335)	0.308(0.037,2.585)	0.278
	Widowed	8(42.1%)	11(57.9%)	0.252(0.098,0.650)	0.578(0.04,8.022)	0.683
Hand wash with soap	No	54(37.0%)	92(63.3%)	0.083(0.050,0.140)	0.103(0.027,0.393)	0.001*
	yes	197(87.6%)	28(12.4%)	1	1	
Drinking water source	Tap	200(79.7%)	58(22.5%)	1	1	
	River	15(62.5%)	9(37.5%)	0.483(0.201,1.161)	0.720(0.055,9.501)	0.803
	Under ground	22(31.4%)	48(68.8%)	0.133(0.074,0.238)	0.222(0.041,1.202)	0.061
	other	14(73.3%)	5(26.3%)	0.812(0.281,2.349)	0.523(0.052,5.219)	0.581
waste disposal practice	no	68(58.1%)	49(41.9%)	0.211(0.108,0.413)	0.744(0.207,2.674)	0.651
	yes	92(86.8%)	14(13.2%)	1	1	
purification method	Don't Use	162(63.0%)	95(37.0%)	0.479(0.287,0.798)	0.139(0.029,0.670)	0.014*
	use	89(78.1%)	25(21.9%)	1	1	
latrine utilization	no	58(52.3%)	53(47.7%)	0.270(0.164,0.446)	0.704(0.170,2.912)	0.628
	yes	174(80.2%)	43(19.8%)	1	1	

$*$ indicates significantly associated variables (p value <0.05).

6. DISCUSSION

This study found that 69.3% of caregivers had a good knowledge on homebased management of diarrhea in children under the age of 5. It is consistent with the study conducted in Dre Dawa, which indicated 65.2% mothers had good knowledge of diarrhea management[25]. However, this is relatively higher than the findings from the study conducted in Benishangul Regional State (37.5%)[26]. The difference from Benishangul

Region may be due to that the diverse socioeconomic backgrounds and geographical location may affect access to health care service in Benishangul[39]. Also, this study finding was lower compared with the study conducted in Cambodia (85.1%) which had a good knowledge on diarrhea management. The difference from Cambodia might be due to the study setup that both studies were conducted in deferent countries and continents and socio economic factor [23].

In this study, caregivers who were unable to write and read (no formal education) were 96.4% less likely to have a good knowledge on home-based management of under-five diarrhea (AOR: 0.036, CI: 0.003,0.420) compared to those who attended college and above The finding is almost consistent with studies conducted in India, Ginchi, Fenote selam [32, 34, 40].This knowledge variation may be due to difference in access to information about diarrhea also the variation may be due to differences[39]. In this study, farmers were by 95.1% less likely to have good knowledge (AOR: 0.049, CI: 0.003, 0.734) as compared to governmental employ. The reason may be that farmers are daily laborers and mostly live in rural area so they could not have the opportunity to get information from different sources like newspaper, television, and radio as the nature of their work makes them busy, they travel long distance to get health services but governmental employers had this opportunity[41].

The other factor that is significantly associated with knowledge on home-based diarrhea management in children under the age of 5 is relation of care giver. Those who were father were by 92% less likely to have a good knowledge on home-based management of diarrhea in children (AOR: 0.080, CI: 0.01, 0.657) compared to those who were mothers in the child care relationship, which is similar to the study in Ginchi, which showed that mother is more likely to have good knowledge than Grandparent and others. This is because the mother is everything for her child and gives everything for her child[32].

The other factor that is significantly associated with knowledge on home-based diarrhea management in children under the age of 5 is health education which is given be health extensions. Those who did not get health education were by 71.1% less likely to have a good knowledge on home-based management of diarrhea (AOR: 0.289, CI: 0.98, 0.848) compared to those who get health education. This is supported by study in kerazi, Sudan which imply health education activities like personal communication, focused group

discussion, lectures, and home visits achieved significant improvement in mother's KAP regarding to home care for children under the age of five with diarrheal disease[42].

Regarding practice, this study has shown that the level of practice of caregivers towards the home management of diarrhea was 67.7% which is greater than the study conducted in Ginchi town (59%), Fagita lekoma (37.6%) and (46.3%) of care givers have a good home-based management practice of diarrhea[27, 32, 34]. The reason is caregivers living in the study town have more access and opportunity for information about diarrhea and its management. About aware of ORS solution preparation also there is a diference on study period.

In this study, caregivers who were with able to write and read (formal education) 96.2% times less likely to have a good home-based management practice of diarrhea in children under the age of 5 (AOR: 0.038, CI: 0.004,0.397) compared to those who attended college and above (higher education). The finding is consistent with studies conducted in Ginchi and Fenote Selam [32, 34]. The reason is because of lower educational level can decrease the understanding on managing diarrhea than at high educational level and caregivers become more skillful towards diarrhea management when educational level of increased[39].

In terms of care giver relation to the child those who were being fathers were by 90.9% less likely to have a good home-based management practice of diarrhea in children under the age of (AOR: 50.091, CI: 0.015, 0.567) compared to those who are mother in the child care relationship. The reason may be because the mother is everything for her child and gives everything for her child, and also she stays with her child for a long time. They provide breast milk for their children that reduces the incidence of diarrheal disease more than others. The study in Ginchi also support that mothers has more practice than other[32]. Care givers who had not hand washing with soap were by 89.7% less likely have good practice (AOR: 0.103, CI: 0.027, 0.393) than who had proper hand washing practice. Which is supported by study conducted at north Shoa zone improper hand washing determinant factors for morbidity of childhood diarrhea[43]. This is because Handwashing with soap complemented with hand hygiene promotion significantly decreased diarrheal episodes in children under 5 years old [44]. The other factor that is significantly associated

with home-based diarrhea management practice in children under the age of 5 is water purification method. Those who did not used water purification method were by 86.1% were less likely have good practice (AOR: 0.139, CI: 0.029, 0.670) than who used water purification practice. This is because of not using purification for any water source will increase the incidence of diarrheal disease and a barrier on home based management practice than who used purification method[17]

7. CONCLUSION

The study revealed that two thirds of the respondents had knowledge and practice toward home-based management of diarrhea in children under the age of 5. Educational status, the occupation of caregiver, relation of care giver and health education given about diarrhea were significantly associated with maternal/caregiver's knowledge. Relation of care giver, educational status, hand washing practice and water purification practice were significantly associated with caregivers practice in the home management of diarrhea.

8. RECOMMENDATIONS

Provide health education for the mothers on preparation of ORS, home fluid preparation, prevention of Diarrhea and sign of dehydration and use it effective strategy for the improvement of mothers' competence in managing their children at home.

We recommend that different approaches and strategy for the improvement of care givers competence in managing their children at home.

District health office make a plan strategies for the distribution of disinfectant to treat drinking water at home level and to reach the rural community where the risk of water-borne diseases is high.

Effective educational programs while conducting a home visit.

Preparing different campaign on the issue addressing information through mass media and health extension workers.

LIMITATION OF THE STUDY

Mothers might have over reported recent diarrhea occurrence because they might think their children could receive medical attention through the survey.

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LIST OF ANNEXS

Annex 1: informed consent form

My name is…… and I am from Wolkite university college of medicine and health science department of Nursing. This questionnaire is designed to assess knowledge and practice and associated factors towards home based management of diarrhea among care giver of children attending under five in Halaba kulito general governmental health institutions. We would like to ask you some questions that are related to the above topic. Your contribution has a great input for the study and we would greatly appreciate your participation. There is no possible risk associated with participating in this study. Your name will not be written in the questionnaire and please be assured that all the information you give will be kept strictly confidential. Your participation is completely voluntary.

A. Agree

B. Disagree

Annex 2; Questionnaire

Questionnaire on knowledge, and practices of mothers towards home based management of diarrhea and associated factors for under five children in HKGH, 2023.

Part I: Socio-demographic characteristic of mothers/care givers

S. No	Questions	Responses Questionnaire	Skip
101	Age of caregivers	_____ in years	
102	Relation of caregiver to child	1. Mother 2. Father 3. Sibling 4. Grand mother 5. Other, specify …….	
103	Residence	1. Rural 2. Urban	
104	Marital status	1. Single 2. Married 3. Divorced 4. Widowed	
105	Educational status	1. Unable to write and read 2. Read and write 3. Primary school 4. Secondary school 5. College and above	

106	Occupation	1. Governmental employee 2. Private employee 3. House wife 4. Merchant 5. Farmer	
107	Family size	_____ in number	

Part II: Knowledge of mothers/caregivers on home-based management of diarrhea for under five children

201	What do you understand by diarrhea?	1. Frequent passing of watery stool (3 or more times) per day 2. Frequent passing of non-watery stool 3. Blood in stools 4. Mucus in stool 5. Other, specify…….	
202	Is diarrhea a serious child illness?	1. Yes 2. No	
203	Do you know the cause of diarrhea?	1. Yes 2. No	
204	If yes for Q203, what will be the cause of diarrhea? More than one answer is possible.	1. Poor hygiene 2. Food poisoning/ contaminated food 3. Contaminated water 4. Teething 5. Intestinal parasite 6. Flies 7. Other, specify….	

205	What do you know about the effect of diarrhea on under five children?	1. Mortality and morbidity 2. Growth retardation 3. Have no knowledge	
206	Is diarrhea preventable?	1. Yes 2. No	
207	If yes for Q206, Diarrhea can be prevented through? More than one answer is possible	1. Proper breast-feeding 2. Proper hand-washing 3. Safe disposal of the stools of young children 4. Child Immunization	
208	Do you know sign of dehydration?	1. Yes 2. No	
209	What are the sign and symptoms your child had when he/she had diarrhea? You can choose more than one answers).	1. Becoming weak or lethargic 2. Fever and blood in stool 3. Marked thirst of water 4. Poor feeding repeated vomiting/ vomiting every where 5. Reduced urine output 6. Other, specify…….	
210	During the diarrhea illness, did your child eat food?	1. About the same 2. More than usual 3. Much less	
211	Did you hear about ORS fluid?	1. Yes 2. No	
212	From where do you heard about ORS?	1. Health post 2. Health Center 3. Hospital 4. Mass media (TV, radio…)	

		5. Friends	
213	Do you know the importance of giving ORS to your child?	1. To increase the diarrhea 2. To decrease the diarrhea 3. To prevent dehydration 4. I have no idea	
214	Do you know when to start ORS?	1. Yes 2. No	
215	Do you know when to stop giving ORS?	1. Yes 2. No	
216	Do you know how to prepare ORS at home?	1. Yes 2. No	

Part III: Practice of mothers/caregivers towards home based diarrhea management for under five children

301	If your child started diarrhea what you will do?	1. Stop feeding 2. Continues feeding 3. Don't know	
302	What type of diet you give to your child, when she/ he has diarrhoea?	1. Normal family diet 2. Dry food (Kita, bread, etc) 3. Coffee powder	
303	During the diarrhea illness did the child drink water?	1. About the same 2. More than usual 3. Much less	

304	What available recommended home-made fluid / home base oral rehydration fluid can be given to a child with diarrhea? (Tick as many as possible)	1. Salt with water 2. Rice water 3. Soup 4. Juice 5. Other, specify……	
305	Did your child receive ORS solution during diarrhea episode?	1. Yes 2. No	
306	How do you prepare WHO ORS?	1. 1 sachet of ORS by500ml (2 glasses) of water 2. 1 sachet of ORS by 75 ml (3 glass) of water 3. 1 sachet of ORS by 1000mls (1 litter or 4 glasses) of water 4. 1 sachet of ORS by 1500mls (1.5 litters or 6 glasses) of water 5. 1 sachet of ORS by 2000mls (2 litter) of water	
307	How often have you given ORS to your child?	1. Once a day 2. 2 – 3 times a day 3. 4 – 5 times a day 4. 6 & above times a day 5. After the passing of every loose stool 6. I have no idea	

308	How much ORS solution have you been given to the child each time the child has loose stool?	1. As much as the child can drink 2. A cup of 100ml 3. Don't know / can't answer 4. Other (specify)_____	
309	For how long do you keep the prepared ORS?	1. 24 hrs (1 day) 2. 48 hrs (2 days) 3. 72 hrs (3 days) 4. 96 hrs (4 days) 5. Other, specify _____	
310	What type water do you use to prepare ORS solution?	1. Previously boiled and cooled water 2. Drinking water 3. Highland water	
311	Do you wash your hands with soap and water before preparing ORS?	1. Yes 2. No	
312	Do you use salt sugar solution to treat diarrhea?	1. Yes 2. No	

Part IV: Household, environmental and health facility related questions toward home-based management of diarrhea for under-five children

S.no	Questions	Responses	Skip
401	Is your child breast feed now?	1. Yes 2. No	

402	If yes for Q401, did your child start complementary feeding?	1. Yes 2. No	
403	If yes for Q402, when you start?	1. Before 6 months 2. After 6 months 3. I do not remember	
404	From where you get drinking water source?	1. Tape water 2. From river 3. From underground 4. Others_____	
405	Have you used water purification methods?	1. Yes 2. No	
406	If yes for Q403, which types of method have used usually?	1. Boiling 2. Chlorine 3. Wuha Agar 4. Other specify _____	
407	Do you have latrine facility for the family member?	1. Yes 2. No	
408	If yes for Q407, have you used it properly?	1. Yes 2. No	
409	Do you have waste separate disposal space in your household?	1. Yes 2. No	
410	If yes for Q409, have you usually practiced proper waste disposal?	1. Yes 2. No	
411	Have you visited by Health extension workers in your house?	1. Yes 2. No	

412	If yes for Q411, did they provide health education for you?	1. Yes 2. No	

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A. Agree

B. Disagree

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S. No	Questions	Responses Questionnaire	Skip
101	Age of caregivers	_____ in years	
102	Relation of caregiver to child	6. Mother 7. Father 8. Sibling 9. Grand mother 10. Other, specify …….	
103	Residence	3. Rural 4. Urban	
104	Marital status	5. Single 6. Married 7. Divorced 8. Widowed	
105	Educational status	6. Unable to write and read 7. Read and write 8. Primary school 9. Secondary school 10. College and above	
106	Occupation	6. Governmental employee 7. Private employee 8. House wife 9. Merchant 10. Farmer	
107	Family size	_____ in number	

Part II: Knowledge of mothers/caregivers on home-based management of diarrhea for under five children

201	What do you understand by diarrhea?	6. Frequent passing of watery stool (3 or more times) per day 7. Frequent passing of non-watery stool 8. Blood in stools 9. Mucus in stool 10. Other, specify…….	
202	Is diarrhea a serious child illness?	3. Yes 4. No	
203	Do you know the cause of diarrhea?	2. Yes 2. No	
204	If yes for Q203, what will be the cause of diarrhea? More than one answer is possible.	8. Poor hygiene 9. Food poisoning/ contaminated food 10. Contaminated water 11. Teething 12. Intestinal parasite 13. Flies 14. Other, specify….	
205	What do you know about the effect of diarrhea on under five children?	4. Mortality and morbidity 5. Growth retardation 6. Have no knowledge	
206	Is diarrhea preventable?	2. Yes 2. No	
207	If yes for Q206, Diarrhea can be prevented through? More than one answer is possible	5. Proper breast-feeding 6. Proper hand-washing	

		7. Safe disposal of the stools of young children 8. Child Immunization	
208	Do you know sign of dehydration?	3. Yes 4. No	
209	What are the sign and symptoms your child had when he/she had diarrhea? You can choose more than one answers).	7. Becoming weak or lethargic 8. Fever and blood in stool 9. Marked thirst of water 10. Poor feeding repeated vomiting/ vomiting every where 11. Reduced urine output 12. Other, specify…….	
210	During the diarrhea illness, did your child eat food?	4. About the same 5. More than usual 6. Much less	
211	Did you hear about ORS fluid?	3. Yes 4. No	
212	From where do you heard about ORS?	6. Health post 7. Health Center 8. Hospital 9. Mass media (TV, radio…) 10. Friends	
213	Do you know the importance of giving ORS to your child?	5. To increase the diarrhea 6. To decrease the diarrhea 7. To prevent dehydration 8. I have no idea	

214	Do you know when to start ORS?	3. Yes 4. No	
215	Do you know when to stop giving ORS?	3. Yes 4. No	
216	Do you know how to prepare ORS at home?	3. Yes 4. No	

Part III: Practice of mothers/caregivers towards home based diarrhea management for under five children

301	If your child started diarrhea what you will do?	4. Stop feeding 5. Continues feeding 6. Don't know	
302	What type of diet you give to your child, when she/ he has diarrhoea?	4. Normal family diet 5. Dry food (Kita, bread, etc) 6. Coffee powder	
303	During the diarrhea illness did the child drink water?	4. About the same 5. More than usual 6. Much less	
304	What available recommended home-made fluid / home base oral rehydration fluid can be given to a child with diarrhea? (Tick as many as possible)	6. Salt with water 7. Rice water 8. Soup 9. Juice 10. Other, specify……	
305	Did your child receive ORS solution during diarrhea episode?	3. Yes 4. No	

306	How do you prepare WHO ORS?	6. 1 sachet of ORS by500ml (2 glasses) of water 7. 1 sachet of ORS by 75 ml (3 glass) of water 8. 1 sachet of ORS by 1000mls (1 litter or 4 glasses) of water 9. 1 sachet of ORS by 1500mls (1.5 litters or 6 glasses) of water 10. 1 sachet of ORS by 2000mls (2 litter) of water	
307	How often have you given ORS to your child?	7. Once a day 8. 2 – 3 times a day 9. 4 – 5 times a day 10. 6 & above times a day 11. After the passing of every loose stool 12. I have no idea	
308	How much ORS solution have you been given to the child each time the child has loose stool?	5. As much as the child can drink 6. A cup of 100ml 7. Don't know / can't answer 8. Other (specify)_____	
309	For how long do you keep the prepared ORS?	6. 24 hrs (1 day) 7. 48 hrs (2 days) 8. 72 hrs (3 days) 9. 96 hrs (4 days) 10. Other, specify _____	

310	What type water do you use to prepare ORS solution?	4. Previously boiled and cooled water 5. Drinking water 6. Highland water	
311	Do you wash your hands with soap and water before preparing ORS?	3. Yes 4. No	
312	Do you use salt sugar solution to treat diarrhea?	1. Yes 2. No	

Part IV: Household, environmental and health facility related questions toward home-based management of diarrhea for under-five children

S.no	**Questions**	**Responses**	**Skip**
401	Is your child breast feed now?	2. Yes 2. No	
402	If yes for Q401, did your child start complementary feeding?	2. Yes 2. No	
403	If yes for Q402, when you start?	4. Before 6 months 5. After 6 months 6. I do not remember	
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406	If yes for Q403, which types of method have used usually?	5. Boiling 6. Chlorine 7. Wuha Agar 8. Other specify _____	
407	Do you have latrine facility for the family member?	2. Yes 2. No	
408	If yes for Q407, have you used it properly?	2. Yes 2. No	
409	Do you have waste separate disposal space in your household?	2. Yes 2. No	
410	If yes for Q409, have you usually practiced proper waste disposal?	2. Yes 2. No	
411	Have you visited by Health extension workers in your house?	2. Yes 2. No	
412	If yes for Q411, did they provide health education for you?	2. Yes 2. No	

AMHARIC VERSION

ወልቂጤ ዩኒቨርስቲ

ጤና ሳይንስ ኮሌጅ

ነርሲንግ ትምህርት ክፍል

ፈቃደኝነትን መጠየቂያ ቅጽ

እንደምንዋሉ/አደሩእኔ .....እባላለሁ። ወልቂጤ ዩኒቨርስቲ በጤና ሳይንስ ኮሌጅ በነርሲንግ ትምህርት ክፍል በሚካሄደው ጥናት ላይ እኔናእርሶ ከ20-30 ደቂቃ ቆይታ ይኖረናል;; ወደ ውደይይታችን ከመሄዳቺን በፊት የጥናቱን አላማና አጠቃላይ ሁኔታ አንነግሮታለን ከዚያን በዋላ ፈቃደኝነቶን ይነግሩኛል። የዚህ ጥናት አላማ የተቅማጥን በሽታ በቤት ውስጥ ለማከም የእናቶችን(የተንከባካቢውን) እውቀትና ተግባር ማጥናት ይሆናል።ጥናቱ የሚካሄደው በጥያቄና መልስ ነው። የጥናቱ ውጤት ለመንግስት ለእናቶች ና ለሆስፒታል ያገለግላል። በጥናቱ ላይ ሲሳተፉስ ስምዋ አይጻፍም።በተቋሙ ለሚወስዱት አገልግሎት ምንም ችግር አይፈጥርም። በጥናቱ ላይ መሳተፍም ሆነ አለመሳተፍ መብቶ ነው።

ስለዚህ ልቀጥል? 1. አዎ..... 2.አይ.....

የመጠይቁ ቁጥር ..... የተጠየቀበት ቀን ..... ጠያቂ.....

ክፍል1;-የእናቶች (የተንከባካቢዎች) ማህበራዊ ሁኔታና የማንነት መረጃዎች።

ቁ.	ተለዋዋጭ	ምርጫ	ዝለለው
1	የተንከባካቢው እድሜ		
2	ከልጁ ጋር ያሎት ግኑኝነት	1. እናት 2. አባት 3. ሀያት 4.ሌላ	
3	የመኖሪያ ቦ ታ	1.ከተማ 2.ገጠር	
4	የጋብቻ ሁኔታ	1.ያገባ 2.ያላገባ 3. የፈታ 4. ባል ወይም ሚስት የሞተባት	
5	የትምህርት ደረጃ	1. ማንበብ እና መፃፍ የማይችል 2.ማንበብ እና መጻሀፍ የሚችል 3.አንደኛ ደረጃ 4.ሁለተኛ ደረጃ	

		5. ከሌጁ እና ከዛ በላይ	
6	ስራ	1.የቤት እመቤት 2.ነጋዴ 3.የመንግስት ተከፋይ 4.ገበር 5.ሌላ	
7	የቤተሰብ ቁጥር	1. ከ 4 በታች 2.4-8 3. ከ 8 በላይ	

ክፍል2;-የተቅማጥ በሺታን በቤት ውስጥ ለማከም የእናቶች(ተንከባካቢዎች) እውቀት።

ቁ	ተለዋዋጭ	ከፈል	ዝለለው
1	ተቅማጥ ምን ማለት ነው?	1.በቀን ውስጥ የቀጠነ/ከሶስት በላይ ሰገራ ከወጣ 2. ትክክለኛው ሰገራ ቶሎ ቶሎ ከመጣ 3. ደም ያለው ሰገራ	

		4.ንፍጥ መሳይ ያለው ሰገራ 5. ሌላ	
2	ተቅማጥን አደገኛ በሽታ ነው?	1.አዎ 2.አይ	
3	የተቅማጥን መንሴኤ ያውቃሉ?	1. አዎ 2. አላውቅም	
4	ለጥያቄ 3 አዎ ካሉ መንስዔው ምንድን ነዉ ?	1.ንፅህና አለመጠበቅ 2. የተበከለ ውሃ 3 .የተበከለ ምግብ 4. ጥርስ ማብቀል 5 የአንጀት ትል 6.ዝንብ 7. ሌላ	
5	የተቅማጥን ምን ያስከትለል?	1.ሞት እና በሽታ 2.እድገትን ማዝግየት 3.እውቀቱ የለኝም	
6	የተቅማጥ መከላከል ይቻላል?	1.አዎ	

		2.አይ	
7	ለጥያቄ 6 አዎ ከሆነ መልስዎ ተቅማጥን እንዴት መከላከል ይቻላል? ከአንድ በላይ መልስ ይቻላል.	1.በአግባቡ ጡት በማጥባት 2.በአግባቡ እጅን በመታጠብ 3.የህፃናትን ሰገራ በአግባቡ ማስወገድ 4.ህፃናትን ማስከተብ	
8	የተቅማጥ አደገኛ ምልክት የሚባሉት ያውቃሉ?	1.አዎ 2.አይ	
9	8ኛ ጥያቄ አዎ ካሉ አደገኛ ምልክት የቱ ነው?	1. መድከም/እራስን መሳት 2. ትኩሳት እና ደም ያለው ሰገራ 3. ውሃ በደምብ መፈለግ 4.ጡት መጥባት ማቆም እና ማስመለስ 5 .የአነሰ የሽንት መጠን 6.ሌላ	
10	የልጅዋ የምግብ ፍላጎትእንዴት ነው?	1 የምግብ ፍላጎቱ አልቀነሰም 2 የምግብ ፍላጎት ጨምሮል 3 የምግብ ፍላጎት ቀንስዋል	

11	ኦ.አር.ስ ያቃሉ?	1.አዎ 2.አይ	
12	ስለ ኦ.አር.ስ የት ነው የሰሙት ?	1.በራሪ ወረቀት 2.ጤና ተቅዋም 3.ሆስፔታል 4 ከሚድያ ቲቪ እና ራድዬ 5 ጎዋደኛ	
13	በተቅማጥ ጊዜ በአፍ የሚወሰዱ ፈሳሽ ነገሮች ጥቅማቸውን ያውቃሉ?	1.የተቅማጥን መጠን ይጨምራል 2.የተቅማጥን መጠን ይቀንሳል 3.መጠማትን ለመከላከል 4. አላውቅም	
14	ኦ.አር.ስ መቼ ማስጀመር እንዳለቦት ያውቃሉ?	1. አዎ 2. አላውቅም	
15	ኦ.አር.ስ መቼ ማቆም እንዳለቦት ያውቃሉ?	1. አዎ 2. አላውቅም	

16	ኦ.አር.ስ እንዴት እንደሚዘጋጅ ያውቃሉ?	1.አዎ 2.አላውቅም	

ክፍል3: የተቅማጥ በሽታን በቤት ውስጥ ለማከም የእናቶች(ተንከባካቢዎች) ተግባር።

1	ልጆት ተቅማጥ ቢይዘው ምን ያደርጋሉ?	1.መመገብ አቆማለሁ 2.መመገብ እቀጥላለሁ 3.አላውቅም	
2	ምን አይነት ምግብ ይመግቡታል ልጆት ተቅማጥ ሲይዘው?	1.እኛ የምንበላውን 2.ይረቅ ምግቦች(ቂጣ፣ ዳቦ) 3.የቡና ዱቄት	
3	ልጆት ተቅማጥ ሲይዘው የሚጠጣ ምን ያህል ይሰጡታል?	1. እንደበፊቱ 2. ከበፊቱ በታች 3. ከበፊቱ በላይ	

4	በተቅማጥ ጊዜ በቤት ውስጥ ምን ምግብ ይመከራል፣ ይሰጣሉ?	1. የጨው ና የስኳር ውህደት 2. የሩዝውሀ 3. ጁስ 4. ሾርባ 5. ሌላ_____	
5	በተቅማጥ ጊዜ ልጆት ኦ.አር.ስ ይሰጣሉ?	1.አዎ 2.አይ	
6	ኦ.አር.ስ እንዴት ያዘጋጃሉ?	1. አንድ እሽግ ኦ.አር.ስ በ 500 ሚሊ (2 ብርጭቆ) ውሀ 2. አንድ እሽግ ኦ.አር.ስ በ 750 ሚሊ(3 ብርጭቆ) ውሀ 3. አንድ እሽግ ኦ.አር.ስ በ 1000 ሚሊ (4 ብርጭቆ) ውሀ 4. አንድ እሽግ ኦ.አር.ስ በ 1500 ሚሊ (1.5 ብርጭቆ) ውሀ 5. አንድ እሽግ ኦ.አር.ስ በ 2000 ሚሊ(2 ብርጭቆ) ውሀ	

7	የተዘጋጀው ኦ.አር.ስ ለልጆ ምን ያህል ጊዜ ይሰጣሉ?	1. በቀን አንዴ 2. በቀን 2_3 ጊዜ 3. በቀን 4-5 ጊዜ 4. በቀን 6 እና ከዛ በላይ ጊዜ 5. ካስቀመጠው በኋላ 6. አላውቅም	
8	ከ እያንዳንዱ ተቅማጥ ቡሀላ ለልጆ ምን ያህል ኦ.አር.ስ ይሰጣሉ?	1. ልጅ መጠጣት እስከቻለው 2. አንድ ብርጭቆ 100 ሚሊ 3. አላውቅም 4. ሌላ	
9	የተዘጋጀው ኦ.አር.ስ ለምን ያህል ጊዜ ይጠቅማሉ?	1.1ቀን 2. 2ቀን 3. 3 ቀን 4. 4 ቀን 5. ሌላ_____	
10	ኦ.አር.ስ ለማዘጋጀት ምን አይነት ውሀ ይጠቀማሉ?	1. ፈልቶ የቀዘቀዘ ውሀ 2. የምንጠጣውን ውሀ	

		3. የሀይላንድ ውሀ	
11	እጆትን በውሀ እና በሳሙና ይታጠባሉ?	1.አዎ 2.አይ	
12	ተቅማጥን ለመከላከል የጨውና የስኳር ውህደትን ይጠቀማሉ?	1.አዎ 2.አይ	

ክፍል4: ከ አምስት አመት በታች ልጆች የተቅማጥ በሽታን በቤት ውስጥ ለማከም ከቤት፣ ከ አካባቢ፣ ከጤና ተቋማት ጋር የተገናኙ ጥያቄዎች።

S.no	**Questions**	**Responses**	**skip**
1	ልጆ አሁን ጡት ይጠባል?	1.አዎ 2.አይ	
2	ለኛ ጥያቄ አዎ ካሉ ልጆት ተጨማሪ ምግብ ጀምሯል?	1.አዎ 2.አይ	
3	ለኛ ጥያቄ አዎ ካሉ መቼነው ያስጀመሩት?	1. ከ6ወር በፊት 2. ከ6ወር ቡሀላ 3. አላስታውስም	

4	የመጠጥ ውሀ ከየት ያገኛሉ?	1. ከ ቧንቧ ውሃ 2. ከወንዝ 3. ከ ጉድጓድ ውሀ 4. ሌላ__	
5	ውሀን ማከሚያ ዘዴ ይጠቀማሉ?	1.አዎ 2.አይ	
6	ለ 5ኛ ጥያቄ አዎ ካሉ በአብዛኛው የቱን የውሀ ማከሚያ ዘዴ ይጠቀማሉ?	1. ማፍላት 2. ክሎሪን 3. በውሀ አጋር 4. ሌላ__	
7	ለቤተሰባቹ የሚሆን መፀዳጃ ቤት አላቹ?	1.አዎ 2.አይ	
8	ለ7ኛ ጥያቄ አዎ ካሉ በአግባቡ ይጠቀማሉ?	1.አዎ 2.አይ	
9	በቤቶ ቆሻሻ ማስወገጃ ቦታ አለ?	1.አዎ 2.አይ	

10	ለ9ኛ ጥያቄ አዎ ካሉ አብዛኛውን ጊዜ ቆሻሻን በአግባቡ ያስወግዳሉ?	1.አዎ 2.አይ	
11	የጤና ኤክስቴንሽን በቤታቹ ይመጣሉ?	1.አዎ 2.አይ	
12	ለኛ ጥያቄ አዎ ካሉ ስለ ጤናትምህርት ይሰጡአችኋል?	1.አዎ 2.አይ	

አመሰግናለው!!!