



**WOLKITEUNIVERSITY**  
**COLLEGE OF MEDICINE AND HEALTH SCIENCE**  
**DEPARTMENT OF NURSING**

**EFFECTIVE LATRINE UTILIZATION AND ITS ASSOCIATED FACTORS IN  
GUNICHIRE TOWN, SNNP, SOUTHERN ETHIOPIA 2022**

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## **Abbreviation**

**AA:** Addis Ababa

**CLTS:** Community led total sanitation

**EDHS:** Ethiopian demographic and health survey

**HH:** household

**HEW** health extension workers

**JMP:** joint monitoring program

**MDG:** millennium development goal

**NGO:** non-government organization

**OD:** Open defecation

**SDG:** Sustainable development goal

**SNNP:** South Nation Nationality and people

**UNICEF:** United Nation International Children Emergency Fund

**WHO:** World health organization

## Abstract

**Background:** Latrine utilization is the actual behavior in a practice of regularly using existing latrines for safe disposal of excreta. Latrine utilization is a common problem in semi-urban areas of developing countries, including Ethiopia. The construction of latrine is a relatively simple technology that is used to prevent the spread of infectious diseases.

**Objective:** To assess effective latrine utilization and its associated factor on Gunchire Town from May01 to June.

**Methods and materials:** Community based cross sectional study design was employed from April 08 to April 18 in 2022 at Gunchire town. Structured questionnaire was developed first in English. Attention was given to check all questionnaires for completeness and accuracy. The questions and statements were arranged according to particular objectives that they can address. Collected data was analyzed by SPSS and analyzed data was represented by frequency and percentage then presented with graphs, tables and pie chart.

**Result:** From 580 respondent 457(78.8%) were satisfactory used latrine and the rest 123(21.2%) were non- satisfactory used. Those household having soap for hand washing after toilet was 3.315 times higher than those haven't soap for hand washing after toilet [AOR= 3.315, 95%CI: 1.750, 6.281] and households were visited by health extension worker was 5.552 times effectively used than those don't visited by health extension worker [AOR=5.552, 95%CI:2.917, 10.569].

**Conclusion and recommendation:** The study revealed that majority of the household use latrine effectively and significant number of participant not used latrine effectively. This study identified that, status of latrine, years since latrine construction, and visible signs of flies, latrine floor clean ability, and existence of soap for hand washing after toilet, visiting of the household by health extension worker were factors associated with effective latrine utilization. This study was recommended to Gunchire Health extension worker and local authorities must provide health education and sensitization for the community to promote effective latrine utilization.

**Key word:** Functional latrine, satisfactory latrine utilization, non-satisfactory latrine utilization.

# INTRODUCTION

## 1.1 Background

Latrine utilization is the actual behavior in a practice of regularly using existing latrines for safe disposal of excreta. Latrine utilization is a common problem in semi-urban areas of developing countries, including Ethiopia. Local data is needed in order to assess the need for planning of intervention programs for the improvement of latrine utilization to support consistent and sustained latrine utilization. The construction of latrine is a relatively simple technology that is used to prevent the spread of infectious diseases. While household access is important, community sanitation coverage is even more important to improve health through the regular use of well-maintained sanitation facilities. The highest proportions of population practicing open defecation were found in South Asia and Sub Saharan Africa. Seven out of ten people without improved sanitation facilities and nine out of ten people still practicing open defecation, live in rural area (1). Problems related to latrine utilization include lack of a functional latrine, latrines located a long distance away from areas where farmers work, and latrines lacking a superstructure (2). Open defecation contributed to poor household sanitation, which increases the risk of transmission of diseases such as diarrhea(3).

The right sanitation is a key element of the Sustainable development goals (SDGs) in the UN that is placed at SDGs 6. The SDG 6 consists of 8 global targets, of which target #2 of goal #6 is especially to address the problem with latrine sanitation. latrine sanitation demonstrates a substantial growth in motivation and required significant step-by-step changes in both scales, especially the SDG sanitation goal advocates for sanitation “for everyone”(4). From 2000 to 2017, 2.1 billion people worldwide (26 percent of the population) gained access to basic sanitation facilities. Although there has been growth in improved access to sanitation in the developing world, the goal of reducing the population that needs adequate sanitation by 2015 has not been achieved. The sanitation target achievement was not met as planned, particularly in less developed countries and since 1990, globally only 27% of the populations were offered exposure to adequate sanitation(6) .

### 1.1.1 Statement of problem

According to WHO and joint monitoring program globally, 5 billion people (68%) or almost two third of the world's population, use satisfactory latrine utilization which is more depend on pit latrine. Of those the highest proportions of population use satisfactory latrine utilization is found in western countries and decrease in satisfactory latrine utilization were found in South Asia and Sub Saharan Africa. Among those 68%, one-thirds (25%) 1.3billion people live in Southern Asia and sub-Saharan Africa. However, Southern Asian counties proportion, nearly three times as many as in sub-Saharan Africa in satisfactory latrine utilization. Number of people use satisfactory latrine utilization in southern Asia has increased moderately from 1990(increased by 21%), but in Sub Saharan Africa number of people use satisfactory latrine utilization is decreased than in 1990 ( decreased by 26%). Sub-Saharan African showed slower progress in sanitation coverage, reaching 31% in 2015 from 24% in 1990(7).

Ethiopia is among 16 (sixteen) countries improved latrine utilization by more than 25 percentage points during the MDG period the largest increase (64%) in the proportion of the population practicing satisfactory latrine utilization (from 25% in 1990 to 92 % in 2015)(14). According to Ethiopia Demographic and Health Survey (EDHS) 2016 report 68% of households have toilet facility. The majority of households, 80.2% use non-improved latrine facilities(15).

In Ethiopia, according to Demographic and Health Survey 2011, overall 38 percent of households have no toilet facility, 16 percent in urban areas. The same data source indicated the proportion of households with private latrine that are not shared with other households was only 8%, 14 percent in urban areas. The 2016 Ethiopia Demographic and Health Survey (EDHS) showed that the extent of national open defecation was 32.9%(8).

In Ethiopia different studies had tried to identify factors affecting latrine utilization including; lack of a functional latrine; latrines located a long distance away from areas where farmers work, and latrines lacking a superstructure (9). According to research conducted in Arsi, Oromia region, Ethiopia, on latrine utilization and associated factor 2017 has shown that the coverage of latrine utilization was 81% (10).

As fact sheet of UNICEF and WHO 2014, estimate the status and compare the region by EDHS 2000, 2005, 2011 and 2016 finding, improved and shared latrine coverage in SNNP was 56%. The coverage unimproved sanitation of the region was also 32% and open defecation status was 12% (12).

Generally, there is still a gap on effective latrine utilization in Ethiopia. Therefore, this study is aimed to assess effective latrine utilization and its associated factors in Gunchire town, Gurage zone, Southern Ethiopia.

### **1.1.2 Significance of the study**

This study was expected to give insight to government body, different Non-Governmental Organization (NGO), policy makers and other concerned bodies about effective latrine utilization and its associated factor and help to generate relevant information that could help to design appropriate health service program to the community so as to solve problems related latrine utilization. The finding of this study was also serving as a reference for other researchers who want to conduct further investigation

## 2 LITERATURE REVIEW

### 2.1.1 Prevalence of effective latrine utilization

According to the joint monitoring program(JMP) for water and sanitation performed by the World Health Organization/WHO/UNICEF, the percentage of the world's population uses improved latrine sanitation facilities developed by 14% from 54% in 1990 to 68% in 2015(5). According to research conducted in east samburu country Kenya only 29% of its population use improved latrine facilities (13).

A cross-sectional study conducted in the Amhara region in Denbia district on latrine utilization and associated factor in 2014 found that only 39.6% of latrine utilization was achieved and lack of education, relative wealth, urban residence and history of travel were identified as associated factors(11).

According to research conducted in in SebetaHawas Woreda, Oromia Special Zone, Ethiopia in 2021 the prevalence of satisfactory latrine utilization was 68%). The finding of this study was greater than study done at Dilla town, southern, Ethiopia (47.3%), Awabe district (52%) and Aneded district (63%) from North West Ethiopia. However, it was lower than the studies in Hulet Ejju Enessie Woreda, Northern, Ethiopia (97%) and report from rural village of Eastern Nepal (95%).(16)

According to Study conducted in Hawassa town, Southern, implies that the satisfactory latrine utilization of SNNP was 56% the coverage unimproved sanitation of the region was also 32% and open defecation status was 12%. Gurage zone is one of the areas of low coverage in satisfactory latrine utilization and the above studies finding prevalence is used to compare our findings last studies (17).

### **2.1.2 Factors affecting latrine utilization**

According to research conducted in Mehal Meda Town in North Shewa Zone, Amhara Region these variables including occupational status of head of households, observing feces around the compound/latrine, shape and structure of latrine facility, latrine status during observation, and distance between water well and latrine facility were identified that could affect latrine utilization (18).

A cross sectional studies conducted in wondogenete district Ethiopia 2018 come up with the presence of under five children, jobs of mother to be farmer, presence of feces in the back and neighborhood's yard and rarely cleaning of latrine were factors negatively associated with latrine utilization. Educational status of mothers, income, presence of secondary school student, presence of door for latrine, and promotional activity of health extension workers to have own latrine, and hygienic condition of latrine were identified as factors positively associated latrine utilization(19).

#### **Shape, structure and status of latrine**

According to Study conducted in Wondo Genet showed that households in which it had been two and more years since the latrine was constructed were more likely to utilize their latrine than those in which the latrine had been constructed more recently(20). and also Similar study conducted in India also showed that more years since latrine construction increased the utilization of the latrine(21). For better usage of latrine, it is important to consider the shape of latrine hole, the size of the latrine and the quality of material build. Those who have less quality of building material have less durability and functioning time. Those who have no proportional hole made difficulty in usage of latrine and may cause on contamination. That latrine their roof and wall is well-structured leads user to have satisfaction and help to increase the durability of latrine.

### **Distance between water well and latrine facility**

According to Study conducted in tigray south east zone in mekelle university from 2016 revealed that, the households that have water well with a distance of below 15 meters from latrine facility were 5 times more likely used than the counter.

### **Availability of hand washing facility**

A cross sectional study conducted in Hawassa town, Southern, Ethiopia revealed that, households with no availability of hand washing facility with latrine were 63.9% less likely to utilize compared to those availability of hand washing facility with latrine. This was might be due to the poor practice of hand washing among households and poor understanding of its relationship with disease prevention. Respondents who were not knowledgeable towards the use of latrine prevents spread of diseases was 93% less likely to utilized latrine compared to those households who were knowledgeable(22).

### **Educational status of family**

According to study conducted at Aksum tigray region in 2016 on latrine, utilization and associated factor educational status of household were significantly associated with latrine utilization. This could be due to education leads to increase awareness to bring behavioral change about the benefit of availability of latrine and that education helps the literate household head to access the information from different sources than illiterate household head about the advantage of latrine utilization(23).

### **Wealth index of the house hold**

According to Study conducted from debretabor amhara region in 2016 showed that income of the household was found to have statistically significant association with availability of latrine. Those house hold who had an income of 1201 and more Eth.Birr per month were 3.70 more likely to have latrine than house hold with or less than 1200 Eth Birr(25)(24).

## **Environmental factor**

According to Study conducted in Tigray south east zone in Mekelle university from 2016 revealed that, the participants had got information from health extension workers (HEWs) to construct latrines and near to healthy facility have more access to latrine and there is association to latrine utilization. This finding was higher than a study conducted in Bahirdar zuria, Ethiopia, (53.8 %,) by HEWs and 31.8 % by local administrators. Concerning on home visiting by health extension workers, visiting within two weeks was found to be significantly associated with latrine utilization. The model result confirms that households who had more contact with health extension workers have more access to sanitation and hygiene related messages than households who did not contact health extension workers. Findings in Bahirdar ziria showed that the availability of latrines was also two fold higher in households who were visited at least three in a month by health professionals than those who had no visited(26).

According to Study conducted in Alaba Special District, Southern Ethiopia, on accessing sanitation and hygiene information shows that, households who had contact with health extension services increase by the factor of 4.233 than who didn't have and according to this study house hold near to health center and access to adequate water have effectively use latrine than those they have not(27).

## **Behavioral factors**

According to research conducted in denbia from Gonder University in 2017 among behavioral factors frequency of cleaning and hygienic condition of latrine showed Households who clean the latrine rarely were 94.5% less likely to utilize their latrine as compared with household's clean latrine daily. Whereas households that have hygienic latrines were 4.327 times more likely to utilize latrine compared with latrines not hygienic. And also study revealed that daily cleaning of the latrine was significantly associated with latrine utilization, a finding similar to studies conducted in Laelai Maichew(28). study in Kenya showed that When latrines are cleaned frequently, faeces, flies and bad odors are eliminated, all of which may increase latrine utilization(29).

### **Presence of primary or secondary school student**

According to study conducted in Uganda also found that the presence of a primary or secondary school student positively favored latrine utilization in the home environment. The presence of a primary or secondary school student in a household increased the odds of latrine utilization, this might be because primary or secondary school students were more exposed to hygiene information in the school environment and therefore their presence positively favored latrine utilization at home(30). The study area district administrator reported (via personal communication) that the health extension program was closely linked to the promotion of health at school, which was an additional opportunity for students to learn healthy lifestyles(31).

### **Jobs of mother to be farmer**

According to research conducted in denibia North West Ethiopia from university of Gonder in 2014, mothers were 67.9% less likely to utilize latrine as compared to homemakers. This might be due to the fact that housewife's have a higher chance of staying in and around their home for a long time, which have great contribution for use of household latrine(32).

### **Presence of door to the latrine**

According to research conducted in denibia North West Ethiopia from university of Gonder in 2014, the presence of the door, households, which have latrines with door, were 3.201 times more likely to utilize their latrine compared with latrines that have no door. This might be due to the fact that latrines which have door can insure privacy that can encourage people to use the latrine(33).

## **Presence of under five children**

According to research conducted in wondogenet southern Ethiopia in 2018 on latrine utilization and associated factor The methods of handling of faeces of children varied among respondents: from children 3-5 age only 8.8% children who used latrines and among those households which have  $\leq 5$  children 31.7% households disposed their children's faeces improperly by disposing out of houses somewhere either in the backyard or in the nearby bush. This behavior is entirely unacceptable practice of handling faeces of children(34).

### 2.1.3 Conceptual framework of factors affecting latrine utilization

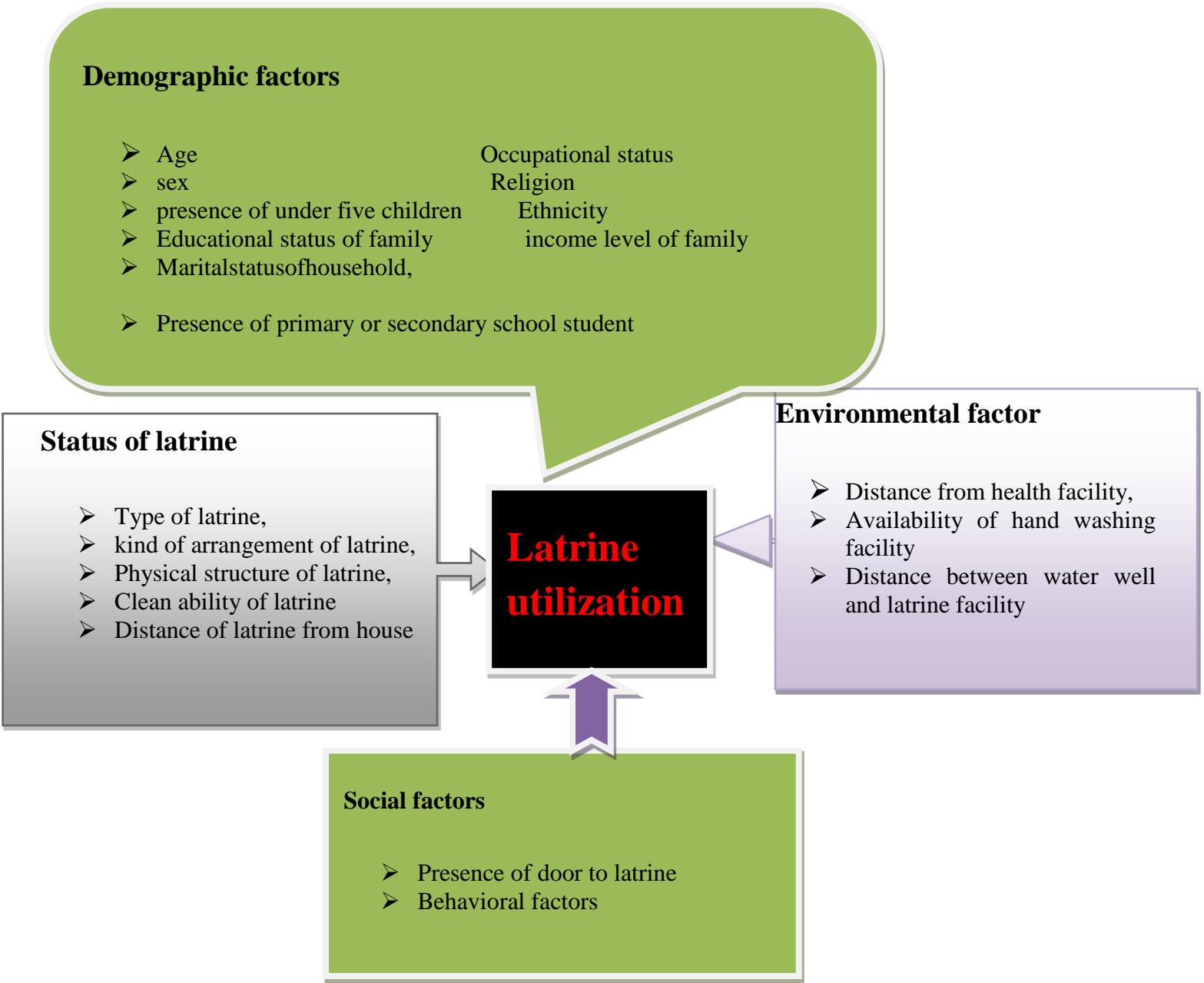


Figure 1: conceptual framework adopted after reviewing of literatures.

### **3 OBJECTIVES**

#### **3.1.1 General objective:**

To assess effective latrine utilization and its associated factor on Gunchire Town from May 01 to June 10 in 2022.

#### **3.1.2 Specific objectives:**

To assess the prevalence of latrine utilization from Gunchire Town May 01 to June 10 in 2022.

To determine factors affecting latrine utilization from Gunchire Town May 01 to June 10 in 2022.

## **4 METHODS AND MATERIALS**

### **4.1.1 The Study Area and period**

The study was conducted in Gunchire town, Enemorena Ener woreda, Gurage zone, SNNPR, Ethiopia. Gunchire is a one of the urban towns found in Enemore woreda. It is around 192 km from the capital city of Ethiopia: Addis Ababa (southwest), 301 km from Hawassa, capital of the SNNPR, and 42 km from wolkite. The town comprises 4 kebeles with 9 villages. The total population of the town is about 23,345 from those 11906 are male& 11439 are females. The study was conducted from May01 to June10 2022.

### **4.1.2 Study Design**

Community based cross sectional study design was employed.

#### **Population**

##### **4.1.2.1 Source Population**

The source population was all population lived in Gunchire town during study period

##### **4.1.2.2 Study Unit**

All households owned private latrine in selected kebeles during the study period was the study population

### **4.1.3 Inclusion criteria**

In selected kebeles of the district, households owned private latrine was included in the study and family members of above 5 years old were interviewed for the study.

#### 4.1.4 Exclusion criteria

Households who have not latrine and family member with less than 5 years child were excluded from the study.

#### 4.1.5 Sample size determination and sampling technique

The sample size was calculated using the single population proportion formula by using the following assumption, proportion of latrine utilization is assumed 55%. the study conducted in HetosaWoreda, which found in Arsi Zone, Oromia regional state. The margin of error of 5% and 95% confidence interval(35).

$$n = Z^2 p (1-p) / d^2$$

Where n= a minimum sample size

Z= standardized normal distribution curve/value for the 95% confidence interval (1.96)

P= proportional prevalence of latrine utilization from the study conducted in HetosaWoreda, which found in Arsi Zone, Oromia regional state, 2016.

d= the margin of error taken (0.05)

$$n = (1.96)^2 * 0.55 * (1-0.55) / (0.05)^2$$

$$= 380.3184 \approx 380$$

Considering design effect, i.e.  $380 * 1.5 = 570$

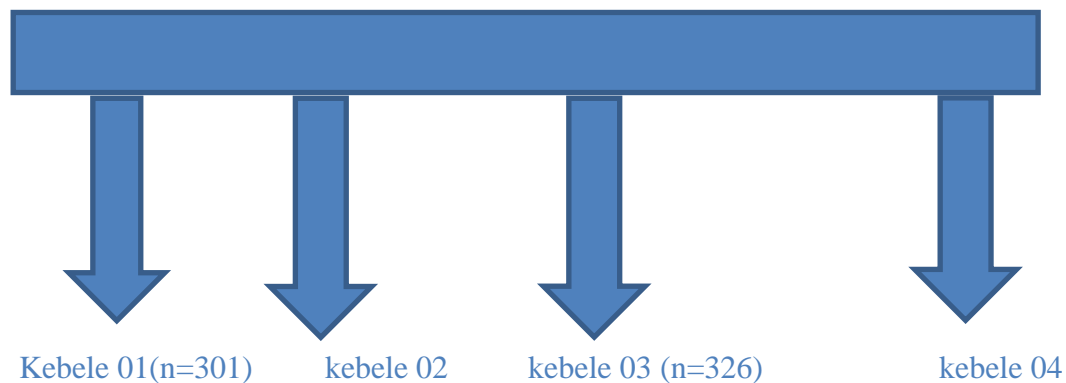
Considering 10% non-response rate,

$$nf = 570 + \frac{10 * 570}{100}, nf = 627$$

Therefore, our sample size was including 627-house hold.

#### 4.1.6 Sampling technique

A multi stage sampling technique was used to select the needed sample size by taking the Kebele as primary sampling unit, the house hold as secondary sampling unit and participant as tertiary sampling unit then we select two kebele randomly by lottery method from 4 kebele. Then we were select our study participant by simple random sampling from the selected kebele and then the study were includes 627 households. Concerning the ethical issues there were informed consent of the participant.



**Figure 2: sampling frame of sampling technique**

Sample method that was used to selected the household using simple random sampling methods. From the selected kebele01 there is 420 household then we need 301 household for survey in Kebele01 and from Kebele03 there is 455 household then we need 326 household for survey in Kebele03

#### 4.1.7 Variables

##### **Dependent variables**

- Prevalence of latrine utilization

##### **Independent variables**

###### ➤ **Demographic characteristics**

- age,
- Ethnicity
- Religion
- head of the house hold
- marital status
- education status presence of under five children
- Presence of primary or secondary school student

###### ➤ **Social factors**

- Presence of door to latrine
- Behavioral factors

###### ➤ **Environmental factors**

- Distance from health facility,
- Availability of hand washing facility
- Distance between water well and latrine facility

###### ➤ **Characteristic of latrine**

- Type of latrine,
- kind of arrangement of latrine,
- Physical structure of latrine,
- Clean ability of latrine
- Distance of latrine from house

#### **4.1.8 Data collection Tools and procedures**

Structured self-administered questionnaires and observation both in Amharic and English were used and two investigators were selected as data collectors and one investigator was selected as a supervisor to assess effective latrine utilization and its associated factor among residents of 01 and 03kebele.

#### **4.1.9 Data collection technique**

Structured questionnaire was developed first in English. The questions and statements were arranged according to particular objectives that they can address. Then the first draft of questioner was submitted to the advisors for comments. The valuable suggestions had considered to improve the instrument. Accordingly, redundancy, vagueness and logical flow of the questions was correct. After extensive revision, the final version of the English questionnaire was translated to Amharic version, then back to English to ensure understandability and message consistency and then was pre tested on some house hold that are not participate in study.

#### **4.1.10 Data quality assurance**

Attention was given to check all questionnaires for completeness and accuracy. Pretest of the questionnaire was carried out among 30(5%) household from kebele that are not participate in data collection. During the pretest, the questions, which were frequently asked, were documented for further consideration. Both the interviewers and advisors were planning to assess for clarity, understandability and completeness of questions. After the result of the pretest, some correction and changes was done made as necessary.

#### **4.1.11 Data processing and analysis**

Data was checked again manually for completeness and internal consistency missing data or incomplete data was excluded to assure quality control. Collected data was analyzed by SPSS and analyzed data was represented by frequency and percentage then presented with graphs and tables.

#### 4.1.12 Ethical consideration

Permission letter was obtained from Wolkite University, college of health science and medicine and secondly from Gunchire administrative body. At the time of data collection, a verbal consent was asked from the participant was given the right to do so. Confidentiality and privacy of responses was ensured (the names of respondents was not be included and ensuring to participants that their identification was not be public. also clearly putting the objective of this study to respondents might help to keep the confidentiality of the respondents) throughout the research process.

#### 4.1.13 Operational definitions

**Functional latrine:** Is a latrine that provides services (using) at the time of data collection.

**Satisfactory latrine utilization:** - A household with functional latrine and no feces observable in the compound and showed at least two sign of latrine use. Observation checklist used to assessed sign of latrine utilization consist of visible footpath to the latrine, observation splash water or urine on the latrine floor, absence of fresh feces observed on the latrine floor and observations of at least one fly in the latrine according to research conducted in Hetosa woreda, Arsi, Oromia region, Ethiopia, 2017

**Unsatisfactory latrine utilization:** - A household with latrine not fulfill the criteria of satisfactory latrine utilization.

#### 4.1.14 Dissemination of Result

The result of the study (both soft copy and hard copy) was submitted to wolkite University, College of medicine and health science, Department of nursing. The result was presented during presentation of research result report, as partial fulfillment of completion of BSc degree in nursing program.

## 5 Results

### 5.1.1 Socio-demographic characteristics

A total 627 house hold participated in the study with respondent rate of (580)92.5% with non response rate of 7.5%.most of head of household were between 20-35years of age 59%. the martial status of mother 95.2% were married,from those respondant 162(27.9%) had post secondary level of education for mother and 249 (42.9%)of them were goverment employee. 308(53.1%) had 1000-5000 birr of monthily income.Regarding to ethnicity majority of them were gurage 560(96.6%).

**Table 1: socio-demographic characteristics of household at Gurage zone gunchire town for the selected kebele SNNPR,Ethiopia,2022 G.C.**

Variable	Category	Frequency	Percent (%)
<b>Head of household</b>	Husband	462	79.7
	Wife	118	20.3
<b>Sex</b>	Male	463	79.8
	Female	117	20.2
<b>Age</b>	20-35	342	59.0
	36-50	233	40.2
	>50	5	0.9
<b>Number of family member</b>	2-4	308	53.1
	5-6	201	34.5
	>6	71	12.3
<b>Religion</b>	Orthodox	249	42.9
	Muslim	228	39.3

	Protestant	85	14.7
	Catholic	18	3.1
<b>Ethnicity</b>	Gurage	560	96.6
	Kembata	12	0.9
	Oromo	5	0.5
	Amhara	3	2.1
<b>Education level of mother</b>	Unable to read and write	144	24.8
	Able to read and write	59	10.2
	Primary education	126	21.7
	Secondary education	89	15.3
	Secondary education and above	162	27.9
<b>Having under five children</b>	Yes	282	48.6
	No	298	51.4
<b>Disposing of your children feces</b>	In to latrine	242	41.7
	Somewhere in to compound	1	0.2
	Somewhere outside compound	28	4.8
	Somewhere in to garbage	11	1.9
<b>Educational level of children</b>	Unable to read and write	41	0.9
	Able to read and write	75	12.9
	Primary education	163	28.1
	Secondary education	161	27.8
	Secondary education and above	75	12.9
	Not start learning	65	11.2

<b>Monthly income of family</b>	1000-5000	308	53.1
	5000-10000	272	46.9
<b>Husband education level</b>	Unable to read and write	32	5.5
	Able to read write	49	8.4
	Primary education	105	18.1
	Secondary education	80	13.8
	Secondary education and above	286	49.3
<b>Marital status</b>	Married	552	95.2
	Widowed	28	4.8
<b>Mothers job</b>	House wife	154	26.6
	Daily laborer	23	4
	Tella/alcohol seller	20	3.4
	Government employee	249	42.9
	Merchant	74	12.8
	Farmer	56	9.7
	Others	4	0.7

### 5.1.2 Characteristics of latrine

Most of the respondents were had pit latrine 564(97.2%) and among those 575(99.1%) of them were functional, from those 521(89.8%) had maintained. From the respondent 500(86.2%)had pipe water on their compound and from those 404(69.7%)latrine floor were cleaned by water .from the house hold that had washing facility near to latrine were 372(64.1%).

**Table 2: latrine characteristics of household at Gurage zone gunchire town for the selected kebele SNNPR,Ethiopia,2022 G.C.**

<b>Variable</b>	<b>Category</b>	<b>Frequency</b>	<b>Percent(%)</b>
<b>Type of latrine</b>	Pit latrine	564	97.2
	VIP latrine	16	2.8
<b>Years since latrine constructed</b>	1-5	317	54.7
	6-10	171	29.5
	>10	92	15.9
<b>Latrine functionality</b>	Yes	575	99.1
	No	5	0.9
<b>Status of latrine</b>	Maintained	521	89.8
	Need maintenance	59	10.2
<b>Part of latrine need maintenance</b>	Super structure	7	1.2
	Slab	24	4.1
	Roof	14	2.4
	Latrine pit	13	2.2
	Others	1	0.2
Have pipe water in compound	Yes	500	86.2
	No	80	13.8
<b>The floor of latrine clean ability</b>	Yes	404	69.7
	No	176	30.3
<b>The distance b/n latrine and pipe</b>	1-2	42	7.2
	3-4	104	17.9

<b>water</b>	5-6	137	23.6
	>7	243	41.9
<b>Visible signs of flies around latrine</b>	Yes	290	50.0
	No	290	50.0
<b>Having hand washing facility near to latrine</b>	Yes	372	64.1
	No	208	35.9
<b>Distance b/n hand washing facility to latrine</b>	Next to latrine	220	37.9
	Within the walking distance	141	24.3
	Inside the house	17	2.9
	No facilities	202	34.8
<b>The distance b/n latrine and house</b>	1-5	325	56.0
	6-10	255	44.0

### 5.1.3 Latrine utilization characteristics of family member above five years among the house hold

Among the respondent almost all 551(95%) were used latrine always and from those the reason for used latrine always were excreta is dangerous for health were 461(79.5%) and from the respondent there were no feaces through the latrine hole was 394(67.9%).

**Table 3: Characteristics of latrine utilization of family member above five years among the household at Gurage zone gunchire town for the selected kebele SNNPR,Ethiopia,2022 G.C.**

<b>Variable</b>	<b>Category</b>	<b>Frequency</b>	<b>Percent</b>
<b>Frequently used latrine</b>	Rarely	20	3.4
	Mostly	9	1.6
	Always	551	95.0
<b>Reason latrine used always</b>	Excreta are dangerous for health	461	79.5
	Convenient/privacy	19	3.3
	No other place to defecate	80	13.8
<b>Reason latrine used rarely</b>	No super structured	1	0.2
	Bad smell	9	1.6
	Open field is not convenient	4	0.7
	Stay out for word	5	0.9
	Other	1	0.2
<b>Fresh feace seen through the latrine hole</b>	Yes	186	32.1
	No	394	67.9

#### **5.1.4 Household characteristics of hand washing and community sanitation**

From the respondent 544(93.8%) were washed their hand 1-2 times after toilet and among those they had soap for washing their hand were 405(69.8%). from the respondent 389(67.1%)were used soap for washing their children hand after defecation. From the household we interview 381(65.7%) were vided by health extension worker.

**Table 4: Characteristics of hand washing and community sanitation among the household at Gurage zone gunchire town for the selected kebele SNNPR,Ethiopia,2022,G.C.**

<b>Variable</b>	<b>Category</b>	<b>Frequency</b>	<b>Percent</b>
<b>Frequency of hand wash after toilet</b>	1-2	544	93.8
	>2	36	6.2
<b>Use soap for washing after toilet</b>	Yes	405	69.8
	No	175	30.2
<b>Use to wash the hand of children after they defecate</b>	Only water	187	32.2
	With soap	389	67.1
	Do not wash	4	0.7
<b>Health extension worker visit your house</b>	Yes	381	65.7
	No	199	34.3
<b>Frequency of visit your house</b>	One's a week	33	5.7
	Every two week	34	5.9
	Every month	251	43.3
	Other	63	10.9
<b>health extension worker way of supervision</b>	Supportive and practically intervention	89	15.3
	Orally intervention	252	43.4
	Non supportive	38	6.6
	Punitive	2	0.3

### **5.1.5 Satisfactory and non-satisfactory characteristics of latrine utilization**

From 580 respondent 457(78.8%) were satisfactory used latrine and the rest 123(21.2%) were non- satisfactory used. See figure 2 below

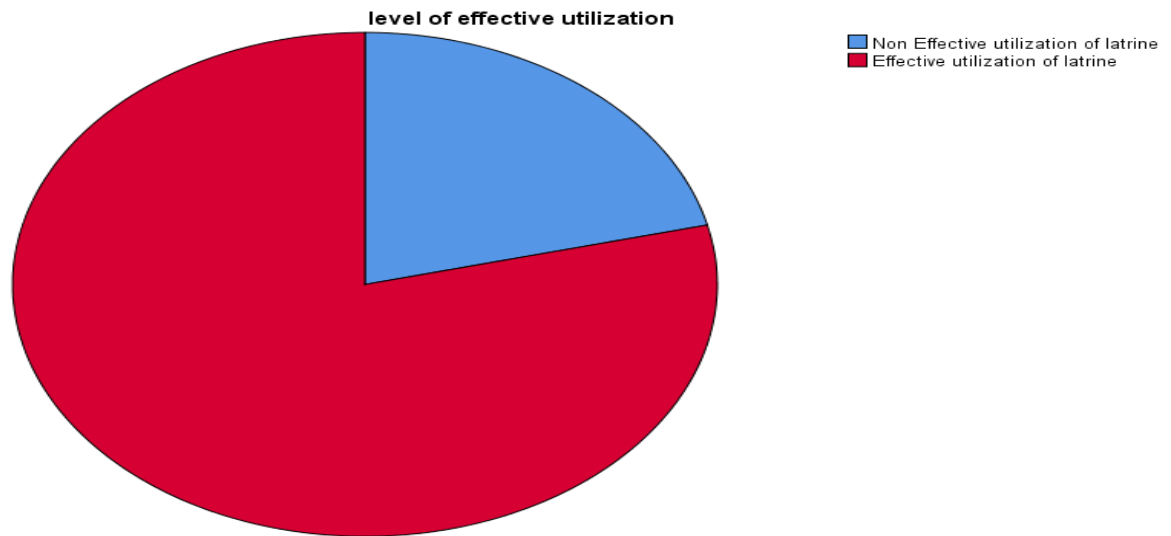


Figure 3: Latrine utilization characteristics among the household at Gurage zone gunchire town for the selected kebele SNNPR, Ethiopia, 2022, G.C.

### 5.1.6 Factor that affect effective latrine utilization

In multivariate logistic regression analysis variables like years since latrine construction, status of latrine, clean ability of latrine, visible signs of flies, existence of soap for hand washing after toilet and visiting of health extension workers to house were independently associated with effective latrine utilization.

Among those variables since latrine construction >10 years were 2.98 times higher than those construct 1-5 years [AOR=2.98, 95% CI: 1.167, 7.634]. Similarly, households whose status of latrine was maintained were 2.7 times more likely to use latrine effectively than those households need maintenance [AOR=2.7, 95% CI: 1.167, 6.275].

Those households whose latrine floor was clean by water were [AOR = 7.968, 95% CI 3.876, 16.381] 7.968 times more likely to use effectively than households whose latrine floor was not clean by water. Those households where there were no visible flies around the latrine were used latrine effectively [AOR=3.239, 95% CI: 1.608, 6.527] 3.239 times higher than those that had flies around the latrine. Those households having soap for hand washing after toilet were 3.315 times higher than those who haven't used soap for hand washing after toilet [AOR= 3.315, 95% CI: 1.750, 6.281] and

households were visited by health extension worker was 5.552 times effectively used than those don't visited by health extension worker [AOR=5.552, 95%CI:2.917, 10.569].

**Table 5: Variables associated with effective latrine utilization among the household at Gurage zone gunchire town for the selected kebele SNNPR,Ethiopia,2022,G.C.**

Variable	Categories	Level of effective latrine utilization				Odds ratio		
		Effectively utilized n=457		Not used effectively n=123		Crude odds ratio with 95%CI	Adjusted odds ratio with 95%CI	P- Value
		f	%	f	%			
Number of family member	2-4	238	41%	70	12.06%	1	1	0.000
	5-6	158	27.2%	43	7.4%	0.723(0.703, 1.661)	1.159(0.604, 2.223)	0.657
	>6	61	10.5%	10	1.72%	0.111(0.873, 3.685)	1.440(0.495, 4.184)	0.503
Having under five children	Yes	231	39.8%	51	8.79%	1.443(0.964, 2.159)	1.524(0.757, 3.065)	0.238
	No	226	38.9%	72	12.41%	1	1	0.000
Children level of	Unable to read and write	32	5.5%	9	1.55%	1.161(0.458, 2.943)	1.259(0.343, 4.629)	0.729

education	Able to read and write	61	10.5%	14	2.4%	1.423(0.633, 3.198)	1.153(0.389, 3.416)	0.798
	Primary education	140	24.1%	23	3.96%	1.988(0.971, 4.068)	2.744(0.912, 8.258)	0.073
	Secondary education	111	19.1%	50	8.6%	0.725(0.378, 1.396)	0.380(0.124, 1.169)	0.091
	Secondary education and above	64	11%	11	1.89%	1.900(0.810, 4.459)	1.835(0.543, 6.201)	0.329
	Not start learning	49	8.44%	16	2.75%	1	1	0.000
Mother education level	Unable to read and write	113	19.48 %	31	5.34%	1	1	0.000
	Able to read and write	52	8.96%	7	1.2%	0.114(0.842, 4.930)	1.769(0.583, 5.364)	0.313
	Primary education	91	15.68 %	35	6%	0.234(0.409, 1.245)	1.500(0.642, 3.503)	0.349
	Secondary education	66	11.37 %	23	3.96%	0.449(0.424, 1.462)	0.390(0.147, 1.037)	0.059
	Secondary education and above	135	23.27 %	27	4.65%	0.2800.773, 2.433	0.612(0.238, 1.572)	0.308

Monthly income of family	1000-5000	229	39.48%	79	13.62%	1	1	0.000
	6000-10000	228	39.31%	44	7.58%	1.788(1.184, 2.698)	1.601(0.791, 3.242)	0.191
Years since latrine construction	1-5	241	41.5%	76	13.1%	1	1	0.000
	6-10	134	23.1%	37	6.37%	1.142(0.731, 1.784)	1.901(1.010, 3.580)*	0.047*
	>10	82	14.1%	10	1.72%	2.586(1.277, 5.235)	2.985(1.167, 7.634)*	0.022*
Status of latrine	Maintained	420	72.4%	101	17.4%	2.473(1.397, 4.375)	2.706(1.167, 6.275)*	0.020*
	Need maintenance	37	6.37%	22	3.79%	1	1	0.000
Have pipe water in the compound	Yes	412	71%	88	15.17%	3.641(2.213, 5.992)	1.070(0.487, 2.351)	0.866
	No	45	7.75%	35	6.03%	1	1	0.000
The floor of the toilet clean by water	Yes	357	61.5%	47	8.1%	5.773(3.770, 8.839)	7.968(3.876, 16.381)*	0.000*
	No	100	17.2%	76	13.1%	1	1	0.000
Visible signs of flies around the latrine	Yes	207	35.6%	83	14.3%	1	1	0.000
	No	250	43.1%	40	6.89%	2.506(1.647, 3.239)	3.239(1.608, 6.511)	0.001

						3.813)	6.527)*	*
The distance b/n latrine and house	1-5	244	42%	81	13.96%	1	1	1
	6-10	213	36.72 %	42	7.24%	1.684(1.111, 2.551)	1.467(0.796, 2.701)	0.219
Hand washing facility near to latrine	Yes	309	53.2%	63	10.86%	1.989(1.327, 2.979)	1.848(0.863, 3.961)	0.114
	No	148	25.51 %	60	10.34%	1	1	0.000
Use soap for washing after toilet	Yes	353	60.8%	52	8.96%	4.634(3.047, 7.048)	3.315(1.750, 6.281)*	0.000 *
	No	104	17.9%	71	12.24%	1	1	0.000
Health extension workers visit your house	Yes	329	56.7%	52	8.96%	3.509(2.325, 5.298)	5.552(2.917, 10.569)*	0.000 *
	No	128	22%	71	12.24%	1	1	0.000

## 6 Discussion

In this study, the prevalence of latrine utilization was unsatisfactory 123(21.2%) which is in line with study conducted in Uganda that was 20% unsatisfactory. This finding was lower than the study conducted in Hulet Ejju Enessie Woreda, Northern, Ethiopia that is only 3% were unsatisfactory used. This result 457(78.8%) was higher than the study reported from Hetosa Woreda, found in Arsi Zone, The margin of error of 5% and with 95% confidence interval that were 55% satisfactory used.

Different variable characteristics of household were tested for association. The results illustrated that there is significant association between effective latrine utilization and the duration that latrine construction, status of latrine, clean ability of toilet, visible signs of flies, existence of soap for hand washing after toilet, visiting of the house by health extension worker

A year since latrine construction was one of the variables, which significantly affects effective latrine utilization behaviors of household in the study area. The odds of having effective latrine utilization with duration of greater than 10 year is 2.98 times more than those with construct 1-5 year. This finding was similar to the Study conducted in Wondo Genet showed that households in which it had been two and more years since the latrine was constructed were more likely to utilize their latrine than those in which the latrine had been constructed more recently (20).

In this study, floor of toilet clean ability showed highly significant ( $p=0.00$ ) association with effective latrine utilization. Households whose floor of toilet cleaned were 7.968 times more likely to use effectively than households latrine floor not clean by water. This result was the same with research conducted in denbia from gonder university in 2017 on latrine utilization and associated factor showed that both frequency of cleaning and hygienic condition of latrine were significant predictors of satisfactory latrine utilization(28).

Status of latrine was significantly affects effective latrine utilization in the study area. Those household whose status of latrine was maintained were 2.7 times more likely to used latrine effectively than those households need maintenance. This study was in line with study conducted in Hetosa Woreda, which found in Arsi Zone, Oromia regional state(35). For better usage of latrine, it is important to consider the shape of latrine hole, the size of the latrine and the quality of material build. Those who have less quality of building material have less durability and functioning time. Those who have no proportional hole made difficulty in usage of latrine and May causes on contamination. That latrine their roof and wall is well-structured leads user to have satisfaction and help to increase the durability of latrine.

A visible sign of flies around latrine was significantly affects effective latrine utilization in the study area. Those household there was no visible flies around the latrine were 3.239 times higher than those that had flies around the latrine. In addition, our finding was consistent with a study in Kenya(29).

Existence of soap for hand washing after toilet showed highly significant ( $p=0.00$ ) association with effective latrine utilization. Those household having soap for hand washing after toilet was 3.315 times higher than those haven't soap for hand washing after toilet. This was consistent with study conducted in Hawassa town, Southern, Ethiopia(OR=3.3)(22). there was an association between latrine utilization and availability of soap for hand washing facility near to latrine. Hence, households with no availability of hand washing facility near to latrine were less likely to utilize compared to those availability of soap for hand washing facility with latrine. This was might be due to the poor practice of hand washing among households and poor understanding of its relationship with disease prevention. Respondents who were not knowledgeable towards the use of latrine prevents spread of diseases was less likely to utilized latrine compared to those households who were knowledgeable.

Visiting of household by health extension worker showed highly significant ( $p=0.00$ ) association with effective latrine utilization. Households were visited by health extension worker was 5.552 times effectively used than those do not visit by health extension worker. This was consistent with Study conducted in Alaba Special District, Southern Ethiopia(27). Household that got information and had more contact with health extension workers have more access to sanitation and hygiene related messages than households who did not contact health extension workers.

## **7 Conclusion**

Majority of the study participants in Gunchire town have latrine. Among those who have latrine majority of them have simple pit latrine, which is construct in >10years which increase the probability of latrine utilization. Majority of latrines have hand-washing facility but the significant number of household do not have it. Among that latrine with hand washing facility most are with soap and the rest hand washing facilities do not have soap. From the total

households with latrines surveyed almost all found to be providing service. A significant number of them were nonfunctional. This study identified that there was association between effective latrine utilization, a status of latrine, years since latrine construction, visible signs of flies, latrine floor clean ability, existence of soap for hand washing after toilet and visiting of the household by health extension worker.

## **8 Recommendation**

Depending on the results of this study, the following recommendations forwarded

- ❖ To Gunchire local authorities and health officer must provide health education and sensitization for the community to promote effective latrine utilization.
- ❖ To Gunchire Health extension worker should have to provide technical support during latrine construction at household level to have durable and easily cleanable latrine.

## **9 Strength and limitation**

### **Strength of the study:**

- ❖ Simple random methods used to select study participant within the study area.
- ❖ Observation checklist was used to identify proper utilization of latrine by sign of latrine use.

### **Limitation**

- ❖ The participant of the selected kebele was unable given response due to adaptation from community based training program.
- ❖ Too, short a time to conduct the research.

## References

1. (WHO) WHO. Joint Monitoring Programme for Water Supply and Sanitation, Progress on Sanitation and Drinking Water. Update and MDG Assessment. 2015.
2. CSA I-I. Ethiopia Demographic and Health Survey Addis Ababa, Ethiopia and Calverton, Maryland, USA. Central Statistical Agency [Ethiopia] and ORC Macro. 2016.
3. Jung YT HR, Lou W, Cheng Y-L. Effects of neighbourhood and household sanitation conditions on diarrhea morbidity. Systematic review and meta-analysis PLoS ONE. 2017; 12(3):e0173808.
4. Fetene N LE, Fekadu B, Alemu H, Omer H, Canavan M, et al. The Ethiopian health extension program and variation in health systems performance:. PLoS ONE. 2016;11(5):e0156438.
5. Odagiri M, et al. Achieving the Sustainable Development Goals for Water and Sanitation in Indonesia—Results from a Five-Year (2013-2017) Large-Scale Effectiveness Evaluation. International Journal of Hygiene and Environmental Health,. 2020.
6. Libby JA, Wells, E.C. and Mihelcic, J.R. () Moving Up the Sanitation Ladder While Considering Function: An Assessment of Indigenous Communities, Pit Latrine Users, and Their Perceptions of Resource Recovery Sanitation Technology in Panama. Environmental Science & Technology. 2020; 54: 15405-13.
7. UNICEF W. Joint Monitoring Programme for Water Supply and Sanitation. Jenave: WHO and UNICEF. 2015.
8. Garn JV, et al. (). The Impact of Sanitation Interventions on Latrine Coverage and Latrine Use: A Systematic Review and Meta-Analysis. International Journal of DBay DOI:104236/oalib110745823OpenAccessLibraryJournalHygiene and Environmental Health. 2017;220:329-40.
9. JWa U. Joint Monitoring Programme for Water Supply and Sanitation Jenave: WHO and UNICEF,. 2014
10. AB D. Assessment of latrine utilization and associated factor in setting of Hetosa Woreda, Arsi, Oromia, Ethiopia. A comparative study MPH Thesis, unpublished, Addis Ababa University Ethiopia. .2017.
11. Ayele Mamo Abebe MWK. Latrine Utilization and Associated Factors in Mehal Meda Town in North Shewa Zone, Amhara Region, Ethiopia. 2019.
12. UNICEF. Sanitation Priority Country Factsheet Ethiopia. Sanitation Priority Country Factsheet UNICEF. 2014.

13. UNICEF Wa. Joint Monitoring Programme for Water Supply and Sanitation 2015.
14. Mohoea. CLTSH Verification and certification protocol. In: health Hae, editor Hygiene. 2012.
15. CSA I-I. Ethiopia Demographic and Health Survey. Addis Ababa, Ethiopia and Calverton, Maryland, USA: Central Statistical Agency [Ethiopia] and ORC Macro 2016.
16. Asfaw G ME, Vata PK. Assessing privy (latrine's)utilization and associated factors among households in Dilla town, Ethiopia. 2015;5 (6).
17. UNICEF. Sanitation Priority Country Factsheet Ethiopia. Sanitation Priority Country Factsheet Ethiopia Report No. 2014.
18. Ayele Mamo Abebe MWK. Latrine Utilization and Associated Factors. in Mehal Meda Town in North Shewa Zone, Amhara Region, Ethiopia. 2019.
19. Ababa CSAA. Ethiopia mini Demographic and Health Survey. Addis Ababa Ethiopia. 2014.
20. Ashenafi T DA, Gizaw Z. Latrine utilization and associated factors among Kebeles declared open defecation free in Wondo Genet district. South Ethiopia. 2018.
21. Sinha A SA. Assessing latrine use in low-income countries A field study in rural India. PhD thesis, London School of Hygiene and Tropical Medicine. 2017.
22. Lemma T AK, Sintayehu B., Hailu F., and Mesfine T. Latrine utilization and associated factors among kebeles implementing and non implementing Urban Community Led Total Sanitation and Hygiene in Hawassa town, Ethiopia. African Journal of En. 2016.
23. Gebremedhin G TD, Gebremedhin M, Kahsay G, Zelalem H. Factors associated with latrine utilization among model and non-model families in Laelai Maichew Woreda, Aksum, Tigray, Ethiopia. Comparative community based study BMC Res Notes. 2018;11(586).
24. Ababa CSAA. Ethiopia mini Demographic and Health Survey. Addis Ababa Ethiopia. July 2014.
25. S AWM. latrine coverage and associated factors among rural communities in the District of Bahir Dar Zuria, Ethiopia. BMC Public Health. 2013; 13: 99.
26. Muche WAaS. latrine coverage and associated factors among rural communities in the District of Bahir Dar Zuria, Ethiopia. 2013.
27. Nigatu Regassa DSRaKK. Access to, and Utilization of Information on Sanitation and Hygiene by Rural Households in Alaba Special District. Southern Ethiopia. 2011.

28. Gebremedhin G TD, Gebremedhin M, Kahsay G, Zelalem H. Factors associated with latrine utilization among model and non-model families in Laelai Maichew Woreda, Aksum, Tigray, Ethiopia. Comparative community based study BMC Res Notes. 2018; 11(586).
29. W WR. Latrine use and associated factors among rural community members in Samburu east sub-county. Samburu county, Kenya: Kenyatta University. 2015.
30. Robinah D KJ, Mangan W. Intestinal helminths in Luweero district,. Uganda Afr Health Sci. 2008.
31. Bartram J CS. Hygiene, sanitation, and water: Forgotten foundations of health. PLoS Med. 2010; 7(11).
32. Yimam YT GK, Chercos DHx. Latrine utilization and associated factors among people living in rural areas of Denbia district, Northwest Ethiopia. A cross-sectional study Pan Afr Med J. 2014.
33. Yimam YT GK, Chercos DH. Latrine utilization and associated factors among people living in rural areas of Denbia district, Northwest Ethiopia. A cross-sectional study Pan Afr Med J. 2014.
34. Ababa CSAA. Ethiopia mini Demographic and Health Survey. Addis Ababa Ethiopia. 2014.
35. AB D. Assessment of magnitude of latrine utilization and associated factor in , Arsi, Oromia, Ethiopia. A comparative study MPH Thesis, unpublished, Addis Ababa UniversityEthiopia. 2017.

**ENGLISH VERSION QUESTIONNAIRE FOR THE ASSESSMENT OF EFFECTIVE LATRINE UTILIZATION AND ITS ASSOCIATED FACTOR**

Household Identification Code\_\_\_\_\_

Name of Keble\_\_\_\_\_

**Annex A: Verbal Consent Letter**

Dear interviewee, I extend my greeting to you. We are here to collect health related data For the purpose of research from wolikite University College of medicine and health science department of nursing. The aim of this Study is to assess effective latrine utilization and associated factors in gubre town. We are requesting your permission to participate in an interview on issues related to effective latrine utilization and associated factor. This information will help the policy makers and other responsible bodies as background to Improve the health status that is related with proper utilization of latrines. We assure you that whatever information you provide will only be used for the purpose of This research and will not be made available to anyone outside of the research team. Your willingness and support to people respond the interview is very much appreciated. We also Assure that the interview process will not bring any harm to you and your family. It is also Your right to withdraw any time from the process when your feeling is uncomfortable with It.

Please make (X) mark to indicate the respondents’ decision regarding participation in the Study. The purpose of the study and confidentiality procedures has been explained to me and I on my own consent: a) Agree \_\_\_\_\_ b) Disagree\_\_\_\_\_ Interviewer name\_\_\_\_\_ Signature\_\_\_\_\_

Date of interview\_\_\_\_\_ Time started\_\_\_\_\_ Time completed\_\_\_\_\_

Result of interview: 1. Completed 2. Respondent not available 3. Refused 4. Incomplete

Checked by supervisor: Name\_\_\_\_\_ Signature\_\_\_\_\_ Date\_\_\_\_\_

**Additional instructions to the Interviewers:**

1. The interview will continue only after the respondent will agree on the consent
2. Fill the questionnaire only with pencil
3. Circle the answer from the options of possible responses

**Thank you!!**

**Part1: Socio Demographic Factors**

<b>NO</b>	<b>Questions</b>	<b>Possible responses</b>
001	Who is the head of the house hold	1. Husband 2. Wife 3. Others specify__
002	Sex of head of the house hold	( _____ )
003	Age of the head of the house hold	( _____ )
004	Age of the husband	( _____ )
005	Age of the wife	( _____ )
006	How many family members do you Have?	_____

007	What is your religion?	<ol style="list-style-type: none"> <li>1. Orthodox</li> <li>2. Muslim</li> <li>3. protestant</li> <li>4. catholic</li> <li>5. other/specify ___</li> </ol>
008	What is your ethnicity?	<ol style="list-style-type: none"> <li>1. Gurage</li> <li>2. Oromo</li> <li>3. Amara</li> <li>4. Others/specify__</li> </ol>
009	What is your education level (Mother)?	<ol style="list-style-type: none"> <li>1. Illiterate</li> <li>2. Able to read and write</li> <li>3. Primary education</li> <li>4. Secondary education</li> <li>5. Post-secondary education</li> </ol>
010	Do you have under five children?	<ol style="list-style-type: none"> <li>1. Yes</li> <li>2. No</li> </ol>
011	Where Does your children Faeces dispose?	<ol style="list-style-type: none"> <li>1. In to the latrine</li> <li>2. somewhere into the compound</li> <li>3. somewhere outside the compound</li> <li>4. somewhere in the garbage</li> <li>5. others specify</li> </ol>
012	What is your children level of Education? (write the numbers of children in the space provided)	<ol style="list-style-type: none"> <li>1. Illiterate</li> <li>2. Able to read and write</li> <li>3. Primary education</li> <li>4. Secondary education</li> <li>5. Post-secondary education</li> </ol>
013	What is your husband education Level?	<ol style="list-style-type: none"> <li>1. Illiterate</li> <li>2. Able to read and write</li> <li>3. Primary education</li> </ol>

		4.Secondary education 5.Post-secondary education
014	What is your family's income level in a month?	( _____ )
015	What is your job (mother)?	1. Housewife 2. Daily laborer 3. "Tella"/alcohol seller 4. Government employee 5. Merchant 6. Farmer 4. others/specify_____
016	Marital status of the mother?	1. Married 2. Widowed 3. Single 4. Divorced

**Part2: Latrine**

017	What type of latrine do you have?	1. pit latrine 2. VIP latrine 3. others/specify_____
018	How many years since latrine is Constructed?	( _____ )
019	Is the latrine functional?	1. Yes 2. No

020	What is the status of latrine?	1. Maintained ( If maintained, Skip to Q 022) 2. Need Maintenance
021	Which parts of the latrine need Maintenance?	1. Superstructure 2. Slab 3. Roof 4. Latrine pit 5. others/specify _____
022	Do you have pipe water in the Compound?	1. Yes 2. No
023	Is the floor of the toilet clean by water?	1. Yes 2.No
025	How far is the distance between Latrine and the pipe water?	1. 1-2meter 2. 3-4meter 3. 5-6meter 4. above 7 meters
027	Are there visible signs of flies in or around the latrine?	1. Yes 2. No
028	Is there hand washing facility nearby toilet?	1. Yes 2. No
029	How close are hand-washing facilities To the latrine (Observation)?	1. Next to the latrine 2. With in walking distance 3. Inside the house 4. No facilities
030	How far is the distance between the Latrine and the house?	( _____ )

**Part 3: Utilization of latrines by family members above 5 years old**

031	How frequently is the latrine used?	1. Rarely 2. Mostly
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		3. Always If rarely, skip to Q 033
032	If latrine is used always, why?	1.Excreta are dangerous to health 2 .Convenient/privacy 3. No other place to defecate 4. Others /specify_____
033	If latrine is used rarely, why?	1. No superstructure 2. Bad smell 3. Open field is not convenient 4. Stay out for work 5. Other/specify_____
034	Is there fresh faeces seen through the Latrine squat hole?	1. yes 2.No

#### **Part 4: Hand washing and community sanitation**

035	How frequently do you wash your hand after toilet?	( _____ )
036	Do have soap for hand washing after toilet?	1.Yes 2.No
037	What do you usually use to wash the Hands of children after they defecate?	1.Only water 2.With soap 3. do not wash

#### **Part 5: Latrine utilization observational check list**

0381	Is there visible footpath to the latrine	1. yes 2. No
0382	Is there Observation splash water	1. yes 2. No
0383	Is there Urine on the latrine floor	1. yes 2. No
0384	Is there feces observed on the latrine floor	1. yes 2. No
0385	Is there Observations of at least one fly in the latrine.	1. yes 2. no

#### **Part 6: support mechanisms from stake holders**

039	Does urban /rural health extension workers visit your house	A. Yes B. No
040	If your answer is yes How many times they visit your house	1. Once a week 2. Every two week 3. Every month 4. Others specify_____
041	How do you explain health extension workers way of supervision	1. Supportive and Practically Interventional 2. Orally interventional 3. Non supportive 4. Punitive

**Thank you in advance for your cooperation!!!!**