COLLEGE OF MEDICINE AND HEALTH SCIENCE

DEPARTMENT OF NURSING

Prevalence And Associated Factor of Trachoma In Gubre primary School, Wolkite Town, SNNPR, Ethiopia, 2022

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Acronyms and abbreviations

GET **Global Elimination of Trachoma**

SAFE **Surgery for Trichiasis, Antibiotic for active trachoma, Face cleanliness, Environmental Improvement**

SNNR **South nation nationality region**

TF **Trachomatous inflammation, Follicular**

TT **Trachomatous Trachealis**

WHO **World Health organization**

WKU **Wolkite University**

Abstract

Background: Trachoma is the most common cause of infectious blindness worldwide. the prevalence of active trachoma in Ethiopia was the highest even among Sub-Sahara African countries. There are at least 146 million people in the world suffering from active trachoma, 4.9 million of whom were blinded due to the disease. Studies are conducted in Ethiopia on school children show that trachoma is highly prevalent and a major public health problem. It is transmitted by flies, fomites and fingers. Since numerous strategies make in improving this disease for preventing active trachoma at health institution, and the study evidences concerning on the prevalence and associated factors with active trachoma in the study area is limited.

Objectives: To assess Prevalence and associated factors of active trachoma among Gubre primary school students in wolkite Town, Gurage zone, SNNPR Ethiopia, 2022 G.C.

Methods: institution based cross sectional study was undertaken in Gubre primary school, wolkite Town, SNNP, Ethiopia, from February to March, 2022. A total of 223 children included in the study using systematic random sampling techniques. The data collected by PIs using pre-tested structured questionnaire. And finally, EPI will be used for data entry and SPSS for analysis and result will be presented by table and pie chart.

Result: prevalence of trachoma in gubrye primary schools was 21.1% (95% CI: 26.1-26.9).On multiple logistic regression families not use solid waste disposal(7.44:95% CI:3.24-17.1) , face of unclean(0.94; 95% CI:0.16-5.65), face washing habit less than twice a day(0.17; 95% CI:0.07-0.44) due to the water source was from river and untreated ground water and failure to seek eye care service through drug receive(1.85; 95% CI:0.82-4.2) were found to be associated with the presence of trachoma in this study population.

Conclusion: An attempt at decreasing trachoma in the face of scarcity of resources, focusing on improving hygienic conditions both in the household and its surroundings and changing people's behaviour towards washing their face and also using solid waste disposal pit, more frequently is recommended.

Key word: Active Trachoma, Risk Factors, Gubre sub city, Wolkite, SNNPR. .

Introduction

1.1 Back ground

Active trachoma is also called granular conjunctivitis, Egyptian opthalmia,or blinding trachoma is an infectious disease by a bacteria called chlamydia trachomatis which causes a roughening of the inner surface of the eyelids. If not treated with oral antibiotics foremost cause of preventable blindness, as a result of ulceration and consequent scarring of the cornea. Globally, 1.2 billion people live in trachoma endemic areas .[1] According to world health organization (WHO), 1.3 million people loss there sight due to Trachoma [2] [3]. The intervention mainly focuses on antibiotic distribution and trichiasis surgery. While, their efforts to control and prevent trachoma, still the prevalence of trachoma is spread specially to developing countries, it rely to socio economic factor to provide pure and adequate water, educating communities, in adequate technology based information about health promotion and disease prevention and related factors. The endemic nature of trachoma transmission is facilitated by the presence of environmental risk factors that are common in the developing countries in the world [4] . A scarcity of clean water is rely with rise of trachoma prevalence because less water is available to use for cleaning the face of infectious secretions similarly, giving less attention to sanitation, increases faecal contamination of the environment, therefore promoting breeding of the fly Musca sorbens, which is a vector for trachoma.

1.1.1 Statement of problem

Infection with trachoma is most commonly found in children and with repeated reinfection it can lead to scarring complications and blindness in late childhood and adult life. Trachoma is endemic in more than 50 countries [5] . According to the WHO (2014) report, globally close to 1.3 million people are blind due to trachoma, while about 84 million people suffer from active trachoma (Trachomatous inflammation, follicular (TF) and/or intense (TI) (5). WHO estimated that there were 1.3 million blind people and an additional 84 million people with low vision globally, as a result of trachoma in the world, especially in sub Saharan Africa the burden of blindness is worest [6] because of as mentioned below in associated factor part. Trachoma is endemic in more than 50 countries [7] [8] [9] Since 2007, orbis and Irish aid along with other non-governmental organization and the regional health bureau is working towards a goal to eliminate blinding trachoma in the study area [10] . In 1996, the World Health Organization launched the WHO Alliance for the Global Elimination of Trachoma (GET) by 2020. In 2002, WHO estimated that there were 37 million blind people and an additional 124 million people with low vision globally [11].The WHO has endorsed a multi-faced strategy called SAFE in order to reduce trachoma incidence, those strategy involves; surgery (S) to correct trichiasis, antibiotics (A) for manage active disease, and methods to prevent transmission based on face washing (F) and environmental sanitation (E) (8), the Ethiopian government also signed the vision 2020 initiative in 2002, which is a 20 years strategic plan to eliminate trachoma [12] . However, most of the studies are in conclusive about the in dependent predictors of active trachoma for rural and urban communities. Moreover, based on the nation-wide survey conducted in 2006 Dera woreda has the highest prevalence of active trachoma. For each child, presence of active trachoma in either eye, facial cleanliness, general grooming and presence of flies on child's face were assessed during clinical examination. In developed countries, trachoma prevalence had eradicated, but in developing countries, still one of concerning health problem due to crowded living condition, scarcity of water, poor hygiene and ownership of cattle were incriminated as risk factors by studies in some countries. Despite, the implementation of the SAFE strategy in 2003, many districts continue to have a high prevalence of active trachoma, but Ethiopia made remarkable achievements. Therefore, this study aimed at assessing difference in prevalence and associated factors of active trachoma of Gubre primary school students, south Ethiopia.

1.6. Significance of the study

Trachoma has always been recognized as a serious public health problem in Ethiopia. As, showed by several studies conducted in different parts of the country in order to determine the cause and risk factors of trachoma. Those studies indicated that the prevalence of active trachoma in Ethiopia was among the highest even in the context of Sub Sahara African Countries. Ethiopia is one of the five countries in which 49% of global burden of active trachoma is located. One nationwide survey on blindness, low vision, and trachoma reported that the national prevalence of active trachoma (either TF or TI) among children with age group of 1–9 years is 40.14% [12]. It is spreading throughout developing countries including Ethiopia, therefore it needs interruption. The prevalence of Trachoma in Wolkite town is excess, in order to investigate what is behind to it, we will study to assess the prevalence of active trachoma and associated factors in the town, Gubre primary school students in South Ethiopia, 2022.

Literature of Review

2.1. Prevalence of Trachoma

According to the World Health Organization (WHO), trachoma is currently responsible for more than 3% of the world's blindness (10).Prevalence of trachoma in far north region of Cameroon in 27 health districts through cross-sectional cluster random sampling study from 48,884 of aged 1-9 years old, TF is 11.2%. Community – based trachoma surveys conducted from 2008 – 2011 in Niger, Mali and Nigeria. Among children aged 1-9 years, indicates that the prevalence of TF was 23.4%, in Niger, 5.7% in Mali and 5.0% in Nigeria [11]. Different studies conducted in Africa to show the prevalence of active trachoma high proportion of surveyed districts are hyper endemic (defined as TF prevalence in 1-9 year – olds of 30%) in South Sudan (83%), Ethiopia (64%), Guinea (50%), Uganda (37%), Chad (38%), Central Africa Republic (38%) and Tanzanian (32%) [13]. Ethiopia, the prevalence of blindness is 1.6% (corneal blindness accounts for over 19% of the total blindness) [14]. Community based comparative cross-sectional study in dera woreda Out of 671 children who were screened for active trachoma, 105 (15.6%) of them with 95% CI [12.8–18.3] had active trachoma. More recent institutional based cross-sectional studies conducted in Dangila town of Amhara region and Kersa district of Oromia region showed the prevalence of active trachoma among children age 1–9 years were 12% and 25.2%, respectively [15]. A cross-sectional community – based study conducted in Ankober (2009) is 53.9% and Baso Liben East Gojjam (2012) on children (aged 1- 9 years) the prevalence of active trachoma was found to be 24.1%(16). Research done in Dangla (2012) indicates the prevalence of active trachoma among children aged between 7 – 10 years was 8% [16] (17). For children in the age group of 1–9 years the prevalence of active trachoma in Ethiopia is 40.14% and regard to selected regions; the highest prevalence in Amhara (62.6%), Oromia (41.3%), and Southern Nations, Nationalities, and People's Region (SNNPR) (33.2%), Tigray (26.5%), Somali (22.6%), and Gambella (19.1%) (18).

2.1.2. Associated Factors of Active Trachoma

Ethiopia is one of highest rates of blindness in the world's which estimated to be 1.25%. Access to a sanitary toilet more than halved the odds of active trachoma (OR= 0.43, 95% CI 0.25-0.74%). Cataract is the leading cause of blindness followed by trachoma (30%), other like glaucoma, malnutrition and infections contribute to the remaining (30).

A study conducted on impact of SAFE strategy interventions on trachoma prevalence in Rural Ethiopia show the community summarized mean prevalence for TF was 34.0% (SD=18.7). Odds of active trachoma were lower in children aged 6-9 years than in younger children (OR 0.47, 95% CI: 0.23-0.96) and higher for children with ocular discharge (OR 4.5, 95% CI: 2.6-7.7) or flies on their eyes OR 2.5, 95% CI: (1.6-3.7); and in children who received 2 or 3 doses lower than received 1 dose (OR 0.26, 95% CI: 0.08-0.88) (20),trachoma prevalence regarding to parents income; parent's income <1000 birr per month were 2.41 times greater than a child whose parent income >2000 birr.

Univariate analysis showed that unclean face (OR 5.2; 95% CI 4.5–5.9), household crowding (P-value < 0.05), less frequent face washing (P-value < 0.05), absence of pit latrine (OR 2.3; 95% CI 1.6–3.3), cattle ownership (OR 2.3; 95% CI 1.9–2.7), and increasing household fly density (P-value < 0.05) were associated with increased relative odds of having a more severe active trachoma sign (no TF, no TI; TF only; and any TI); however, older age was associated with decreased odds (OR 0.7; 95% CI 0.6–0.8) [17] .

Odds of active trachoma were lower in children aged 6-9 years than in younger children (OR= 0.47, 95% CI: 0.23-0.96) and higher for children with ocular discharge (OR= 4.5, 95% CI: 2.6-7.7) or flies on their eyes OR= 2.5, 95% CI: (1.6-3.7) [18].Generally Poor face washing habit, not using soap, absence of clean face, not using latrine, absence of waste disposal, and higher hose hold fly density (AOR=5.96, 95% CI: 2.87, 16.01) (AOR=3.54,95% CI: 1.91, 10.85), (AOR=7.01, 95% CI:3.89,15.17), (AOR=2.05, 95% CI: 1.34, 7.55), (AOR=3.09 95% CI: 1.53, 11.12) and (AOR=4.22 95% CI: 2.37, 12.95), respectively [19].

2.2. Conceptual frame work

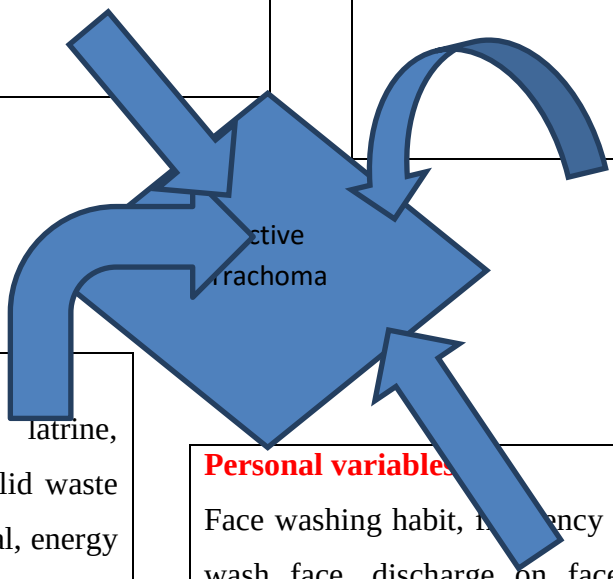
This conceptual framework is developed with thoroughly investigating of related literatures. It support to clarify and aware of about the concept and idea of factors that directly and indirectly rely with active Trachoma.

Socio demographic factors

Sex, age, marital status mother, religion, educational status of the family, etc.

Socio Economic factors

Household current occupation, household monthly income



Environmental variables

Types of water source, latrine, presence of flies on face, solid waste disposal, liquid waste disposal, energy source for cooking purpose, separation of kitchen, cattle ownership, separation of animal house

Personal variables

Face washing habit, f ncy of washing face, the use of soap to wash face, discharge on face, facial cleanness, and using of Zithromax prophylaxes used

FIG; conceptual framework of variables

Objectives

General Objectives

- ❖ To assess the prevalence and Associated factors of Trachoma in Gubre primary school students, SNNPR, Ethiopia, 2022 G.C.

Specific objectives

- To determine magnitude of active trachoma among Gubre primary school, Wolkite town
- To identify associated factors of Active Trachoma. Gube primary school, Wolkite town

Methodology

4.1. Study area and period

This study conducted in Wolkite town, SNNPR, Ethiopia which is one rapidly growing town. This is located at the longitude of 37.757655 and latitude of 8.267655 and also 204 km distance from Addis Ababa the capital city of Ethiopia and 123km and 183m from Jimma. In Wolkite town there are 3308 males and 2824 females, totally 6182 secondary school students are attended, 2020. Regarding to Gubre Primary School, with aim of to provide knowledge through well trained teachers, there are 8,196 students(4403 were females, and 3793 were males attends to school; most of the schools were encounter long ages with different regimes are pass;the number of students in the school are increasing through time associated with modernizing way of teaching.

4.2. Study design and period

School based cross sectional study was conducted in Gubre primary school, Wolkite Town from May 1-June, 2022 G.C.

4.3. Population

Source population

All primary school students in Gubre primary School, Wolkite Town.

Study population

The students found in Gubre primary schools of Wolkite town those fulfil the inclusion criteria during data collection period from randomly selected schools(3 schools).

4.4. Inclusion and exclusion criteria

The inclusion criteria

All primary school students who found in the school during data collection.

The exclusion criteria

Those students who do not learn during the study period and those who have hearing and already visually impaired

4.5. Sampling technique and sample size determination

Sample size determination

The sample size determination was based on the prevalence of active trachoma in south Gondar zone Dera district (15.6%), with 95% confidence interval; the sample size is calculated using the following formula. in

$$n= Z^2P (1-P)/w^2$$

w=margin of error

n = Sample size, for population of size

P= prevalence

Z= Standard normal deviate corresponding to 95% of confidence level;

$n= (1.96)^2 (0.156) (1-0.156)/ (0.05)^2 =202.3=203$

By considering 10% of non-response rate, the minimum sample size will be 203.

203+20 =223 finally, 223 samples will be selected.

4.5.1 Sampling procedure

In Gubre Primary school was our study area. The study was conducted by using systematic sampling techniques the sample size in each class allocated proportionally to the size of the class from grade 1-8 in the class in Gubre Schools. Lottery method was used to select the 1st child from students' registration then add k^{th} from the first child was selected for each class K- Value will be n/N= 223/1107 = 0.2(1/5) then the first sample proportion was selected randomly and the next will be every 5 interval.

Gubrye primary school

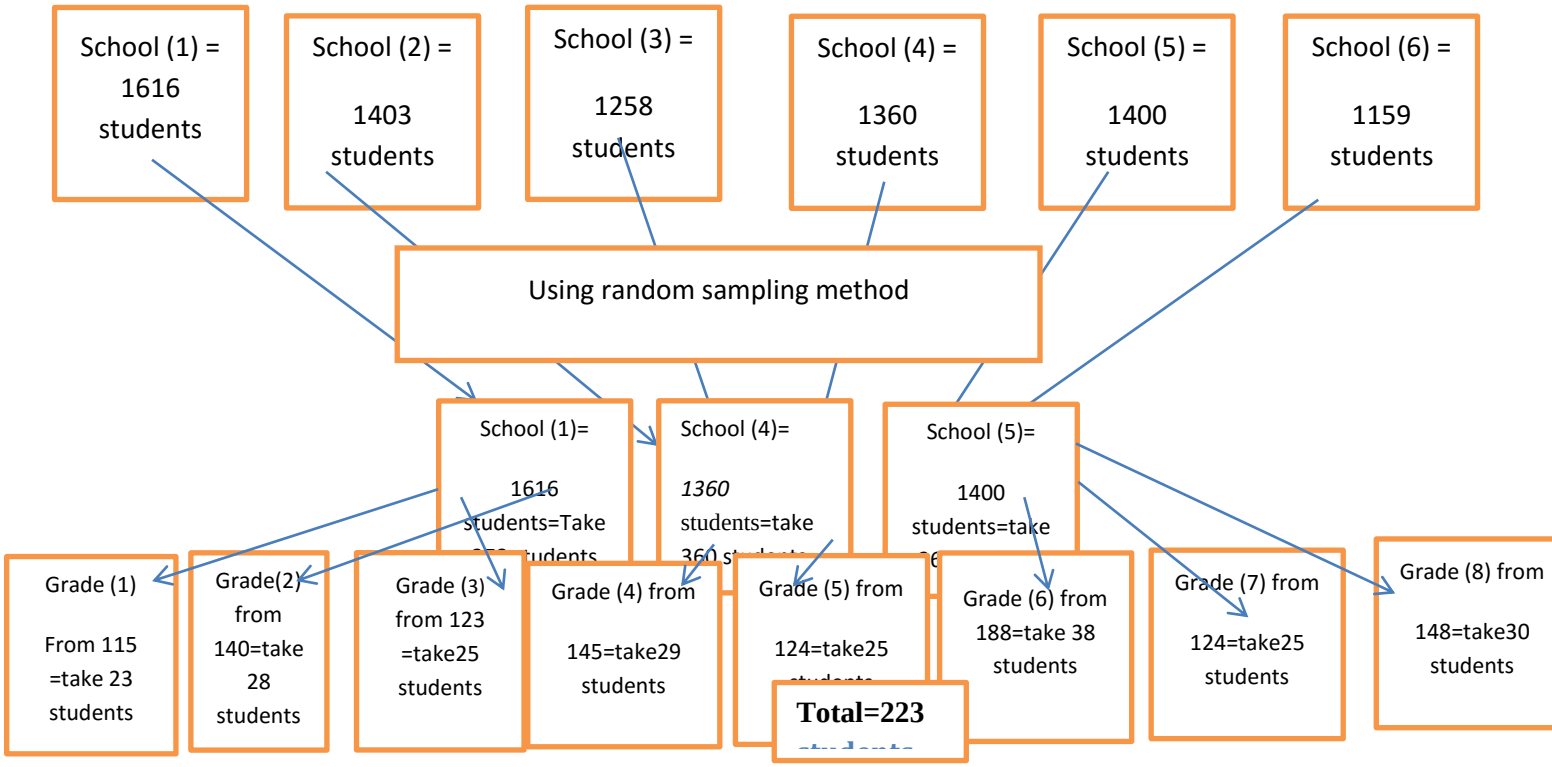


Fig: 2 representation of sampling procedure

nj =n byNj/N where, nj = sample size in a class Nj = total number of student in class n = total sample size N = total number of student enrolled

School (1)…Abaferansua School (3)….Walberg school (5)….kaffa

School (2)….Gasore School (4)….Otherna sise school (6)……Dagag

4.6. Variables

Dependent variable

- Active Trachoma (yes)

Independent variable

- *Socio demographic factors*

Sex of the child, age of the child, age of household head, marital status, religion, educational status of the mother, educational status of the father, being model household of the health extension package

- *Socio economic factors*

Household current occupation, household monthly income

- *Personal variables:*

Face washing habit, frequency of washing face, the use of soap to wash face, discharge on face, facial cleanness, and using of Zithromax prophylaxes used.

- *Environmental variables*

Types of water source, latrine utilizations, presence of flies on faces, solid waste disposal site, liquid waste disposal site, and house hold water consumption.

4.7. Operational Definition

Definition of terms

Active trachoma: A contagious conjunctiva inflammation in children characterized by white lumps in the under surface of the upper eyelid (conjunctival follicles or lymphoid germinal centres) and roughening of the inner surface of the eyelids-pain, breakdown of cornea.(21)

Clean face: A child who did not have an eye discharge or nasal discharge, fly in the face and any dirty things at time of observation. [20]

Trachomatous inflammation-follicular (TF): The presence of five or more follicles in the upper tarsal conjunctiva. (Follicles must be at least 0.5 mm in diameter).(20,21)

Trachomatous inflammation-intense (TI): Pronounced inflammatory thickening of the tarsal conjunctiva that obscures more than half of the normal deep tarsal vessels(20,21).

Trachomatousconjunctiva scarring (TS): The presence of easily visible scaring in the tarsal conjunctiva (20,21).

*Trachomatoustrichiasis (TT)***:** At least one eyelash rubs on the eyeball. Evidence of recent removal of inurned lashes was also graded as trichiasis. [20, 21]

Corneal opacity (CO): Easily visible corneal opacity over the pupil so dense that at least part of the pupil margin is blurred when viewed through the opacity [21] [21].

4.8 Data processing collection tools and procedures

Data was collected by face to face interview using a structured questionnaire and by using direct observation. The data was collected directly from students. The questionnaire was first prepared in English and translated to Amharic, and then it was again being translated back to English. A total of 3 trained nurses with eye care health were selected as data collector and 01 supervisor was assigned to the data collection for student interviews and observation. The observation is done by eye examination, then if present white lump under surface of upper

eyelid, redness of eye, watery discharge, the lashes rub on eye, and photophobia(using led light) etc….

4.9 Data quality Control Management

To keep the quality of data, the questionnaire was tested on 5% of total sample size outside study area. Principal investigator checks the completeness of the questionnaire each day and he/she return the back to data collector if not complete for refill by the visiting in the next day.

4.10 The data processing and analysis

Data was checked for completeness and all responses to the survey questionnaires. For data entry and analysis we use SPSS. Tally, graphs and tables applied for description

4.10.1 Ethical Considerations

Ethical clearance was obtained from WKU, college of health science department of nursing. After getting letter the school authorities informed about the study through letter written from WKU to enhance cooperation.

School directors are permit verbally and assent from each selected participant to confirm willingness. Honest explanation of the survey purpose, description of the benefits and an offer to answer all inquiries is made to the respondent.

4.10.2 Dissemination of results

The result of this study was disseminated to Ministry of Education, SNNPR regional Education bureau, Gurage zone education department, Gubre district Education office. The findings would also be disseminated to different concerned organizations that would have contributions to improve the education condition of the community through presentation and publication of the paper.

5. Result

5.1. Socio demographic variables of primary school students on Gubre sub city, Wolkite, Gurage, SNNPR, 2022

A total of 223 participants sampled for the study, the overall response rate was 223 (100 %).In gubrye sub city primary school students a total of 132 female (59.5%) and age of 10-15 are 175(78.8%). From these, 176 (79.3%) are Grade 5-8,and 196(88.3%) are SNNPR,112(50.5%) are Muslims, the students originate from families having 69 (31.1%) diploma and above. Regarding about

solid disposal presence and usage 181(81.5%), and 184(82.9%), respectively and 215(96.8%) have latrine. For more detail see table; 1.

Table 1: socio demographic status of students of Gubrye primary school, Wolkite, Gurage, SNNPR, Ethiopia, 2022 G.C .

S/no	variables		Frequency	Per cent %
1	Sex	male	90	40.5
		female	133	59.2
2	Age	6-9	47	21.1
		10-15	172	77.1
		>15	4	1.8
3	Grade	1-4	49	22
		5-8	174	78
4	Ethnicity	SNNPR	196	87.9
		Amhara	19	8.5
		Oromo	4	1.8
		Others	4	1.8
5	Religion	Orthodox	86	38.6
		Protestant	13	5.8
		Muslim	113	50.7
		Catholic	11	4.9
6	Family education status	Cannot read and write	13	5.8
		Can read and write	47	21.1
		Primary school	50	22.4
		Secondary school	22	9.9
		11-12th	22	9.9
		Diploma and above	69	30.9
7	Do the family have Solid	yes	182	81.6
		no	41	18.4

	disposal pit?			
8	Does the family use solid disposal pit	yes	177	79.4
		yes	46	20.6
9	Presence of latrine	Yes	216	96.9
		no	7	3.1

5.2. Personal characteristics of Gubrye sub city primary students, Wolkite, Gurage, SNNPR, Ethiopia, 202

As regard to personal characteristics 177(52.7%) were spent more time at home, 156 (70.3%) wash their face more than two, during washing their face use of soap 76 (34.4%) once and twice per day. Students those receive drug are 169 (76.1%), from those 68(30.6%) take only 1 times, 145(65.3%) have no flies on their face,212(95.5%) of them have clean face, (Table 2)

5.2 Table of personal characteristics of Gubrye sub city primary students, Wolkite, Gurage, SNNPR, Ethiopia, 2022

s/no	Variables		Frequency	Per cent (%)
1	Place where most time spent	Play on street	6	2.7
		At home	118	52.9
		At school	99	44.4
2	Frequency of wash hi/her face	Once	45	20.2
		Twice	53	23.8
		More than two	125	56.1
4	Frequency of using soap for washing face	Once	98	43.9
		Twice	82	36.8
		More than two	43	19.3
5	Did you receive drug for trachoma?	Yes	160	71.7
		No	63	28.3
6	How many times did you receive drug for trachoma?	One times	82	36.8
		Two times	52	23.3
		Three times	25	11.2
		More than three	1	0.4
7	Have you see flies on his/her face?	Yes	79	35.4
		No	144	64.5
8	Condition of his/her face	Clean	213	95.5
		Unclean	10	4.5

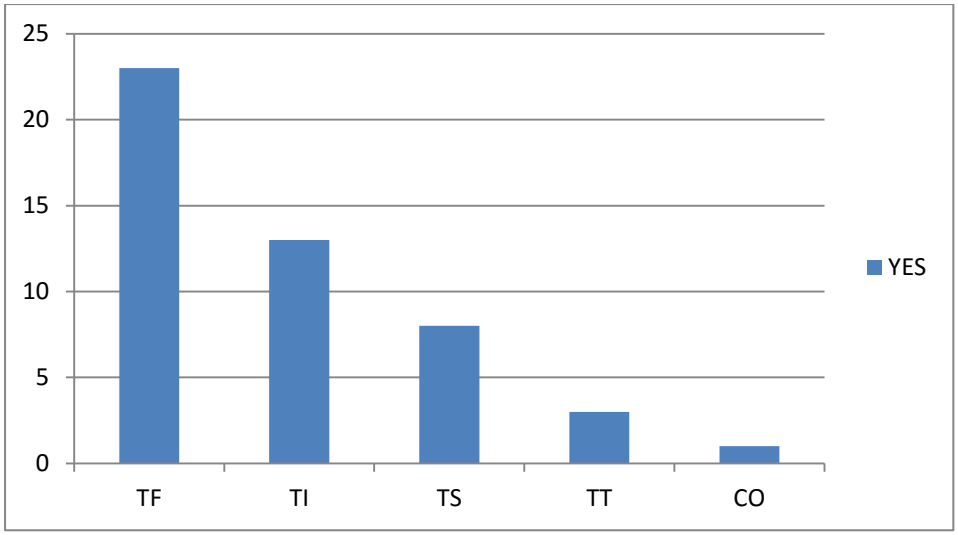


FIGURE 2: shows graphical representation prevalence of stage of trachoma

5.3. Socio economic status of families of students in Gubrye sub town, Wolkite, Gurage, SNNPR, Ethiopia, 2022 G.C.

Most families are merchant as our study indicates 142(64%), and 194(87.4%) gets 1000-5000 monthly income, and also 138(62.2%) have only one source of income, but 58(26.1%) were government employer and merchant. Table (3);

Table 3: socio economic variables of families of students in gubrye primary school, Wolkite, gurage, SNNPR, Ethiopia, 2022.G.C.

s/no	Variables	Category	Frequency	Per cent(%)
1	Occupation of family leaders	Farmer	23	10.3
		merchant	142	63.7
		Government worker	58	26.0
2	Family monthly income	500-1000	9	0.9
		1000-5000	195	87.4
		>5000	26	11.7
3	Did your family income more than one?	Yes	84	37.7
		No	139	62.3
4	If yes for	Government	58	26.0

	q(3),which one?	employee and merchant		
		Farmer and merchant	23	10.3
		Others	1	0.4

5.4. Environmental situation of student of Gubrye sub town, Wolkite, gurage, SNNPR, Ethiopia, 2022.

According to this study 200(90.1%), have separation of human and animals, and source water piped were 170(76.6%).Health centre are available for all student, but with different distance, 135(60.8%) were nearest to them. Table (4);

Table 4: environmental condition of students of gubrye primary school, Wolkite, Gurage, SNNPR, Ethiopia, 2022, G.C.

s/no	Variables	Category	Frequency	Per cent(%)
1	Is there human and animal separation	Ye	201	90.1
		No	22	9.9
2	What is the main source of water?	Protected well	43	19.3
		Protected spring	5	2.2
		Unprotected well	3	1.3
		Unprotected spring	5	2.2
		River	1	0.4
		Piped water	171	76.7
4	How far health facility from your village?	Nearest	135	60.5
		Far	63	28.3
		Very far	25	11.2

5.5 prevalence of trachoma in Gubrye primary school, Wolkite, Gurage, SNNPR, Ethiopia, 2022

Our study conducted on gubrye primary school students with respondent of 223(100%),from those (47(21.1%;95% CI=16.1,26.9)were response of indicates positive for active trachoma eye examination,176(78.9%) of them negative result),as shown by pie chart below .

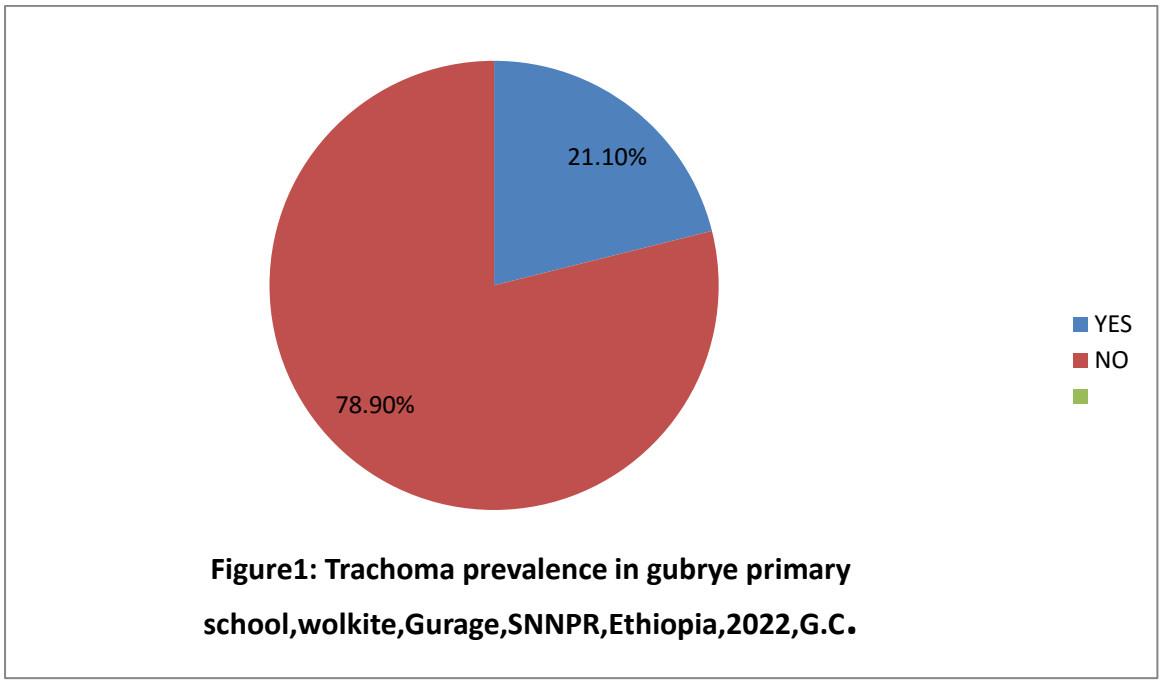


Figure1: Trachoma prevalence in gubrye primary school,wolkite,Gurage,SNNPR,Ethiopia,2022,G.C.

5.6. Factors associated of trachoma among gubrye primary school students

According to our study students wash their face once were more vulnerable (AOR=0.17, 95% CI;0.068-0.44) than relatively with others this is associated with water source of untreated piped water, river and also underground water source, students those of having unclean face were more victim (AOR=1.30;95% CI:0.16-5.65) than clean face the likelihood of trachoma among students who were not take drug for prevention were more infected (AOR=1.85;95% CO:0.82-4.2) than their counter parts.

Table (5);

Table 5: Factors associated of trachoma among gubrye primary school students, Wolkite, Gurage, SNNPR, Ethiopia, 2022.G.C.

Variables	Category	Trachoma		COR	AOR	P-value
		Yes (%)	No (%)			
Did your family use solid waste	Yes	23(48.94)	154(87.5)	1.00	1.00	
	No	24(51.1)	22(12.5)	7.03(3.54-15.1)	7.44(3.24-17.1)	0.00

disposal						
How often wash your face?	Once	19(40.4)	26(14.7)	0.4(0.28-0.62)	0.17(0.068-0.44)	0.00
	Twice	14(29.8)	39(22.2)	1.00	1.00	
Did you receive drug for trachoma?	No	19(59.6)	44(75)	2.04(0.04-3.99)	1.85(0.82-4.2)	0.14
	Yes	28(40.4)	123(25)	1.00	1.00	
Have you seen fly on face?	No	22(53.1)	122(30.7)	1.00	1.00	
	Yes	25(46.8)	54(69.3)	2.57(0.20-0.75)		0.005
Condition of the face	Clean	43(91.4)	170(96.6)	1.00	1.00	
	Unclean	4(0.85)	6(0.34)	2.64(0.71-9.76)	1.30(0.16-5.65)	0.94

6. Discussion

Although trachoma is avoidable, it remains neglected public health issue owing to few voices of people speaking out on behalf of people affected by trachoma. The study revealed that the prevalence of active trachoma in the gubrye sub town was found to be 21.1% (95% CI:16.1-26.9),the similar study was institutional based cross-sectional studies conducted in Kersa district of Oromia region showed the prevalence of active trachoma among children age 1–9 years 25.2% and and Baso Liben East Gojjam (2012) on children (aged 1- 9 years) the prevalence of active trachoma was found to be 24.1%(16), on the other hand higher prevalence on cross-sectional community – based study conducted in Ankober (2009) is 53.9%,the lower prevalence on Community based comparative cross-sectional study in dera woreda Out of 671 children who were screened for active trachoma, 105 (15.6%) of them with 95% CI [12.8–18.3] had active trachoma. More recent institutional based cross-sectional studies conducted in Dangila town of Amhara region showed the prevalence of active trachoma among children age 1–9 years were 12% the difference might be due to the difference in sample size, accessibility of services, water and drugs to prevent from trachoma, and study population. Regarding the factors the prevalence of trachoma higher on those of not washing their face once were more infected (2.64; 95% CI: 0.71-9.75) than their counter

parts, students those not receive drug to prevent trachoma were more (COR=2.01; 95%CI: 1.02-3.99) than those of received and also increasing frequency of washing face prevent from infection from trachoma.

7. Strength and limitation the study

Strength of the study

Collecting 100% respondent with individually, active participation of teachers and students, the study area near to the campus and also eager data collectors. And the advisors precise and timely comment for all of our thesis and also it was cost effective.

Limitation of the study

Limitations of significant were the data was collected from children's, time shortage, budget availability to do what to be done, and also sparsely allocation of schools. Lack of materials like laptop, and also different, being first exposed to research in case lack of detail knowledge for how to conduct research.

8. Conclusion

Active trachoma among students those who has been infected in highly prevalence were don't use latrine, don't use soap for face washing and face washing once alone are highly vulnerable as reported by respondent. And also, among students who not vaccinated for the immunizing the body to prepare antibody to struggle the disease for the prevention were the victim's. The access to adequate water and sanitation are the crucial components in irradiating and eliminating trachoma as a public problem's the concerned bodies should have to take measures to increase the access to adequate water and sanitation facilities to combat the active trachoma as well the related problem.

9. Recommendation

The prevalence of active trachoma in the study area far from the elimination of trachoma as a Puplic health problem. We commed for school directors and teachers to reduce its prevalence can be controlled in the study area thoroughly informing about the following;

I. Improving awareness of the community is a need through health education program regarding proper solid waste disposal using multi-disciplinary approach (offices of municipality, health, and administration of respective kebeles)
II. The heals sector needs to promote achieving high coverage and appropriate utilization of latrine

III. The use of separate kitchen and a cooking room with a window is needed by using multidisciplinary approach

IV. Multi sectorial collaboration (office of water, health and mayor) is needed to promote adequate recommended daily water consumption by making safe water available and accessible to the community

References

1. Nyamwaro, C.M., *Prevalence, and Risk Factors for Trachoma Infection Among Children Aged 1–9 Years Old in Oldonyonyokie Location, Magadi Division, Kajiado County, Kenya* 2016.
2.] A. T. Ferede, A.F.D., A. Tariku, and A. A. Adane, *"Prevalence and determinants of active trachoma among preschool-aged children in Dembia district, Northwest Ethiopia.* Infectious Diseases of Poverty, 2017. **6, no.1**: p. 128.
3. Schémann JF, S.D., Malvy D, Momo G, Traore L, Bore O, et al, *Risk factors for trachoma in Mali. Int J Epidemiol* 2002. **(1):194–201**: p. 31.
4. Mawson, A.K.M.a.A.R., *Neglected tropical diseases: epidemiology and global burden.* Tropical Medicine and Infectious Disease, 2017. **2, no. 3**.
5. Organization., W.H., *Planning meeting for Global Elimination of Trachoma.* 97.60 1996.
6. Ngondi J, M.F., Reacher M, Baba S, Brayne C, Emerson P., *Associations between active trachoma and community intervention with antibiotics, facial cleanliness, and environmental improvement.* 2008.
7. Organization., W.H., *Planning meeting for Global Elimination of Trachoma: .* 1996.
8. Alliance, R.o.t.t.M.o.t.W., *for the Global Elimination of Trachoma by 2020, Sydney, Australia* 2016.
9. Gedefaw M, S.A., Alamrew Z, Feleke A, Fentie T, Atnafu K. C, *urrent state of active trachoma among elementary school students in the context of an ambitious national growth plan. The case of Ethiopia.* 2013.
10. WorldHealthOrganization, *Reportofthe2ndGlobalScientific MeetingonTrachoma,WorldHealthOrganization.* 2003.
11. Polack S, B.S., Kuper H, Mariotti S, Mabey D, Foster A, *Mapping the global distribution of trachoma. Bull World Health Organ.* 2005. **913-19**: p. 3.
12. al, S.e., *The Geographical Distribution and Burden of Trachoma in Africa, LoSNegl Trop Dis 7(8):e. Doi:/journal.pntd0002359, (11.* 10.1371, 2013: p. 2359.
13. al., S.e., *The Geographical Distribution and Burden of Trachoma in Africa.* 0002359, 2013. **11**.
14. T, S.e.a., *he Geographical Distribution and Burden of Trachoma in Africa.* 0002359, 2013 **11**.
15. Mpyet C, G.M., Ogoshi C *Personal and environmental risk factors for active trachoma in children in Yobe state, northeasternNigeria. .* Trop Med Int Health 2010. **15**: p. 168-172
16. Berhane Y, W.A., Bejiga A, et al. , *Prevalence and causes of blindness and low vision in Ethiopia.* 2007. **204–210**: p. 3.
17. R, J.N.F.M.M., *Prevalence and risk factor of active trachoma. American Society of Tropical Medicine* 2014: p. 1126-132
18. Mpyet C, G.M., Ogoshi C *Personal and environmental risk factors for active trachoma in children in Yobe state, northeasternNigeria. .* Trop Med Int Health 2010. **15**: p.: 168-172.
19. E, M.A.M., *Prevalence and associated factor of active trachoma. iMedpud Journals and preventive medicine* 2016. **1**: p. 1-5.
20. trachoma., W.H.O.R.o.t.n.g.s.m.o., *WHO/PBD/GET* 2003. **03.1**.
21. Karimurio J, G.M., Ilako DR, et al, *prevalence of trachoma in six districts of Kenya. East Afr Med J* (4), 2006. **83**: p. 63 – 68.

ANNEX: QUESTIONAIRE

WOLKITE UNIVERSITY COLLAGE OF HEALTH SCIENCE department OF NURSING

Dear participant; my name is _____. We are working as a data collector with, who is doing a research as for a partial fulfilment of Bachelor of Science in nursing.

The main aim of this study is to assess Prevalence of active trachoma among Duna primary school students. The results of the study will be used as baseline information to design appropriate intervention strategies. Your name will not be written in this form and the information you give is kept confidential. If you do not want to answer all or some of the questions, you do have the right to refuse. So you are kindly requested to provide your genuine answers to the questions. If you have any question, don't hesitate to ask the interviewer. It doesn't take more than 30 minutes. Would you participate in responding to the questions in this questionnaire? Yes --------No------ Name and Signature of the data collector _____ Date of interview_____ Name and signature of the supervisor _____Date_____

INSTRUCTIONS FOR INTERVIWERS

(a) Explain the purpose of the interview to the children,

(b) Ask for consent before proceeding with the interview

(c) Make sure all questions are answered

(d) Tick as appropriate

Are you willing to be part of the study? (If "yes" continue)

1. Yes 2. No

If your answer I yes please answer the following questions

Part I: questions on socio demographic

Characteristics.

	Questions	Option of answers	Skip
101	Sex of the child	1. Male 2. 2.Female	

102	Age of the child	----------years	
104	Students grade	….……	
105	What is your region?	1. SNNPE 2. Amhara 3. Oromo 4. Tigrie 5 Other (specify)	
106	What is your Religion?	1.Orthodox 2. Protestant 3. Muslim 4. Catholic 5. Other (specify)……	
107	Educational status of the family	1. Cannot read and write 2. Can read and write 3. Primary school (1-8) 4. Secondary school (9&10) 5. 11-12 grade 6. Diploma and above	
109	Do your family have solid waste disposal pit?	1. Yes 2. No	
110	Does your family using the solid waste disposal pit?	1. Yes 2. No	
111	Do your family have latrine?	1. Yes 2. No	

Part2:- Personal character

201	Where does spend most of his/her time in the day?	1. Playing on street 2. at home 3. At school 4. Other (Specify) _	
202	How often does wash his/her face in a day?	1. Once 2. Twice 3. More than two	
203	Does use soap when washing his face?	1. Yes 2. 2.No	
204	If "Yes" for question number "3", how often soap is Used to wash the face?	1. One time, 2. Two times ,3.More than two times	
205	Did remember that ever receive a drug for trachoma prevention (Azythromycin)?	1. Yes 2. No	
206	If yes how many doses did received?	…….	
207	Have you see fly's in his / her face	1. Yes 2. 2.No	
208	Condition of the child's face	1. Clean 2. unclean	
209	Result of the Eye examination for active trachoma	1.Yes 2. No	

210	If Yes, specify the stage of Trachoma	1.TF 2. TI 3. TS 4. TT 5.CO	

Part 3: Question on Socio economic status

211	What is your father and mother occupation	1.farmer 2.trader Others……	
212	Your families average monthly income	Specify…..	
213	If the main source of your families income more than one?	1.yes 2.no If yes which one….	

Part 4: Questions on environmental variable

214	There is animal and human separation in home?	1.yes 2. no Others…	
215	What is the main source of water for the household?	1. Protected well 2. Protected spring 3. Unprotected well 4. Unprotected spring 5.River 6. Piped water	
216	Is there healthy facility in your village?	1.yes 2.no If yes 1.1 nearest 1.2 far 1.3 Very far…	

5. አባሪ፡ ጥያቄ

የወልቂጤ ዩኒቨርሲቲ የጤና ሳይንስ ኮሌጅ

የነርሶች ክፍል

ውድ ተሳታፊ; የኔ ስም _____. በነርሲንግ ሳይንስ የባችለር ከፊል ሙላትን ለማግኘት ምርምር እያደረገ ካለው እንደ ዳታ ሰብሳቢ እየሠራን ነው።

የዚህ ጥናት ዋና አላማ ጉብሬ አንደኛ ደረጃ ትምህርት ቤት ተማሪዎች ላይ ትራኮማ ስርጭትን መገምገም ነው ። የጥናቱ ውጤት ተገቢውን የጣልቃ ገብነት ስልቶችን ለመንደፍ እንደ መነሻ መረጃ ጥቅም ላይ ይውላል። ስምዎ በዚህ ቅጽ አይጻፍም እና የሚሰጡት መረጃ በሚስጥር ይጠበቃል። ሁሉንም ወይም የተወሰኑ ጥያቄዎችን መመለስ ካልፈለግክ/ሽ እምቢ የማለት መብት አለህ/ሽ። ስለዚህ ለጥያቄዎቹ ትክክለኛ መልስ እንድትሰጡ በትህትና እንጠይቃለን። ማንኛውም ጥያቄ ካለዎት ቃለ-መጠይቁን ከመጠየቅ አያመንቱ። ከ 30 ደቂቃዎች በላይ አይፈጅም. በዚህ መጠይቅ ውስጥ ለቀረቡት ጥያቄዎች ምላሽ በመስጠት ይሳተፋሉ? አዎ --------አይ------ የመረጃ ሰብሳቢው ስም እና ፊርማ _____ የቃለ መጠይቁ ቀን _____ የተቆጣጣሪው ስም እና ፊርማ _____ ቀን_____

ለጠያቂዎች መመሪያዎች

(ሀ) የቃለ መጠይቁን ዓላማ ለልጆቹ ያብራሩ፣

(ለ) በቃለ መጠይቁ ከመቀጠልዎ በፊት ፈቃድ ይጠይቁ

(ሐ) ሁሉም ጥያቄዎች መመለሳቸውን ያረጋግጡ

(መ) እንደአስፈላጊነቱ ምልክት ያድርጉ

የጥናቱ አካል ለመሆን ፈቃደኛ ነህ?

.1.አዎ

2. አይደለም

መልስዎ አዎ ከሆነ እባክዎ የሚከተሉትን ጥያቄዎች ይመልሱ

ክፍል አንድ፡ በማህበራዊ ስነ-ሕዝብ ላይ ያሉ ጥያቄዎች

ባህሪያት.

	ጥያቄዎች	የመልሶች አማራጭ	ዝለል
101	የተጠያቂ ጾታ	1 ወንድ 2. ሴት	
102	የተጠያቂ ዕድሜ	-------ዓመታት	
103	የክፍል ደረጃ	…….	
104	ብሄርህ/ሽ ምንድን ነው?	1.ደ/ብ/ብ/ህ/ክ/መ 2. አማራ 3. ኦሮሞ 4. ትግሬ 5. ሌላ (ይግለጹ)..	
106	ሀይማኖትህ/ሽ ምንድን ነው?	1.ኦርቶዶክስ 2. ፕሮቴስታንት 3. ሙስሊም 4. ካቶሊክ 5. ሌላ (ይግለጹ)……	
107	የቤተሰብህ/ሽ የትምህርት ደረጃ	1. ማንበብ እና መጻፍ አይችሉም 2. ማንበብ እና መጻፍ ይችላሉ 3. የመጀመሪያ ደረጃ ትምህርት ቤት (1-8) 4. ሁለተኛ ደረጃ ትምህርት ቤት (9	

		እና 10) 5. 11-12 ክፍል 6. ዲፕሎማ እና ከዚያ በላይ	
107	ቤተሰብህ/ሽ የደረቅ ቆሻሻ ማስወገጃ ጉድጓድ አላቸው?	1. አዎ 2. አይ	
108	ቤተሰብህ/ሽ የደረቅ ቆሻሻ ማስወገጃ ጉድጓድ ይጠቀማሉ?	1. አዎ 2. አይ	

ክፍል 2: - የግል ባህሪ

201	በቀኑ ውስጥ አብዛኛውን ጊዜ የት ነው የምታሳልፍ/ፊ? –	1. በመንገድ ላይ መጫወት 2. በቤት ውስጥ 3. በትምህርት ቤት 4. ሌላ (ይግለጹ)...	
202	ፊትህን/ሽን በቀን ስንት ጊዜ ትታጠባለህ/ትታጠቢያለሽ?	1. አንዴ 2. ሁለት ጊዜ 3. ከሁለት በላይ	
203	ለጥያቄ ቁጥር "3" "አዎ" ከሆነ, ሳሙና ስንት ጊዜ ነው ፊትን ለማጠብ ጥቅም ላይ	1,አንድ ጊዜ 2 ሁለት ጊዜ ,3.ከሁለት ጊዜ በላይ	

	ይውላል?		
204	በዘመቻ የሚሰጥ የትራኮማ መከላከያ (Azythromycin) መድኃኒት ወስደሀል/ሻል?	1. አዎ 2. አይ	
205	አዎ ከሆነ ስንት ጊዜ ወስደሀል/ሻል?	……	
206	በፊትህ/ሽ ላይ ዝንብ አይተሃል/ሻል።	1.አዎ 2.አይ	
207	የልጁ/ጇ ፊት ሁኔታ	1 ንጹህ 2. ቆሻሻ	
208	የነቃ ትራኮማ የዓይን ምርመራ ውጤት	1. አዎ 2. አይ	
209	አዎ ከሆነ፣ የትራኮማ ደረጃን ግለፅ/ጭ	1.TF 2. TI 3. ቲኤስ 4. ቲ.ቲ 5.CO	

በማህበራዊ ኢኮኖሚያዊ ሁኔታ ላይ ጥያቄ

2110	አባትህ/ሽ እና እናትህ/ሽ ስራቸው ምንድን ነው?	1.ገበሬ 2.ነጋዴ ሌሎች……	
211	የአንተ/ች ቤተሰቦች አማካይ ወርሃዊ ገቢ ይግለጹ…..	1, <1000 2, >1000	

		የተለየ ከሆነ....	
212	የቤተሰብህ/ሽ ዋና የገቢ ምንጭ ከአንድ በላይ ነው?	1.አዎ 2.አይደለም አዎ ከሆነ ይለዩት.....	
213	በቤት ውስጥ የእንስሳት እና የሰው መለያየት አለ?	1.አዎ 2. አይ ሌሎች…	
214	የቤተሰብህ/ሽ ዋናው የውኃ ምንጭ ምንድን ነው?	1. በደንብ የተጠበቀ 2. የተጠበቀው ጸደይ 3. በደንብ ያልተጠበቀ 4. ያልተጠበቀ ጸደይ 5. ወንዝ 6. የቧንቧ ውሃ	
215	በመንደር ውስጥ ጤና ተቋም አለ?	1.አዎ 2.አይደለም አዎ ከሆነ 1.1 ቅርብ 1.2 ሩቅ 1.3 በጣም ሩቅ….	

ተጠናቀቀ ስለትብብረዎ ከልብ እናመሰግናለን።