UNIVERSITY OF GONDAR

COLLEGE OF MEDICINE AND HEALTH SCIENCES

SCHOOL OF MEDICINE

DEPARTMENT OF OPTOMETRY

ATTITUDE, PRACTICE AND ASSOCIATED FACTORS AMONG ADULT RESIDENTS TOWARDS TRADITIONAL EYE MEDICINE IN GONDAR CITY, NORTHWEST ETHIOPIA

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List of Acronyms

AOR	Adjusted Odds Ratio
COR	Crude Odds Ratio
ETB	Ethiopian Birr
HM	Herbal Medicine
SPSS	Statistical Package for Social Science
TEM	Traditional Eye Medicine
TEMPs	Traditional Eye Medicine Practitioners
TH	Traditional Healer
TM	Traditional Medicine

Abstract

Background: World health organization defines traditional medicines as the sum of all knowledge and practices used in diagnosis, prevention and elimination of illnesses. The proportion of traditional eye medicine use in Africa was 13.2- 82.3%. Despite, high frequency of traditional eye medicine use in Africa, population based studies are limited in Ethiopia specifically in Gondar city.

Objective: The aim of this study was to assess attitude, practice and associated factors among adult residents towards traditional eye medicine in Gondar city, northwest Ethiopia.

Methods: Community based cross sectional study was conducted from April 25 to May 15, 2017. Data from the entire questionnaire was coded, entered in to Epi info 3.5.1 and analyzed using SPSS 20 software. Frequency and cross tabulations were used for descriptive analysis. Associations between variables were analyzed using binary logistic regression through enter method with 95 % confidence interval.

Results: A total of 600 subjects participated in the study with 95 % response rate. From total study subject, 292 (48.7 %) (95% CI: 44.7-52.7%)) of them had good attitude towards traditional eye medicine use and 73 (12.2 %) (95%CI: 10-15%)) were used traditional eye medicine in the past two years. Variables such as positive family history of traditional eye medicine use (AOR=3.30(95% CI: 2.01-5.47) and absence of health insurance (AOR=1.60(95% CI: 1.14-2.55) were significantly associated with good attitude towards traditional eye medicine use. Being illiterate (AOR=5.40(95% CI: 5.3-12.3) and positive family history of TEM use (AOR=4(95% CI: 1.84-8.67) were significantly associated with traditional eye medicine use.

Conclusion and recommendation: In this study, almost half of the study subjects had good attitude towards traditional eye medicine use and the proportion of traditional eye medicine use was low in the past two years. Positive family history of traditional eye medicine use and availability of traditional healers had significant association with attitude and use of traditional eye medicine. Community awareness about traditional eye medicine use is important.

Key words: Attitude**,** Practice, Traditional Eye Medicine, Gondar City, Ethiopia

1. Introduction:

1.1 Statement of the problem

World health organization defines traditional medicines as the sum total of all knowledge and practices whether explicable or inexplicable used in diagnosis, prevention and elimination of physical, mental or social imbalance and relying exclusively on practical experience and preservation handed down from generation to generation whether verbally or written (1).

Traditional eye medicines are a form of biologically based therapies or practices that are instilled or applied to the eye or administered orally to achieve a desired ocular therapeutic effect. Traditional eye medicines are crude or partially processed organic (plant and animal products) or inorganic (chemical substances) agents (2). The most common types of traditional eye medicines used by the traditional eye medicine practitioners (TEMPs) are plant extracts, commercial chemicals and fluids from various sources (1, 2).

Traditional eye medicine is popular. It is believed as an alternative health care and used in developing world where in many places, it takes a more widely available and affordable alternative to pharmaceutical drugs. In Africa, up to 13.2- 82.3% of the population depends on it (4-6).

Traditional eye medicine is used largely in Ethiopian society (7, 8). However, studies done on attitude and practice of traditional eye medicine are limited. This is also true in Gondar city and to the best of the researcher knowledge there is no published and reported study regarding attitude and practice of traditional eye medicine.

By studying attitude, practice and associated factors of traditional eye medicine in Gondar city adult residents, this study will provide important information to stake holders to take appropriate controlling measures regarding the quality and safety of the practices.

1.2 Literature Review

1.2.1 Attitude towards traditional medicine

Different cross-sectional studies done in different parts of the world reported different attitude towards traditional medicine.

Hospital based study done in Iran, Kasha health care staffs in 2014 reported that 75% of the participants in the study had positive attitude toward TM use (9) While Sayadi et al.(10) and Mirzai et al.(11) in 2011 reported that in Rafsanjan, only 13% of medical students and 5% of doctors had positive attitude toward traditional medicine (TM) use respectively. Study in Singapore in 2005, 92% of medical students(12) had positive attitude towards traditional medicine use. Another study in china in 2001 has reported that 63% of pharmacists had positive attitude towards traditional medicine use (13). In addition, approximately 85.8% agreed that TM contained ideas and methods from which modern medicine could benefit (14). Interestingly, the vast majority (97.3%) of nurses who saw themselves as having excellent or good health considered that the use of TM by Hong Kong people is a common phenomenon, whereas 89.2% of those who saw themselves as having poor or fair health held such a perception (15). Yilmaz et al. (16) in 2007 found that about one-third of interviewed herbal users believed that ‘‘herbals are healthy’’ and beneficial when added to medicines.

A study in 2010 revealed that about half of the community pharmacists in Riyadh (57%) consider herbal products as potentially unsafe, whereas a considerable proportion (30%) deemed them to be harmless. This was found despite the finding that 53% of pharmacists believed herbal remedies were effective or very effective (17).

In community based study in Tanzania in 2015, 18% of the respondents belief that traditional medicine was their first source of healthcare, including both self-treatment and also visiting local healers (18). In another similar study in Kenya in 2015 the respondents believed in the importance of herbal medicine for maintaining health. Some (14.9%) of the respondents believed that herbal medicine is well accepted by the community. While most (30%) of the respondents believed that they yield

perceived relief to their respective diseases. Equally important, 5.9% of the respondents had the belief that herbal medicine cures ailment faster than the conventional medicine (19).

Studies in different parts of Ethiopia reported different attitude towards traditional medicine use. In Jara town, Bale zone, southeast Ethiopia in 2016 out of the respondents 60.15% had negative attitude while 39.85% had positive attitude towards traditional medicine use and 54.61% of the respondents believed that there are disease that are not cured by modern medicine (20). In Shopa Bultum Southeast Ethiopia in 2014, a study showed that 92% of the study participants had positive attitude towards traditional medicine use. Among them 72% believed that traditional healers can cure their disease better than doctors (21) and In Merawi, West Gojjam, Ethiopia in 2015, 71.7% of the study participants had negative attitude towards traditional medicines use. Only 19.1% participants recommend use of TM therapy for others (7).

1.2.1.1 Factors for attitude towards traditional medicine

Socio-demographic factors

Community based cross sectional study in Israel (2001) and Serbia (2013), indicated that male sex and being illiterate were positively associated with positive attitude towards traditional medicine use. It was more (38 %) in males compare to females. It was higher (34 %) towards adult age greater than 40 years (22, 23). Another study in Malaysia (2009) indicated that income level and marital status were insignificant factors (24). Similar study in Tanzania in 2010 reported male sex and Christian religion were positively associated with positive attitude towards traditional medicine use (25).

Personal factors

According to studies in Malaysia and Uganda family history of TM use, and awareness of TM side effects were positively associated with positive attitude towards traditional medicine use. Those individuals with family history of TM and awareness of TM side effects had positive attitude towards traditional medicine use in both studies (24, 26).

Environmental factors

Adepoju from Nigeria in 2005 reported that availability of traditional healers in the village was significantly associated with positive attitude towards traditional medicine use. It indicated that persons who live around traditional healer (TH) had positive attitude towards traditional medicine use (27- 28).

Eye care related factors

Studies in Kenya (19) and west Gojjam, Ethiopia (7) accessibility of health care service, and outcome of modern treatment were significantly associated with positive attitude towards traditional medicine use.

1.2.2 Traditional eye medicine practice

Traditional eye medicine is common in many countries; in Brazil (1997) 14.4% of those having cataract surgery reported that they had self-medicated at home for the cataract prior to surgery (29).

Various cross sectional hospital based studies in Africa and Asia have reported the large-scale use of TEM for corneal ulcers, ocular injuries, and other eye diseases (30-35). Singh, in 2005, (30) from Nepal reported that 57% of the patients with corneal ulcers used TEM. A relatively old study on corneal ulcers in Benin City, Nigeria (1995), also reported the use of TEM by 68% of the patients. Among them, 55.4% used plants near their house (31). In south east Nigeria (2014), Eberechukwu et al. reported 82.3% proportion of TEM among patients, who visited secondary hospital (32). Another recent(2011) study in Nigeria reported that TEM proportion in new patients presenting to tertiary hospital was 13.2% (33). The proportion of TEM use among new patients at Skheu, Zimbabwe in 2014, was 61.5% (34). In Tanzania (1998), 49% of patients with ocular injuries used TEM (35).

A community based cross sectional study conducted in Adilabad district of India (2016) and Democratic Republic of Congo (2008) showed that 17.31% of patients reported use of traditional eye medicines (36-37). In Malawi in 2009, 28.7% of study participants reported use of traditional eye medicines (38). Similar study in Uganda in 2012 showed that proportion of use of traditional eye health practices was found to be 44.2%. Of those who used traditional remedies, 73% used modern medicine at one point during the sickness either concurrently (37.9%), after presumed failure of modern medicine (21.4%) or after traditional medicine had failed to cure them (13.8%) (39).

1.2.2.1 Factors for traditional eye medicine practice

Socio-demographic factors

In institution based cross sectional study conducted in Nigeria, female sex and being farmer were positively associated with TEM use. It was reported that among those who have used TEM, 43% were males while 57% were females (33). Similar studies in Nigeria and Zimbabwe reported that being married and old age (51-60 year age group had the highest prevalence for the use of TEM at 23.2%, followed closely by the 61-70 year group (22.02%) and 41-50 year group (13.1%)) were positively associated with TEM use (34, 40). However, educational status was insignificant factor (33, 40).

A community based cross sectional study done in Uganda showed that old age and male sex were positively associated with TEM use. It was higher in males (49.4%) compared to the females (37.4%). It was also noted that use of traditional eye remedies increases with age with a peak at the 41-50 age group. But, occupation is insignificant variable (39). In other similar study, Bisika et al,(38) reported that TEM practice was significantly predicted by male sex, chrstian by religion and high income.

Personal factors

According to a study in Nigeria in 2014, family history of TEM use was positively associated with TEM use while awareness of TEM side effects was negatively associated with TEM use (41). Around 65% of users were unaware of the risks associated with TEM use (45).

Environmental factors

Choudhary (3) et al reported that availability of TH in the village was positively associated with TEM use. Traditional healers are accessible, the treatment is usually affordable, and they communicate well at a psychosocial level with the patient. All of which provide consumer satisfaction in relation to non-clinical care (29).

Eye care related factors

According to studies in Zimbabwe, Nigeria, and Ivory Coast, good accessibility of modern eye care and outcome of modern eye treatment had negative association with TEM use (42, 43).

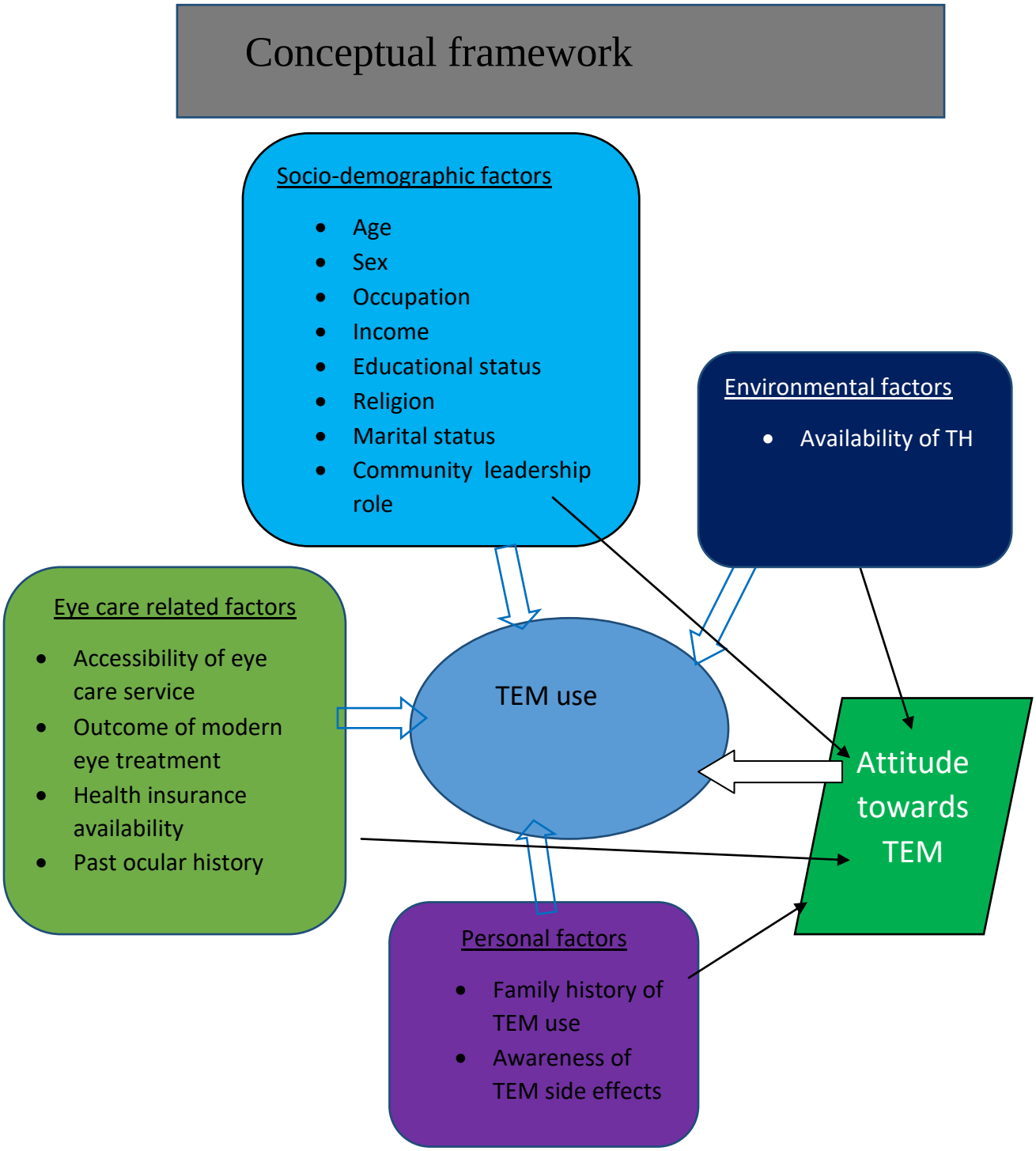

Diagram 1: conceptual frame work that shows variables on attitude and practice of traditional eye medicine

1.3 Justification of the study

Most patients present at Gondar university hospital tertiary eye care and training center have applied traditional eye medicine before their presentation. Among those patients, majority got corneal and conjunctival complications. This usually causes poor treatment outcome and may lead to blindness. However, attitude and practice of TEM among general population was not well characterized and studies are absent on this problem in the study area. Therefore, a study that assess attitude, practice and associated factors of traditional eye medicine is important in order to give reliable data to public health efforts for developing controlling measures regarding quality and safety of traditional eye medicine use.

2. Objective

2.1 General objective:

- ✓ To assess attitude, practice and associated factors among adult residents towards traditional eye medicine in Gondar city, northwest Ethiopia, 2017.

2.2 Specific objectives:

- ✓ To determine attitude of adults towards traditional eye medicine use.
- ✓ To measure the proportion of traditional eye medicine use among adults.
- ✓ To identify factors that influence attitude of adults towards traditional eye medicine use.
- ✓ To identify factors associated with traditional eye medicine use among adults.

3. Methods

3.1 Study design: - Community based cross sectional study was conducted

3.2 Study area and period: The study was conducted in Gondar city from April 25 to May 15, 2017. Gondar city is found in northwest Ethiopia. It is located 727 Km from the capital, Addis Ababa and 182 km from Bahir Dar, capital of Amhara National Regional State. It has population size of 351,675, out of which 168,993 are males and 182,682 are females. The town is subdivided into 24 city kebeles holding approximately 53,725 households and approximately 112, 800 adult population (44). There is one tertiary eye care center which provides different specialty eye care services and training of eye care professionals such as Optometrists and Ophthalmologists. There are three private eye care specialty clinics in the city as an alternative.

3.3 Source and study population: - All adults, who were living in Gondar city at least for 6 months.

3.4 Inclusion and exclusion criterias

3.4.1 Inclusion criterias: -All adults, who were living in Gondar city at least for 6 months.

3.4.2 Exclusion criterias: - Adult residents, who were seriously ill, hearing loss and mentally retarded.

3.5 Sample size determination: -By using open Epi computer software for proportion study with the following conditions.

Since, there is no previous study in the study area and similar study setting, P= 50 %(proportion of TEM practice) was taken.

Margin of error=5%

Level of significance=5% (95% confidence level)

Design effect=1.5

Non response rate= 10%

Total population= 112, 800

Total sample size (n) = 575 + 10(575)/100= 633

Sample size for independent variables

Variable 1, Age (OR= 2.5, P= 23.2%= exposed age group (above 41 years old), P=8.33%= non exposed age group (less than 20 years old)) (39)

Level of significance=5%

Non response rate= 10%

Power= 80%

Total population= 112, 800

Total sample size (n) = 470

Variable 2, sex (OR= 2, P= 49.4=exposed (males), P= 34.7= non exposed (females)) (39). Following similar fashion, total sample size was 302.

Thereafter maximum sample size was selected from three sample sizes. Therefore, the sample size for this study was 633.

3.6 Sampling technique

Multi stage random sampling technique was employed. Six kebeles were selected from the city by simple random sampling technique. In selected kebeles there were 189, 675 population and 12, 952 households. Population proportion to size sampling was used to determine the sample size in each kebele. Households in kebele were selected by systematic random sampling method using sampling fraction of 21. One adult individual was selected randomly from each household to obtain a final sample size of 633.

Schematic description of sampling technique

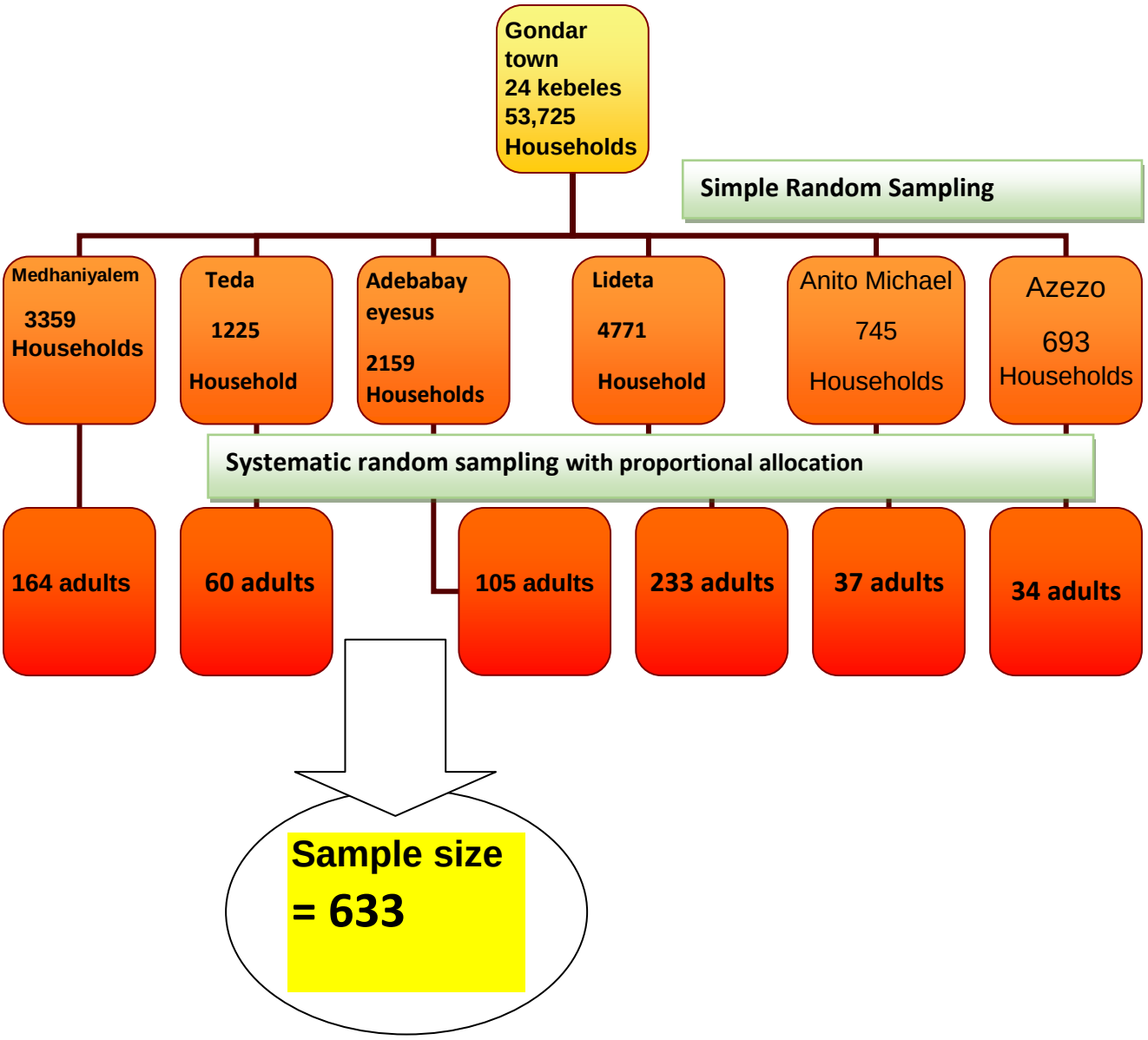

Diagram 2: Schematic description of sampling procedure among adult residents in Gondar city, northwest Ethiopia, 2017

3.7 Study variables

3.7.1 Dependent variables

Attitude towards traditional eye medicine use

Practice of traditional eye medicine

3.7.2 Independent variables

Socio-demographic variables

- Age
- Sex
- Occupation
- Income
- Educational status
- Religion
- Marital status
- Community leadership role

Personal variables

- Family history of TEM use
- Awareness of TEM side effects

Environmental variables

- Availability of TH

Eye care related variables

- Accessibility of eye care service
- Outcome of modern eye treatment
- Availability of health insurance

3.8 Operational definitions

Traditional eye medicine practice: - The respondent said to have traditional eye medicine practice when he/she used traditional eye medicine at least once in the past 2 years for specific ocular problem.

Good attitude: When the study participants scored mean and above mean of attitude questions.

Poor attitude: When the study participants scored less than mean of attitude questions.

High income: monthly income greater or equal to 1328 EB (48)

Low income: monthly income less than 1328 EB.

Availability of TH: when participants report that they know functional traditional healer any where in the city.

Health insurance: payment for health coverage for any reason

3.9 Data collection procedures and personnel

Data was collected through face to face interview, using pre-tested structured Questionnaire. It contains Information about socio demographic characteristics, personal factors, eye care related factors and environmental factors.

The data collection instrument (questionnaire) was developed in English and then translated to Amharic and later translated back to English by language experts to ensure accuracy and reliability of data.

Seven optometrists were selected for data collection. They were trained for two days to make them familiar with the survey instrument and also the basic approach.

3.10 Data management and analysis

Epi-info version 3.5.1 was used for data entry and every day at the end of data collection, every questionnaire was checked for completeness.

3.10.1 Data quality control

To assure data quality pre tested (5%) was done in maksegnt town using structured questionnaire. Reliability of the questionnaire was tested using Cronbach's alpha and the result was 0.80. In addition, data clean up, checking for data completeness, outliers and missing values, training of data collectors, supervision was done as necessary.

3.10.2 Data processing and analysis

Data from the entire questionnaire was coded, entered in to Epi info 3.5.1 and cleaned, checked for completeness, outliers and missing values using SPSS version 20 software. Frequency and cross tabulations were used for descriptive analysis of data. Bivariable analysis was used to measure strength of association using odds ratio. Associations between dependent and independent variables were analyzed using binary logistic regression with enter method. To check significance 95% confidence intervals was used. P-value of 0.05 was used as the cut off point for the statistical significant of predictor variables in multiple regressions and P-value of 0.2 was used for bivariable analysis. Model fitness was checked using Hosmer and Lemeshow goodness of fit and the result was 0.985. Besides to this, predictor variables were checked for multicollinearity and the VIF values were less than 10 through cross checking across each variable.

3.11 Ethical issues

Ethical clearance was obtained from University of Gondar College of medicine and health sciences, school of medicine ethical review committee and support letter was obtained from kebele administrates. The household head saw and read it during data collection.

Verbal informed consent was obtained from all study participants. Participation in the study was voluntarily. The participants were requested to give verbal consent with a detailed explanation of the study. The questionnaires did not require the identity of the participants and data collection and analysis was done with confidentiality maintained. Information gathered was only be used for purposes of improving health delivery services and for academic purposes. Hence, the results of this study were

be shared only with the relevant stake-holders including the University of Gondar, division of ophthalmic services. Information was not used for any other purpose other than the one stated.

3.12 Dissemination of the results

The result of this study was disseminated to University of Gondar College of Medicine and health sciences, department of optometry, University of Gondar hospital administrates, federal and regional ministry of health, publishing organizations and other concerned organizations.

4. Results

4.1 Sociodemographic characteristics of study participants

A total of 600 subjects participated in the study with 95 % response rate. The median age of the participants was 30 (16 IQR) with range of 18–88 years. Among them, 354 (59%) were females, 539 (89.8 %) were Christian in religion, and 426 (71%) had income ≥ 1328 Ethiopian birr. (Table 1)

Table 1: Sociodemographic characteristics of study participants towards attitude and practice of traditional eye medicine among adult residents in Gondar city, northwest Ethiopia, 2017 (n=600)

Variables	Category	Frequency	Percent
Age (in years)			
	18-24	150	25
	25-30	181	30.2
	31-40	140	23.3
	41-88	129	21.5
Sex			
	Male	246	41
	Female	354	59
Educational status			
	Illiterate	69	11.6
	Read and write	99	16.6
	Primary school	89	14.6
	Secondary school	131	21.8
	Collage and above	212	35.4
Marital status			
	Married	307	51.1
	Unmarried	293	48.9
Religion			
	Christian	539	89.8
	Muslim	61	10.2
Occupation			
	House wife	109	18.2
	Student	97	16.2
	Merchant	115	19.2
	Employed	203	33.8
	Other	76	12.6

Income			
	High income	426	71
	Low income	174	29
Community leadership role			
	Having role	115	19.2
	No role	485	80.5

n=number of respondents

4.2 Attitude towards traditional eye medicine use

Two hundred ninety two (48.7 % (95% CI: 44.7 %-52.7 %)) individuals from 600 total study participants had good attitude towards traditional eye medicine use. Among total study participants, 294 (49 %) disagreed that traditional eye medicines are as safer as modern eye medicines, 275 (45.8 %) disagreed that there is danger to take traditional eye medicine with modern eye medicine, 340 (56.7 %) disagreed that traditional eye medicines are more effective than modern eye medicines. (Table 2)

Table 2: Attitude of study participants towards traditional eye medicine use among adult residents in Gondar city, northwest Ethiopia, 2017(n=600)

Questions	Frequency	Percent
Do you accept traditional eye medicine use?		
Yes	274	45.7 %
No	326	54.3 %
Do you encourage others to use traditional eye medicine?		
Yes	216	36.2 %
No	384	63.8 %
Traditional eye medicines have role in public eye health.		
Strongly agree	43	7.2 %
Agree	254	42.2 %
Neutral	79	13.2 %
Disagree	181	30.2 %
Strongly disagree	43	7.2 %
Individual or communiy perception of eye disease can encourage or discourage TEM use.		
Strongly agree	55	9.2 %
Agree	172	28.6 %
Neutral	44	7.4 %
Disagree	278	46.3 %
Strongly disagree	51	8.5 %

Traditional eye medicines are as safer as modern eye medicine.		
Strongly agree	94	15.7 %
Agree	126	21 %
Neutral	58	9.7 %
Disagree	294	49 %
Strongly disagree	28	4.7 %
It is dangerous to take traditional eye medicines with modern eye medicines.		
Strongly Agree	38	6.3 %
Agree	220	36.7 %
Neutral	39	6.5 %
Disagree	275	45.8 %
Strongly Disagree	28	4.7 %
Traditional eye medicines are more effective than modern eye medicines		
Strongly agree	19	3.2 %
Agree	44	7.3 %
Neutral	24	4 %
Disagree	340	56.7 %
Strongly disagree	173	28.8 %
Consulting eye care professional or pharmacist before taking traditional eye medicine is important.		
Strongly agree	21	3.5 %
Agree	192	32 %
Neutral	25	4.2 %
Disagree	307	51.2 %
Strongly disagree	55	9.1 %

n=number of respondents

4.3 Practice of traditional eye medicine

Seventy three (12.2 %) (95% CI: 10-15 %)) individuals from 600 total study participants were used traditional eye medicine in the past two years. Among those who were used traditional eye medicine, majority (35.6 %) were found above age 40 years. In addition, 48 (65.8 %) were married, 57(78.1 %) were Christian, and 43 (58.9 %) had income ≥ 1328 ETB. (Table 3)

Table 3: Distribution of traditional eye medicine use in study participants among adult residents in Gondar city, northwest Ethiopia, 2017 (n=73)

Variables	Traditional eye medicine (TEM) use	
	Yes (no and %) Total =73	No (no and %) total = 527
Age (in year)		
18-24	11(15 %)	139 (26.4 %)
25-30	16 (21.9 %)	165 (31.3 %)
30-40	20 (27.5 %)	120 (22.8 %)
41-88	26 (35.6 %)	103 (19.5 %)
Sex		
Male	36 (49.3 %)	210 (39.8 %)
Female	37 (50.7 %))	317 (60.2 %)
Marital status		
Married	48 (65.8 %)	259 (49.1 %)
Unmarried	25 (34.2 %)	268 (50.9 %)
Educational status		
Illiterate	18 (24.7 %)	51(9.7 %)
Read and write	19 (26 %)	80 (15.2 %)
Primary school	10 (13.7 %)	79 (15 %)
Secondary school	12 (16.4 %)	119 (22.6 %)
Collage and above	14 (19.2 %)	198 (37.6 %)
Religion		
Christian	57 (78.1 %)	482 (91.5 %)
Muslim	16 (22.9)	45 (8.5 %)
Occupation		
House wife	14 (19.2 %)	95 (15.6 %)
Student	15 (20.5 %)	82 (18 %)
Merchant	13 (17.8 %)	102 (19.4 %)
Employed	14 (19.2 %)	189 (35.9 %)
Others	17 (23.3 %)	59 (11.2 %)

Income		
High income	43 (58.9 %)	383 (72.7 %)
Low income	30 (41.1 %)	144 (27.3 %)
Community leadership role		
Having role	21 (28.8 %)	94 (17.8 %)
No role	52 (71.2 %)	433 (82.2 %)

n=number of traditional eye medicine users

Among those who reported the use of TEM, 44(48.9 %) mentioned cultural believe as a reason for their use. (Figure 1)

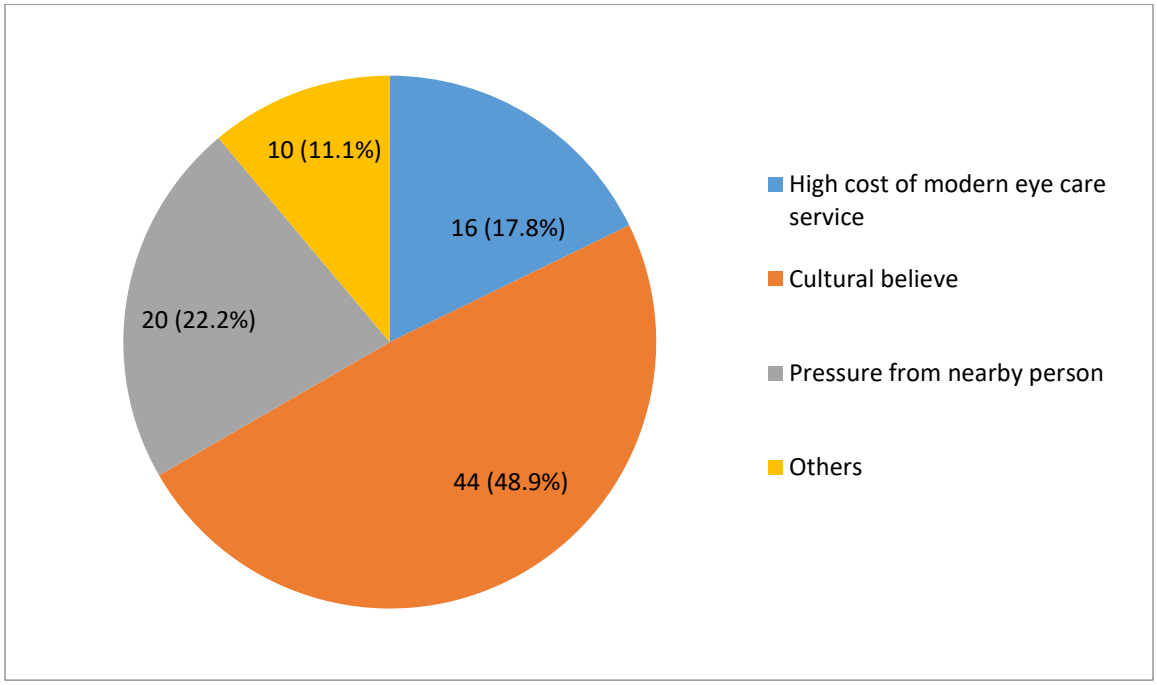

Figure 1: pie chart that shows reasons of study participants for traditional eye medicine use among adult residents in Gondar city, northwest Ethiopia, 2017.

From a total of 600 study participants, 542 (90.3%) were familiar with some type of traditional eye medicine. (Figure 2)

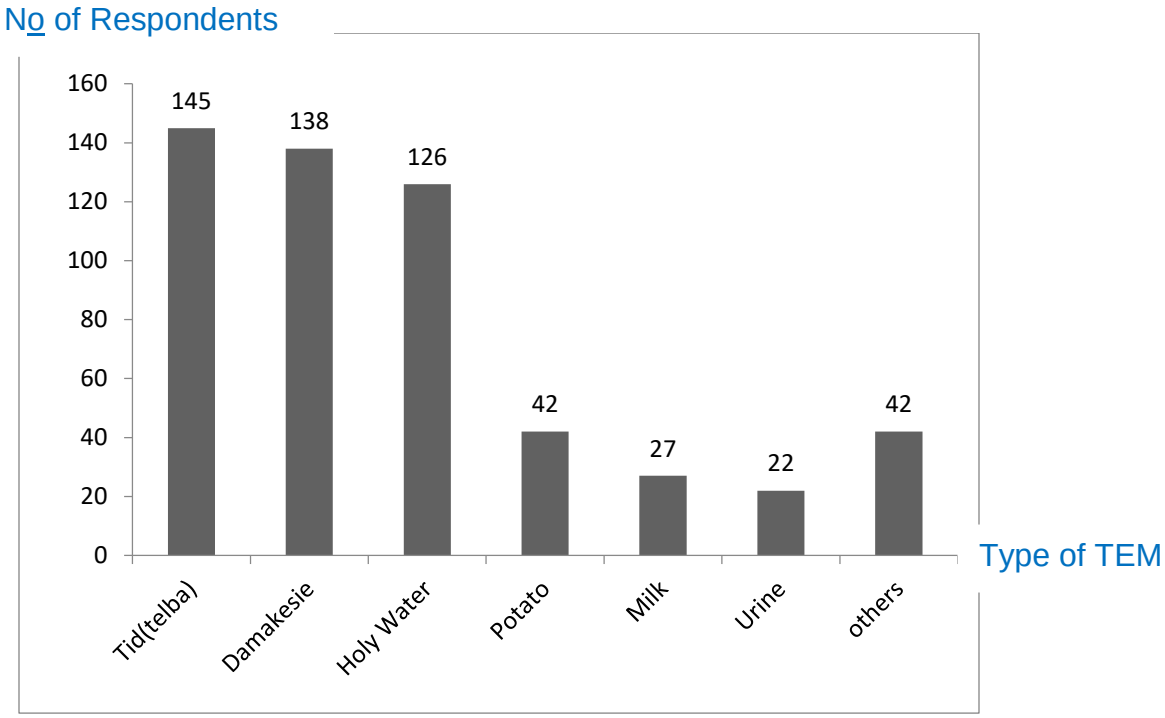

Figure 2: Bar graph that shows types of traditional eye medicine most commonly known by study participants among adult residents in Gondar city, northwest, Ethiopia, 2017

Among a total of 600 participants in the study, 58 (9.7 %) visit traditional healer in the past two years due to the following reasons (Table 4)

Table 4: Reasons for visiting traditional healer by study participants among adult residents in Gondar city, northwest Ethiopia, 2017 (n=58)

Reasons	Frequency	Percent
They are easily accessible (TH)	32	55.2 %
Their services are cheaper (TH)	10	17.2 %
Confidence and trust on THs	6	10.4 %
Other reasons	10	17.2%
Total	58	100 %

4.4 Factors associated with attitude towards traditional eye medicine use

In this study, male were 2.00 times (AOR=2.00(95% CI: 1.23-2.68)) more likely to have good attitude towards TEM use compared to females. Study participants with positive family history of TEM use were 3.3 times (AOR=3.30(95% CI: 2.00-5.47)) more likely to have good attitude towards TEM use compared to those who had no family history of TEM use. Study participants who live in TH available area were 1.81 times (AOR=1.81(95% CI: 1.12-2.9)) more likely to have good attitude towards TEM use compared to those who live in area where traditional healers do not exist. Study participants who had no health insurance were 1.6 times (AOR=1.60(95% CI: 1.14-2.55)) more likely to have good attitude towards TEM use compared to those who had health insurance. (Table 5)

Table 5: Factors associated with attitude of study participants towards traditional eye medicine use among adult residents in Gondar city, northwest Ethiopia, 2017(n=292)

Variable	Attitude		COR((95%CI)	AOR(95%CI)
	Good	Poor		
Age (in year)				
18-24	78	72	1.00	
24-30	91	90	0.93 (0.61-1.44)	
30-40	63	77	0.76 (0.48-1.20)	
41-88	60	69	0.80(0.50-1.29)	
Sex				
Male	148	98	2.20 (1.58-3.06)	2.00(1.23-2.68)**
Female	144	210	1.00	1.00
Marital status				
Married	148	159	1.00	
Unmarried	144	149	1.04 (0.75-1.43)	
Educational status				
Illiterate	30	39	0.63 (0.36-1.08)	
Read and write	38	61	0.51 (0.31-0.82)	
Primary school	42	47	0.73 (0.44-1.19)	
Secondary school	65	66	0.80 (0.52-1.24)	
College and above	117	95	1.00	

Religion				
Christian	260	279	1.00	
Muslim	32	29	1.18(0.69-2.01)	
Occupation				
Student	50	47	1.00	
House wife	39	70	0.52 (0.30-0.92)	
Merchant	58	57	0.96 (0.56-1.64)	
Employed	114	89	1.20 (0.74-1.96)	
Others	31	45	0.65 (0.35-1.19)	
Income				
High	217	209	1.00	
Low	75	99	0.73 (0.51-1.04)	
Community leadership role				
Having role	54	61	0.92 (0.61-1.40)	
No role	238	247	1.00	
Awareness of TEM side effects				
Yes	125	77	1.00	
No	167	231	0. 45(0.32-0.63)	
Availability of TH				
Yes	104	39	3.82 (2.53-5.76)	1.82(1.12-2.95)*
No	188	269	1.00	1.00
Accessibility of modern eye care service				
Yes	188	205	1.00	
No	104	103	1.10 (0.79-1.54)	
Health insurance				
Yes	44	72	1.00	1.00
No	248	236	1.72 (1.14-2.61)	1.63(1.14-2.55)*
Family history of TEM				
Yes	109	34	4.8 (3.13-7.37)	3.31(2.01-5.47)**
No	183	274	1.00	1.00

n=number of individuals with good attitude *=P-value<0.05 **=P-value<0.01

4.5 Factors associated with practice of traditional eye medicine

In this study, the liklihood of TEM use was lower by 52% (AOR=0.48(95% CI: 0.17-0.83)) in unmarried study participants compared to merried study participants. Illiterates were 5.4 times (AOR=5.40(95% CI: 5.3-12.3)), those able to read and write were 3.30 times (AOR=3.30(95% CI: 1.60-10.8)) and those who complete primary school were 1.97 times (AOR=1.97(95% CI: 1.02-8.30) more likely to use TEM than those whose attended college and above. Study participants who live in area where traditional healers exist were 2.84 times (AOR=2.84(95% CI: 1.44-7.56)) more likely to use TEM than those who live in area where traditional healers do not exist. Study participants, who had poor access of modern eye care service were 2 times (AOR=2.00(95% CI: 1.06-4.19)) more likely to use TEM than those who had good access of modern eye care service. Study participants, who had positive family history of TEM use were 4 times (AOR=4.00(95% CI: 1.84-8.67)) more likely to use TEM than those who had no family history of TEM use. (Table 6)

Table 6: Factors associated with traditional eye medicine use by study participants among adult residents in Gondar city, northwest Ethiopia, 2017 (n=73)

Variable	TEM use		COR(95%CI)	COR(95%CI)
	Yes	No		
Age (in year)				
18-24	11	139	1.00	
25-30	16	165	1.23 (0.55-2.73)	
31-40	20	120	2.11(0.97-4.57)	
41-88	26	103	3.19 (1.51-6.75)	
Sex				
Male	36	210	1.00	
Female	37	317	0.68 (0.42-1.11)	
Marital status				
Married	48	259	1.00	1.00
Un married	25	268	0.50 (0.30-0.84)	0.48(0.17-0.83)*
Educational status				
Lliterate	18	51	4.99 (2.33-10.71)	5.40(5.3-12.3)**
Read and write	19	80	3.36 (1.61-7.02)	3.301.60-10.8)**
Primary school	10	79	1.79 (0.76-4.20)	1.97(1.02-8.30)*
Secondary school	12	119	1.43 (0.64-3.19)	1.41(0.47-4.26)
Collage and above	14	198	1.00	1.00

Religion				
Christian	57	482	0.33 (0.18-0.63)	
Muslim	16	45	1.00	
Occupation				
Student	15	82	1.00	
House wife	14	95	0.81 (0.37-1.77)	
Merchant	13	102	0.7 (0.31-1.55)	
Employed	14	189	0.41 (0.19-0.88)	
Others	17	59	1.58 (0.73-3.40)	
Income				
High	43	383	1.00	
Low	30	144	1.86 (1.12-3.07)	
Community leaership role				
Having role	21	94	1.00	
No role	52	433	1.86 (1.07-3.26)	
Awarness of TEM side effects				
Yes	22	180	1.00	
No	51	347	1.20 (0.71-2.05)	
Availability of TH				
Yes	43	100	6.12 (3.66-10.24)	2.84(1.44-7.56)**
No	30	427	1.00	1.00
Health insurance				
Yes	15	101	1.00	
No	58	426	0.92 (0.50-1.68)	
Family history of TEM use				
Yes	28	98	7.04 (4.18-11.84)	3.99(1.84-8.67)**
No	45	429	1.00	1.00
Accessibility of modern eye care service				
Yes	33	167	1.00	1.00
No	40	360	2.61 (1.59-4.29)	2.11(1.06-4.19)**
Attitude				
Good attitude	241	51	2.751 (1.62-4.67)	
Poor attitude	286	22	1.00	

n=number of traditional eye medicine users *= P-value <0.05 **= P- value <0.01

5. Discussion

In this study, Proportion of good attitude towards TEM use was 48.7% (95% CI: 44.7-52.7 %). Almost half of the respondents had good attitude towards TEM use. This result is higher than study conducted in Jara town, Bale zone, southeast Ethiopia (39.8 %) (20). The possible explanation for this might be due to cultural and socioeconomic variation. Jara is small town while Gondar is zonal city, where study participant may have good information about traditional eye medicine. On the other hand, this result is lower than other studies done in Iran (75 %), Singapore (92 %) and China (63 %) (9, 12, 13). This difference could be because of variation in study setting. Those studies were done in hospital health care staffs, medical students and pharmacists respectively. Besides to this, traditional medicine practices are common in Asians and prescribed as an alternative medicine (17, 47).

Males were 2 times more likely to have good attitude towards TEM use compared to females. Other studies conducted in Israel, Serbia and Tanzania support this finding (22, 23, 25). This might be due to cultural tradation that usualy parents transfer their skill and knoledge on tradional medicine to their male children. Moreover, males have higher community interaction than females.They could share information with their friends about traditional eye medicines.

Those study participants with positive family history of TEM use were 3.3 times more likely to have good attitude towards TEM use compared to those who had no family history of TEM use. This finding agrees with studies done in Malasia and Ugand (24, 26). This might be as result of learning from family experience about health role and adverse effect of traditional eye medicine use.

Study participants, who live in area having traditional healer were 1.81 times more likely to have good attitude towards TEM use compared to those who live in area where traditional healer do not exist. This is consistent with studies conducted in Nigeria (27, 28). It could be that persons nearby to THs are more exposed for TEM practice and also appreciate activity of traditional healers.

Study participants who had no health insurance were 1.63 times more likely to have good attitude towards TEM use compared to those who had health insurance. This might be due to money constraint that participants couldn't visit modern eye care center. For example, 29 % of the study participants in this study had less than 1328 ETB monthly income. As a result, they could stick at traditional eye medicines and their attitude towards TEM use might be better.

The proportion of TEM use in this study was 12.2% (95% CI: 10 -15 %). This is low proportion in our contex. Because, over 80% of the Ethiopian population is still depend on traditional medicine (8) and the low proportion might be due to unwillingness of the respondents to report their TEM use. This result is consistent with studies done in Brazil (14.4 %) and Niger city Nigeria (13.2 %)) (29, 33). However, it is lower than studies in Nepal (57 %), Southeast Nigeria (82.3 %), Zimbabwe (61.5 %) and Malawi (28.7 %) (30, 32, 34, 38). This variation might be accounted for difference in study setting and target population. Studies in Zimbabwe, southeast Nigeria and Nepal are hospital based, which includes only diseased individuals. But, our study was community based. The second reason could be as a result of cultural variation among nationalities. In addition, our study area was urban and didn't include rural communities.

The liklihood of TEM use was lower by 52% in unmarried study participants compared to married study participants. Studies done in Nigeria, Uganda and Zimbabwe (34, 39, 42) support this result. Absence of income related constraint because of taking care of the family and children, and sufficient time to visit eye care providing centers could be the possible reasons.

Study participants, who were illiterate, were 5.4 times, able to read and write were 3.30 times and those, who complete primary school were 1.97 times more likely to use TEM compared to those who attended college and above. A study from Malawi agrees with this result (38). The reason for these high odds might be due to

knowledge and attitude difference at different literacy level towards TEM use. Moreover, financial issues could contribute towards TEM use. Because, most of individuals below college level educational status have less chance for employment and poor payment in employment. As a result, they might favor more towards traditional eye medicine.

Study participants, who live in traditional healer available area, were 2.84 times more likely to use TEM compared to those who lives in area where traditional healers do not exist. This is in agreement with Indian study (3). They might use traditional healers as an alternative means to seek eye care service. They could also trust on diagnosing and treating quality of traditional healers, besides to their short waiting time and cheap service (29, 35).

Study subjects who had poor access of modern eye care service were 2 times more likely to use TEM compared to those who had good access of modern eye care service. It is supported by Nigeria, Zimbabwe and Ivory Coast studies (33, 34, 43). In Africa there is, on average, one ophthalmologist per one million populations. There are relatively few eye trained professional. Eye medicines are often not available in health facilities and are expensive in private pharmacies. Because of this tradional eye medicine use is a common practice in Africa (4-6).

Study participants, who had positive family history of TEM use, were 4 times more likely to use TEM compared to those who had no family history of TEM use. This is in line with studies in India and Malawi (3, 38). TEM use might be taken as a trend and pass from parents to children to treat abnormal eye condition and the family member might bind to a certain belief towards traditional eye medicine.

6. Conclusion

The result in this study shows that good attitude towards TEM use for treatment of eye disease was fairly good. It indicates that almost half of the study participants had good attitude towards TEM use. But, still it needs improvement. Female sex, positive family history of TEM use, availability of traditional healers and absence of health insurance had statistically significant relationship with good attitude towards TEM use.

This study also shows that the proportion of TEM use was lower. Being unmarried, educational status less than secondary school, availability of traditional healer, poor access of modern eye care service and positive family history of TEM use had significant association with TEM practice.

6.1 Limitations:

Majority of questions in data collection instrument asks previous information about TEM use, which are exposed for recall bias.

Since, the sampling units were households; streat individuals were not included in the study.

This study used crosectional study design which does not show time wise relationship of variables

In addition, the study lacks sufficient literatures specifically on attitude towards traditional eye medicine use for comparison and discussion.

7. Recommendations:

To national and regional ministry of health

A proper regulatory framework is required for the quality and safe use of traditional eye medicine and traditional healers should be integrated in to national health system.

To north Gondar zonal health bureau

Prepare community awareness creation program about traditional eye medicine use. In addition to this, increase the number of governmental eye care centers in city and at zone level.

To Community

You have to consult eye care professional or pharmacist before the use of traditional eye medicine.

To researchers

It is better to explore variables using longitudinal study.

Investigate the reason for traditional eye medicine use more in detail.

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9. Annex I, Data collection tool (English version)

Hello, my name is _____. I am working in the research team of university of Gondar, department of Optometry. Today I am here to ask you few questions related to attitude, practice and associated factors of traditional eye medicine. Your answer will help us to determine attitude of adult residents towards traditional eye medicine use and factors that have role in utilization of traditional eye medicine. This will help to improve eye care service. Thus you are asked to participate in this study. Your answers will be kept confidential and secret. If you decide that, you do not want to participate in the study now or at any time in the future; you can withdraw from the study at any point. No need of frustration. Your name shouldn't be mentioned in the questionnare and it will take 20-30 minutes to complete the questionnaire. Thank you.

Data collector

Name ---------- signature ---------- date ----------

Supervisor

Name ---------- signature---------- date----------

I. Socio-demographic characteristics

1	Age (year)	----------
2	Sex	1. Male 2. Female
3	Marital status	1. Married 2. Single 3. Divorced 4. Widowed
4	Educational status	1. Illiterate 2. Read and write 3. Primary school 4. Secondary school 5. College and above
5	Religion	1. Orthodox 2. Muslim 3. Protestant 4. Catholic 5. Others----------
6	Occupation	1. House wife 2. Merchant 3. Student 4. Employed 5. Farmer 6. Others----------
7	Family average monthly income in ETB	……
8	Do you have community leadership role?	1. Having role 2. I have no role

II. Attitude questions

9	Do accept traditional eye medicine use?	1. Yes 2. No
10	Do you encourage others to use TEM?	1. Yes 2. No
11	Traditional eye medicines are good for public eye health.	1. Strongly agree 2. Agree 3. Neutral 4. Disagree 5. Strongly disagree
12	Individual or community perception of eye disease may encourage TEM use.	1. Strongly agree 2. Agree 3. Neutral 4. Disagree 5. Strongly disagree
13	Traditional eye medicines are as safer as modern eye medicine.	1. Strongly agree 2. Agree 3. Neutral 4. Disagree 5. Strongly disagree
14	It is dangerous to take traditional eye medicines with modern eye medicines.	1. Strongly Agree 2. Agree 3. Neutral 4. Disagree 5. Strongly Disagree

16	Consulting eye care professional or pharmacist before taking traditional eye medicines is good.	1. Strongly agree 2. Agree 3. Neutral 4. Disagree 5. Strongly disagree

III. Practice and other questions

17	Did you have ocular illness or trauma in the past 2 years?	1. Yes 2. 2. No
18	If you say yes for question 17, which one did you use for your eye problem?	1. TEM 2. MEM 3. Nothing 4. I don't remember
19	If you say TEM for question 18, why?	1. High cost of modern eye care 2. Pressure from nearby person 3. Culturally believed 4. Others (specify) ……
20	Do you have family history of TEM use?	1. Yes 2. No 3. I don't know
21	Have you ever heard about TEM side effects?	1. Yes 2. No
22	Do you know any traditional eye medicine?	1. Yes 2. No

23	If you say yes for question 22, which one do you know?	1. Holy Water 2."Dama Kesie" 3. "Telba" 4. Human/ animal urine 5. Milk 6. Potato 7.Others(specify)----------
24	Do you know traditional eye healer in Gondar city?	1. Yes 2. No
25	Have you visited TEM practitioners in the past two years?	1. Yes 2. No
26	If you say yes for question 25, why?	1. They are good in diagnosing and treating quality 2. They are easily accessible 3. Their service is cheap 4. Others (specify)----------
27	Does modern eye care service accessible in Gondar city?	1. Yes 2. No
28	If you say no for question 27, why?	1. Because it is costy 2. Long waiting time 3. Difficult to get doctors 4. Other(specify)----------
29	Do you have health insurance?	1. Yes 2. No
30	Did you use modern ocular medicine previously?	1. Yes 2. No
31	If you say yes for question 30, what was its effectiveness?	1. Effective 2. Failed

Annex II, Amharic version of questionnaire

<u>የአሚርኛ ማኪይቅ ቅጽ</u>

ጤፍ ይስጥልኝ ስሜ.....እባላለሁ፡ ፡ በጎንደር ዩኒቨርሲቲ የጥናት እና ምርምር ቡድን አባለ ነኝ፡ ፡ ዛሬ እዚህ የማካሁት ስለባህላዊ የዓይን መድሃኒት ጥቂት ጥያቄዎችን ልጠይቅዎት ነው፡ የጥናቱ ዋና አላማ በአሁኑ ወቅት በጎንደር ከተማ ዕድሜያቸው 18 አሞት ዕና ከዚያ በላይ የሆኑ ነዋሪዎች ስለ ባህላዊ የአይን መድሃኒት ያላቸውን አሞላካከት፣ ከሂህ በፊት ተጠቅሞው ያውቁ እንደሆን እና እንዲጠቀሙ የሚያደርጉዋቸው ምክኒያቶችን ለሞወቅ ነው፡ እርስዎ የዚህ ጥናት ተሳታፊ ይሆኑ ዘንድ ተሞርጠዋል፡ ፡ ምንምእንኳን ይህ ጥናት የሞደረገውየድህረ ምረቃ ሂደቱን ለሞምላት ቢሆንም የዚህ ጥናት ጥቅምግን ከዚህ በላይ እንደሆነ ይታሞናል፡ ፡ ይህምአሁን ነዋሪዎቹ ስለ ባህላዊ የአይን መድሃኒት ያላቸውን አሞላካከት እና እንዲጠቀሙያደረጉዋቸውን ምክኒያቶች ለሞላየት ያገለግላል፡ ፡ ይህምበችግሮቹ ዙሪያ አስፈላጊውን እርምጃ ለሞውሰድ እና የተሻሻለ የአይን ጤፍ አገልግሎት እንዲኖር ያደርጋል፡ ፡ ማኪይቁ ጥናቱን ለማከናዎን ጢቃሚስለሆነ እንዲሞሉ እየተጠየቁ ስምዎ በማኪይቁ አይጻፍም፤ የሚሰጡትም ሜልስ ሞሉ በሞሉ ሚስጢራዊነቱ ተጠብቆ ለጥናቱ ብቻ የሚውል ነው ፡ ስለዚህ በሂደቱ ላይ እንደአስፈላጊነቱ በነጻነት ይሞሉ ምንም ሊያስፈራዎት አይገባም ፤ ከዚህ በላይ ደግሞ እርስዎ መመላት የሚይፈልጉት ጥያቄ ቢኖር ለመመላት አይገደዱም ፡ ለጥያቄውከ20-30 ደቂቃ በቂ ነው ፡

አሞሰግናለሁ!

<u>ሚጃ ሰብሳቢ</u>

ስም.....

ፊርማ..... ቀን .....

<u>ያረጋገጠዉተቆጣጣሪ</u>

ስም.....

ፊርማ..... ቀን .....

I ማህበራዊ እና ስነ -ህዝብዊ ሚጃ

1	እድሜ በዓመት)	----------
2	ጸታ	1. ወንድ 2. ሴት
3	የጋብቻ ሁኔታ	1. ያገባ/ች 2, ያላገባ/ች 3, የፈታ/ች 4. የሞተበት/የ ሞተባት
4	የትምህርት ሁኔታ	1. ያልተማረ/ች 2. ማንባብ እና ማፍ የ ሚቻል/የ ምትችል 3, የ መጀመሪያ ደረጃ ያጠና ቀቀ/ች 4, የ ሁለተኛ ደረጃ ያጠና ቀቀ/ች 5, ኮሌጅ እና ከዚያ በላይ
5	ሐይማኖት	1. ኦርቶዶክስ 2. ሞስሊም 3. ፕሮቴስታንት 4. ካቶሊክ 5. ሌላ ካለ ይጥቀሱ.....
6	የስራ ሁኔታ	1. የቤት እማኬት 2. ነጋዴ 3. ተማሪ 4. ተቀጣሪ 5. ገበሬ 6. ሌላ ካለ

ይጥቀሱ.....

7	የ ቤተሰብ አ ማክኝ ወር ሃ ዊ ገ ቢ በ ኢትዮጵያ ብር	----------
8	በ ማህበ ረ ሰ ቡ ውስ ጥ የ ሚ ነ ት ሜ ቴ አ ለ ዎት?	1. አ ለ ኝ 2. የ ለ ኝ ም

II የአጫላካከት ጥያቄዎች

9	እንደ ግለሰብ ባህላዊ የዐይን መድሃኒት ማከቀምን ይቀበሉታል?	1. አዎ 2. የለም
10	ሌሎች ሰዎች ባህላዊ የዐይን መድሃኒቶችን እንዲጠቀሙያበረታታሉ?	1. አዎ 2. የለም
11	ባህላዊ የዓይን መድሃኒቶች ለሚሀበረሰቡ ጠፍ ጥሩ ናቸው ፡	1. በጣምእስማማለሁ 2. እስማማለሁ 3. ገለለተኛ ነኝ 4. አልስማማም 5. በጣምአልስማማም
12	ስለ ዐይን በሽታ ያለን ግላዊ ወይም ሚህበረሰባዊ አጫላካከት ባህላዊ የዐይን መድሃኒት እንዲጠቀምሊያደርግ ይችላል ፡ ፡	1. በጣምእስማማለሁ 2. እስማማለሁ 3. ገለልተኛ ነኝ 4. አልስማማም 5. በጣምአልስማማም
13	ባህላዊ የዐይን መድሃኒቶች ከ ዘጫዊ የዓይን መድሃኒቶች ጋራ ተጫጣኝ የጎንዮሽ ጉዳት አሏቸው ፡	1. በጣምእስማማለሁ 2. እስማማለሁ 3. ገለልተኛ ነኝ 4. አልስማማም 5. በጣምአልስማማም
14	ባህላዊ የዐይን መድሃኒት ከዘጫዊ የዐይን መድሃኒት ጋር በአንድ ላይ መወሰድ ለጠፍ አደገኛ ነው፡ ፡	1. በጣምእስማማለሁ 2. እስማማለሁ 3. ገለለተኛ ነኝ 4. አልስማማም 5. በጣምእልስማማም

15	ባህላዊ የዐይን መድሃኒቶች ከዘመናዊ የዐይን መድሃኒቶች የተሻለ ፈዋሽ ናቸው ፡	1. በጣምእስማማለሁ 2. እስማማለሁ 3. ገለልተኛ ነኝ 4. አልስማማም 5. በጣምአልስማማም
16	ባህላዊ የዐይን መድሃኒት ከማከቀማችን በፊት የዐይን ወይም የፋርማኪ ባለሞያ ማማከር ጥሩ ነው ፡	1. በጣምእስማማለሁ 2. እስማማልሁ 3. ገለልተኛ ነኝ 4. አልስማማም 5. በጣምአልስማማም

III, የተግባር ዕና ሌሎች ጥያቄዎች

17	ባለፉት ሁለት ዓመታት ዐይንዎትን ታመውወይምተመትው ያውቃሉ?	1. አዎ 2. አላውቅም
18	ለጥያቄ ቁጥር 17 መልስዎ አዎ ከሆነ ፣ ምን መፍትሄ ተጠቀመ?	1. ባህላዊየዐይን መድሃኒት 2. ዘመናዊየዐይን መድሃኒት 3. ምንምአልተጠቀሚሁም 4. አላስታውስም
19	ለጥያቄ ቁጥር 18 መልስዎ 1 ከሆነ ለምን?	1. ዘመናዊሀክምና ውድስለሆነ 2. በቅርብሰውግፊት 3. በባህላችን የተለመደ ስለሆነ 4. ሌላ ምክንያት ካለ ይጥቀሱ.....
20	ከቤተሰብ ባህላዊ የዐይን መድሃኒት ተጠቅሞየሚያውቅ አለ?	1. አዎ 2. የለም 3. አላውቅም
21	ስለ ባህላዊ የዐይን መድሃኒቶች የጎንዮሽ ጉዳት ሰምተውያውቃሉ?	1. አዎ 2. ሰምቼ አላውቅም

22	በአካባቢዎት የተለጫዱ ባህላዊ የዐይን ጭሃኒቶችን ያውቃሉ?	1. አዎ 2. አላውቅም
23	ለጥያቄ ቁጥር 22 ጫልስዎት አዎ ከሆነ የቱን ያውቃሉ?	1. ጸበል 2. ዳማከሴ 3. ተልባ 4. የሰውየእንስሳት ሽንት 5. ወተት 6. ድንች 7. ሌላ ካለ ይጥቀሱ----------
24	በአካባቢዎ ባህላዊ የዐይን ጭሃኒት አዋቂ ያውቃሉ?	1. አዎ 2. አላውቅም
25	ባለፉት ሁለት ዓጭታት ውስጥ በባህላዊ የዐይን ጭሃኒት አዋቂ ዐይንዎትን ታይተው ወይም ተፈትሸው ያውቃሉ ?	1. አዎ 2. አላውቅም
26	ለጥያቄ ቁጥር 25 ጫልስዎት አዎ ከሆነ ለምን?	1. አክሞ የጫዳን አቅሟው ጥሩ ስለሆነ 2. በቀላሉ ስለጫኙ 3. የሚሰጡት አገልግሎት እርካሽ ስለሆነ 4. ልላ ምክኒያት ካለዎት ይግለጹ----------
27	በጎንደር ከተማ ዘጫዊ የዐይን ህክምና አገልግሎት ለጫበረሰቡ ተደራሽ ነው?	1. አዎ 2. አይደለም
28	ለጥያቄ ቁጥር 27 ጫልስዎ አይደለምከሆነ ፣ ለምን?	1. ዋጋውውድ ነው 2. ወረፋ ይበዛል 3. ሃኪሞችን ጫገኘት ከባድ ነው

		4. ሌላ ካለ ይጥቀሱ…… .
29	የ ጡ ፍ ሞድህ ን አ ለ ዎ ት?	1. አ ዎ 2. የ ለ ኝ ም
30	ዘ ማ ዊ የ ዐ ይ ን ሞድሃ ኒ ት ተ ጠቅ ሞ ዱ ያ ውቃ ሉ?	1. አ ዎ 2. አ ላ ውቅ ም
31	ለ ጥ ያ ቄ ቁ ጥ ር 30 ሜ ል ስ ዎ አ ዎ ከ ሆ ነ የ ሞድሃ ኒ ቱ ን ውጤ ት እ ን ዴ ት ይ ገ ል ጹ ታ ለ ?	1. ፈ ዋ ሽ 2. ያ ል ሰ ራ ነ በ ር

Annex III. Information Sheet about the research

Introduction

This information sheet and consent form was prepared to explain the research project that participants asked to join by a group of research investigators. The main aim of this research project is to determine attitude, practice and associated factors of traditional eye medicine use among adults in Gondar city residents.

The research team includes a final year Msc in Clinical Optometry graduate student and two senior advisors from University of Gondar college of medicine and health sciences, school of medicine, department of Optometry.

Name of investigator: Minychil Bantihun(BSc)

Name of advisors: 1. Mr. Dereje Hayilu (BSc, MSc)

2. Mr. Natnael Lakachew (BSc, MSc)

Name of Sponsoring organization: University of Gondar, College of Medicine and Health Sciences, school of medicine, department of Optometry.

Purpose

The purpose of this research study is determining attitude, practice and associated factors among adult residents towards traditional eye medicine use in Gondar city. Results from this study were used to help policy makers and designers to appropriately design policies regarding traditional eye medicine.

Procedure

This study used cross-sectional study design that was applied on a total of 600 study participants from Gondar city after pretest for data reliability and validity. Data was collected from April 25 up to May15, 2017 using structured, pretested interviewer administered questionnaire as data collection tools in the study area. The data was entered to Epi info version 3.5.1 and was exported to SPSS Version 20 and analysis was done with logistic regression model.

Risk and/or discomfort

There was no any risk or discomfort that the study participants facing because of participating in this research except dedication of time for completely filling the questionnaire. Names and personal identifiers weren't included in the tool. Every piece of information was kept confidential.

Benefits

While participating in this research project, there was not direct benefit for study participants, but there may be direct benefit and help for hospitals, policy makers, stakeholders, designers and others significantly to know about attitude, practice and associated factors among adult residents twards traditional eye medicine use in Gondar city, Northwest Ethiopia.

Incentive/ payment for participation

There was no incentive for study participants except compensation for expense.

Confidentiality

Name of the participant, personal identifiers and personal information were not included in the questionnaire. The information collected from this research project was kept confidential. Information was accessed by the researcher and research assistants only.

Persons to contact

This research project was reviewed and approved by the ethical committee of the University of Gondar. If you have any question, you can contact the following individuals (the researcher and advisors respectively).

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Annex IV, Declaration Form

I, the under signed, senior Clinical Optometry student declare that this research is my original work in partial fulfillment of the requirements for the degree of Masters in Clinical Optometry.

Name: Minychil Bantihun (BSc)

Signature: ----------

Place of submission: Department of optometry, School of medicine, College of Medicine and Health Sciences, University of Gondar.

Date of submission: ----------

This research work has been submitted for examination with my /our approval as University advisor(s)

Advisors

Name	Signature
1. Mr. Dereje Hayilu (BSc, MSc)	----------
2. Mr. Natnael Lakachew (BSc, MSc)	----------