Assessment of Knowledge and Attitude of Cataract and Their Associated Factors Among Adults in Arba Minch Zuria Woreda, Southern Ethiopia

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Background: Cataract is the major cause of reversible blindness and visual impairment in developing countries. It has been assumed that there is poor access to information related to the cause, prevention, and treatment of cataract in developing countries. There is also a paucity of data on knowledge and attitude towards cataract in Ethiopia.

Purpose: This study aimed to assess the knowledge and attitude towards cataract among adults in Arba Minch Zuria Woreda, Southern Ethiopia.

Patients and Methods: A community-based cross-sectional study was conducted among 623 adults from February 6 to April 16, 2020. The study participants were selected by the multi-stage sampling technique. Data were collected with a pre-tested structured questionnaire by using face-to-face interviews. The data were entered into Epi info version 7.2 and exported to SPSS version 23 for analysis. The level of statistical significance was set at a p-value less than 0.05 in multivariable logistic regression.

Results: Among 623 total participants, 54.9% of them had good knowledge about cataract, while 37.9% of them had favorable attitude towards cataract. Inability to read and write (AOR=0.104, 95% CI: 0.042–0.258), primary school educational level (AOR=0.208, 95% CI: 0.091–0.478), secondary school educational level (AOR=0.199, 95% CI: 0.088–0.451), earning average monthly income 350–820 Ethiopian birr (AOR=2.364, 95% CI: 1.277–4.373), not having previous eye examination (AOR=0.605, 95% CI: 0.425–0.861) and unavailability of eye clinic (AOR=0.65, 95% CI: 0.446–0.945) were significantly associated with knowledge of cataract. No history of cataract (AOR=0.257, 95% CI: 0.157–0.418) was significantly associated with attitude towards cataract.

Conclusion: Significant portion of participants had poor knowledge and an unfavorable attitude towards cataract. So, it is recommended that stakeholders in different hierarchies need to exert efforts on creating awareness about cataract by considering the education level of the community. Moreover, attention should be given to the availability and accessibility of the primary eye care unit.

Keywords: cataract, knowledge, attitude, associated factors, Arba Minch Zuria Woreda, Southern Ethiopia

Introduction

A cataract is any clouding or opacity of the eye’s lens, which can result in increased scattering of light. Lens opacity can result from the separation of protein process, the aggregation of proteins, or the disruption of the fiber cells’ regular alignment or
packing.\textsuperscript{1} It can be due to congenital, developmental, and acquired causes.\textsuperscript{2} Symptoms of cataract are blurred/reduced vision, cloudy vision, glare, seeing haloes around light, and inability to see in dim light.\textsuperscript{3} The most common factors identified to influence cataract development are increasing age, sunlight (UV) exposure, trauma, smoking, steroid use, and genetics.\textsuperscript{4}

In 2010, 32.4 million people were blind and 191 million people had impaired vision globally. From this 10.8 million and 35.1 million people were blind and visually impaired due to cataract respectively. Cataract caused 33.4% of all blindness worldwide in 2010, and 18.4% of all moderate to severe vision impairment. These rates were lower in the high-income regions (<15%) and higher (>40%) in South and Southeast Asia and Oceania.\textsuperscript{5} A cataract is the major cause of blindness and visual impairment in developing countries despite it is a preventable and treatable disease.\textsuperscript{6} In Ethiopia, 50% of blindness is caused by cataract.\textsuperscript{7}

Cataract has a consequent effect on the individual, family, community, and the nation as a whole on visual disability. It reduces the quality of life, independence, economic and social interaction. In developing countries, the economic impact of visual loss from cataract is huge, including loss of jobs and increase custodial care.\textsuperscript{8} Younger children are often taken out of school to look after the elderly blind, thus the children are deprived of school.\textsuperscript{9}

Different studies around the world showed that there is a gap in knowledge of cataract in both developed and developing countries including Ethiopia.\textsuperscript{10–12}

The lack of knowledge about the disease and its treatment is still a major obstacle in reducing blindness due to cataract in developing countries, particularly in rural areas. However, evidence on public awareness, knowledge, and attitude about cataract is not widely known and done in Ethiopia except in a few communities still these studies are mainly institution-based. Hence, this study aimed to assess the Knowledge and Attitude of adults towards Cataract and associated factors in Arba Minch Zuria Woreda, Ethiopia.

Materials and Methods

Study Area, Design, and Period

A community-based cross-sectional study was conducted from February 6 to April 16, 2020, in Arba Minch Zuria Woreda (district). It is one of the Gamo Zone woredas which is found around Arba Minch town and 500 km away from the capital city Addis Ababa. According to the 2007 national population and housing census from the Central Statistical Agency of Ethiopia estimated the total population at Arba Minch Zuria woreda was 123,950 of whom 60,736 are men and 63,214 of them are women.\textsuperscript{13} The woreda has 18 rural kebeles (the smallest administrative unit in Ethiopia) and 25,823 households according to the Arba Minch Zuria woreda information desk affairs office. The woreda has four health centers, twenty-six Health posts, and twenty-nine private Health facilities.

Source and Study Populations

The source population were all households with adults aged ≥ 18 years living in Arba Minch Zuria Woreda. The study population were all households with adults aged ≥ 18 years in the selected kebeles during data collection period.

Inclusion Criteria

Households with adults aged ≥ 18 years, and lived in the study area for greater than 6 months.

Sample Size Determination

A total of 633 sample size was calculated using single population proportion formula by assuming 95% confidence interval, 5% margin of error, the proportion of good knowledge 61.7% taken from Study conducted in Gondar town,\textsuperscript{11} 1.5 design effect (Since multistage systematic sampling was used), and 10% non-response rate.

Sampling Procedures

A multi-stage systematic sampling method was used in the study; the first six kebeles were selected randomly by using the lottery method from a total of 18 kebeles then the sample size (633) was proportionally allocated to selected kebeles based on the size of the households. Participant’s household was selected by using systematic random sampling using k values of five. Finally, one adult is selected for interview using lottery method if there is more than one adult per household.

Operational Definition

Knowledge: To assess the level of knowledge, respondents were asked 14 questions and those who scored greater than the mean value were considered as having “good knowledge” and those who scored less than the mean value were considered as having “poor knowledge”.

1.3 design effect (Since multistage systematic sampling was used), and 10% non-response rate.
Positive attitude: Study participants who score above the mean value from five attitude questions were considered as having a favorable attitude.

Negative attitude: Study participants who score below the mean value from five attitude questions were considered as having unfavorable attitude.

Data Collection Tool and Procedure
A pretested structured questionnaire was used for face-to-face interviews that include Socio-demographic and economic characteristics, knowledge and Attitude of cataract, availability of eye clinic, and previous eye examination which was prepared by reviewing different literature. Knowledge of cataract was assessed by questions which contain simple definition, symptoms, risk factors, and ways of prevention, effects, and treatment of cataract. The questionnaire was prepared in the English version and translated into Amharic and then translated back to English to maintain its consistency and accuracy. Pretest was done on 10% of the sample in Mirab Abaya woreda. After the pretest, some unclear questions were modified for clarity. Data were collected by 4 diploma nurses and supervised by two BSc Nurses. All data collectors and supervisors were trained for one day and performed practical exercises to be familiar with the questionnaire. All the questionnaires were checked for completeness and consistency on daily basis. Reliability analysis was done for attitude and knowledge measuring questions/items and the result showed a good score of internal consistency between the items with 0.844 and 0.703 Cronbach’s alpha respectively.

Data Processing and Analysis
The data were coded and entered into Epi info version 7.2 and exported to SPSS version 23 for analysis. Descriptive statistics such as mean, percent, and frequency were done. The necessary assumptions of logistic regression were checked using Hosmer and Lemeshow goodness-of-fit test (p-value > 0.05). Bivariable analysis was done and all explanatory variables which have an association with the outcome variable at p-value <0.25 were selected for multivariable analysis. The level of statistical significance was set at a p-value less than 0.05 in multivariable logistic regression.

Ethical Consideration
Ethical clearance was obtained from Arba Minch University, College of Medicine and Health Science Institutional Review Board with IRB reference number of IRB/213/12. An official letter was written to Arba Minch Zuria Woreda Administrator, then permission was obtained from woreda and selected kebeles. Informed consent was obtained from respondents who participated in the study. All data collectors and supervisors used personal protective equipment based on WHO standards during the training and data collection period to prevent the COVID 19 pandemic disease transmission. Besides, this study was conducted in accordance with the Declaration of Helsinki, and all ethical and professional considerations were followed throughout the study to keep participants’ data strictly confidential.

Result
Socio-Demographic Characteristics
From the total sample size, 623 adults were interviewed giving a response rate of 98%. More than half, 386 (62%) of respondents were male. Greater than one-third 243 (39%) of study participants were at age category of 30–39 and the mean age of respondents was 34.5 years. The educational background of respondents showed that 96 (15.4%) cannot read and write on the other hand 76 (12.2%) were college and above. The majority of respondents 517 (83%) were married. Almost half 283 (45.4%) of the respondents earn between 820 and 1170 Ethiopian birr monthly on average (Table 1).

Availability of Eye Clinic and Previous Eye Examination
Almost one-third 208 (33.4%) of respondents reported that there is no eye clinic service nearby. More than one third 280 (44.9%) of respondents were male. Greater than one-third 243 (39%) of study participants were at age category of 30–39 and the mean age of respondents was 34.5 years. The educational background of respondents showed that 96 (15.4%) cannot read and write on the other hand 76 (12.2%) were college and above. The majority of respondents 517 (83%) were married. Almost half 283 (45.4%) of the respondents earn between 820 and 1170 Ethiopian birr monthly on average (Table 1).

Knowledge of Cataract Among Adults
All of the respondents heard about cataract and 347 (55.7%) of them get this information from health professionals followed by 125 (20.1%) from television, 97 (15.6%) from radio and 54 (8.7%) from family. About 551 (88.4%) of participants answered the correct simple definition of
More than half 438 (70.3%) of respondents stated reduction of vision as a symptom of cataract. Regarding the risk factors, 362 (58.1%) and 350 (56.2%) of participants were recognized increased age and trauma as risk factors of cataract respectively. Most 552 (88.6%) of respondents identified impaired vision and blindness as the worst effect of cataract. More than half 465 (74.6%) of them stated surgery as the best treatment for cataract and 40 (6.4%) of respondents cited using sunglasses as prevention of cataract. Overall, 342 (54.9%) of participants had good knowledge about cataract (Table 3).

The Attitude of Cataract Among Adults
More than one third 218 (35%) of respondents agreed that a person with cataract needs examination and 248 (39.8%) of them agreed on seeking cataract treatment. More than one third 221 (35.5%) of participants agreed that cataract

### Table 1 Socio-Demographic and Economic Characteristics for the Study Assessing Knowledge and Attitude of Cataract and Their Associated Factors Among Adults in Arba Minch Zuria Woreda, Southern Ethiopia, 2020

| Variable (n=623) | Categories | Frequency | Percent |
|-----------------|------------|-----------|---------|
| Age             | 18–29      | 201       | 32.3    |
|                 | 30–39      | 243       | 39.0    |
|                 | 40–49      | 116       | 18.6    |
|                 | >50+       | 63        | 10.1    |
| Sex             | Male       | 386       | 62.0    |
|                 | Female     | 237       | 38.0    |
| Religion        | Orthodox   | 248       | 39.8    |
|                 | Muslim     | 18        | 2.9     |
|                 | Protestant | 353       | 56.7    |
|                 | Catholic   | 4         | 0.6     |
| Marital status  | Married    | 517       | 83.0    |
|                 | Single     | 98        | 15.7    |
|                 | Divorce    | 3         | 0.5     |
|                 | Widow      | 5         | 0.8     |
| Educational status | Cannot read and write | 96 | 15.4 |
|                   | Can read and write | 120  | 19.3 |
|                   | 1–8 grade  | 210       | 33.7    |
|                   | 9–12 grade | 121       | 19.4    |
|                   | College and above | 76  | 12.2 |
| Occupation       | Civil Servant | 46  | 7.4  |
|                   | Farmer     | 251       | 40.3    |
|                   | Merchant   | 93        | 14.9    |
|                   | Student    | 79        | 12.7    |
|                   | Housewife and retired | 154 | 24.7 |
| Income           | <350       | 12        | 1.9     |
|                   | 350–820    | 82        | 13.2    |
|                   | 820–1770   | 283       | 45.4    |
|                   | >1770      | 246       | 39.5    |

### Table 2 Health Care System Characteristics and Previous Eye Examination for the Study Assessing Knowledge and Attitude of Cataract and Their Associated Factors Among Adults in Arba Minch Zuria Woreda, Southern Ethiopia, 2020

| Variable (n=623) | Categories | Frequency | Percent |
|-----------------|------------|-----------|---------|
| Availability of eye clinic in nearby health facility (n=623) | Yes | 415 | 66.6 |
|                 | No         | 208       | 33.4    |
| Previous eye examination (n=623) | Yes | 280 | 44.9 |
|                 | No         | 343       | 55.1    |
| Regularity of eye checkup (n=280) | < 2 years | 62 | 22.1 |
|                   | >2 years   | 140       | 50.0    |
|                   | When they feel pain | 78 | 27.9 |
| Last eye visit(n=280) | <2 years | 119 | 42.5 |
|                   | >2 years   | 161       | 57.5    |
| Self-history of cataract (n=623) | Yes | 83 | 13.3 |
|                 | No         | 540       | 86.7    |
| Family history of cataract (n=623) | Yes | 568 | 91.2 |
|                 | No         | 55        | 8.8     |

### Table 3 Knowledge of Cataract for the Study Assessing Knowledge and Attitude of Cataract and Their Associated Factors Among Adults in Arba Minch Zuria Woreda, Southern Ethiopia, 2020

| Variable (n=623) | Correct n (%)  | Incorrect n (%) |
|-----------------|----------------|-----------------|
| Simple definition of cataract | 551 (88.4%) | 72 (11.6%) |
| Symptom of cataract | 438 (70.3%) | 185 (29.7%) |
| Increasing age as risk factor | 362 (58.1%) | 261 (41.9%) |
| Commonest age of cataract presentation | 358 (57.5%) | 265 (42.5%) |
| Trauma as risk factor | 350 (56.2%) | 273 (43.8%) |
| UV light as risk factor | 70 (11.2%) | 553 (88.8%) |
| Worst effect of cataract | 552 (88.6%) | 71 (11.4%) |
| Treatability of cataract | 528 (84.8%) | 95 (15.2%) |
| Best treatment option for cataract | 465 (74.6%) | 158 (25.4%) |
| Reversibility of vision after treatment | 399 (64%) | 224 (36%) |
| Prevention of cataract | 375 (60.2%) | 248 (39.8%) |
| Ways of prevention | 40 (6.4%) | 553 (93.6%) |
Table 4: Attitude of Cataract for the Study Assessing Knowledge and Attitude of Cataract and Their Associated Factors Among Adults in Arba Minch Zuria Woreda, Southern Ethiopia, 2020

| Variable                                                                 | Category                                                                 | Strongly Disagree | Disagree | Neutral | Agree | Strongly Agree |
|--------------------------------------------------------------------------|--------------------------------------------------------------------------|-------------------|----------|---------|-------|----------------|
| How much do you agree that a person with cataract needs an eye examination | n (%) 234(37.6%)                                                        | 121(19.4%)       | 50(8%)   | 70(11.2%) | 148(23.8%) |
| How much do you agree that a person with cataract should seek eye treatment | n (%) 190(30.5%)                                                        | 123(19.7%)       | 62(10%)  | 119(19.1%) | 129(20.7%) |
| How much do you agree that cataract is serious health problem            | n (%) 232(37.2%)                                                        | 119(19.1%)       | 51(8.2%) | 72(11.6%) | 149(23.9%) |
| How much do you agree that a person with cataract get appropriate care in the health care institutions | n (%) 190(30.5%)                                                        | 124(19.9%)       | 58(9.3%) | 118(18.9%) | 133(21.3%) |
| How much do you agree that if you did not going for treatment, is because of the doctor advised that immediate treatment is not required | n (%) 233(37.4%)                                                        | 120(19.3%)       | 55(8.8%) | 69(11.1%) | 146(23.4%) |
| Attitude                                                                 | Positive attitude                                                        | 236(37.9%)       |          |         |       |
| Negative attitude                                                        | 387(62.1%)                                                              |                   |          |         |       |

is a serious health problem and 251 (40.3%) of them agreed that people with cataract can get appropriate care in a health institution. Generally, 236 (37.9%) of participants had a positive attitude towards cataract (Table 4).

Associated Factors of Knowledge of Cataract

The result of bivariable logistic regression analysis showed that age, sex, marital status, educational status, occupation, average monthly income, previous eye examination, and availability of eye clinic were selected as a candidate for multivariable logistic regression analysis. Then educational status, earning average monthly income between 350 and 820, previous eye examination, and availability of eye clinic showed statistically significant association with knowledge in multivariable logistic regression analysis.

Those participants who cannot read and write are 89.6% (95% CI 0.042–0.258) less likely to have good knowledge than those whose educational level is college and above. Similarly, those with the educational level of primary school are 79.2% (95% CI 0.91–0.478) less likely to have good knowledge than those whose educational level is college and above. Participants who earned 350–820 Ethiopian birr monthly are 2.36 (95% CI 1.277–4.373) more likely to have good knowledge than those who earned >1770 birr monthly. Respondents who did not have a previous eye examination are 39.5% (95% CI 0.425–0.861) less likely to have good knowledge than those who had a previous eye examination. Those participants who did not have an eye clinic nearby are 35% (95% CI 0.446–0.945) less likely to have good knowledge than those who have an eye clinic nearby (Table 5).

Associated Factors for Attitude of Cataract

In bivariate logistic regression analysis age, educational status, previous eye examination, self-history of cataract, family history of cataract, and availability of eye clinic were selected as a candidate for multivariable logistic regression analysis then self-history of cataract showed statistically significant association with the attitude of cataract. Hence, those participants who did not have a self-history of cataract are 74.3% (95% CI 0.157–0.418) less likely to have a positive attitude than those who had self-history of cataract (Table 6).
Discussion

This study showed that 54.9% of study participants had good knowledge about cataract. This finding was lower than studies done in China (70.9%), Nepal (70.4%), Iran (74%), Gondar town, North West Ethiopia (61.7%), and Yirgalem town, Southern Ethiopia (64.7%). But the finding was higher than studies done in Southern India (18%) and Nigeria (18.2%). These variations can be explained by cut-off points used to measure the composite score of knowledge, the difference in the target population, and the study setting.

Participants who cannot read and write and with primary educational level were 89.6% and 89.2% less likely to have good knowledge than those whose educational level is college and above. This finding is similar to the studies done in Canada, Nigeria, Gondar town, and Yirgalem town. This might be due to the reason that individuals with higher educational levels tend to read

| Variable          | Categories       | Level of Knowledge | OR(95% Confidence Interval) | P-value |
|-------------------|------------------|--------------------|-------------------------------|---------|
|                   |                  | Good Knowledge(n=342) | Poor Knowledge(n=281) | COR (95% CI) | AOR (95% CI) |
| Age               | 18–29            | 122 (35.7%)        | 79 (28.1%)                   | 1.317 (0.744–2.331) | 1.219 (0.610–2.436) | 0.574 |
|                   | 30–39            | 134 (39.2%)        | 109 (38.8%)                  | 1.049 (0.601–1.829) | 0.956 (0.518–1.764) | 0.886 |
|                   | 40–49            | 52 (15.2%)         | 64 (22.8%)                   | 0.693 (0.374–1.283) | 0.654 (0.335–1.275) | 0.212 |
|                   | >50              | 34 (9.9%)          | 29 (10.3%)                   | 1           | 1           | 1 |
| Sex               | Male             | 229 (67%)          | 157 (55.9%)                  | 0.625 (0.451–0.865) | 1.155 (0.699–1.909) | 0.575 |
|                   | Female           | 113 (33%)          | 124 (44.1)                   | 1           | 1           | 1 |
| Marital status    | Married          | 277 (81%)          | 240 (85.4%)                  | 1           | 1           | 1 |
|                   | Single           | 62 (18.1%)         | 36 (12.6%)                   | 1.492 (0.956–2.33) | 0.804 (0.418–1.545) | 0.512 |
|                   | Divorce          | 2 (0.6%)           | 1 (0.4%)                     | 1.733 (0.156–19.23) | 1.868 (0.116–30.181) | 0.66  |
|                   | Widowed          | 1 (0.3%)           | 4 (1.4%)                     | 0.217 (0.024–1.951) | 0.32 (0.032–3.167) | 0.33  |
| Education         | Cannot read and write | 39 (11.4%)     | 57 (20.3%)                   | 0.128 (0.061–0.269) | 0.104 (0.042–0.258) | <0.0001 |
|                   | Can read and write | 54 (15.8%)       | 66 (23.5%)                   | 0.153 (0.075–0.313) | 0.111 (0.047–0.263) | <0.0001 |
|                   | Primary          | 117 (32.4%)        | 93 (33.1%)                   | 0.236 (0.12–0.463) | 0.208 (0.091–0.478) | <0.0001 |
|                   | Secondary        | 68 (19.9%)         | 53 (18.9%)                   | 0.241 (0.118–0.491) | 0.199 (0.088–0.451) | <0.0001 |
|                   | Collage and above| 64 (18.7%)         | 12 (4.3%)                    | 1           | 1           | 1 |
| Occupation        | Civil Servant    | 32 (9.4%)          | 14 (5%)                      | 0.65 (0.33–1.278) | 1.706 (0.693–4.2) | 0.245 |
|                   | Farmer           | 150 (43.9%)        | 101 (35.9%)                  | 0.509 (0.241–1.076) | 1.074 (0.422–2.734) | 0.881 |
|                   | Merchant         | 50 (14.6%)         | 43 (15.3%)                   | 0.843 (0.386–1.841) | 1.397 (0.544–3.588) | 0.487 |
|                   | Student          | 52 (15.2%)         | 27 (9.6%)                    | 0.264 (0.13–0.536) | 0.658 (0.258–1.674) | 0.379 |
|                   | House wife and retired | 58 (17%)    | 96 (34.2%)                   | 1           | 1           | 1 |
| Monthly income    | <350             | 30 (8.8%)          | 20 (7.1%)                    | 1           | 1           | 1 |
|                   | 350–820          | 50 (14.6%)         | 28 (10%)                     | 1.128 (0.605–2.102) | 1.637 (0.834–3.214) | 0.152 |
|                   | 820–1770         | 129 (37.7%)        | 133 (17.3%)                  | 1.343 (0.79–2.282) | 2.364 (1.277–4.373) | 0.006 |
|                   | >1770            | 133 (38.9%)        | 100 (35.6%)                  | 0.729 (0.511–1.040) | 0.968 (0.653–1.434) | 0.871 |
| Previous eye      | Yes              | 175 (51.2%)        | 105 (37.4%)                  | 1           | 1           | 1 |
| examination       | No               | 167 (48.8%)        | 176 (62.6%)                  | 0.569 (0.413–0.79) | 0.605 (0.425–0.861) | 0.005 |
| Availability of eye clinic | Yes | 242 (70.8%)  | 173 (61.6%)                  | 0.662 (0.474–0.925) | 1         | 0.024 |
|                   | No               | 100 (29.2%)        | 108 (38.4%)                  | 1           | 1           | 1 |
and explore more. They may also understand information related to cataract easily so that they would become knowledgeable.

Respondents who earned 350–820 Ethiopian birr monthly are 2.36 more likely to have good knowledge than those who earned >1770 monthly. This result is not consistent with the studies done in Bangladesh and Gondar town. Further research is needed to reason out this discrepancy.

The study finding showed that Respondents who did not have previous eye examinations are 39.5% less likely to have good knowledge than those who had a previous eye examination. This finding is similar to a study done in Gondar town. This might explain that individuals who had previous eye examinations may get information from health professionals, posted information in the clinic and from patients.

Those participants who did not have an eye clinic nearby are 35% less likely to have good knowledge than those who have an eye clinic nearby. This might explain that the availability of an eye clinic nearby may help individuals to have an eye examination and also to access information easily.

The study result showed that the overall attitude of the study participants towards cataract was 37.9%. This finding is comparable with the study done in Yirgalem town (35.3%).

Study participants who did not have a self-history of cataract were 74.3% less likely to have good knowledge than those who have self-history of cataract. This might be due to the reason that an individual with a history of cataract may go to an eye clinic and get information. Also, may experience the consequences and treatment options which may lead the individual to have a positive attitude.

The limitations of this study were recall bias and being cross-sectional in the design, which does not establish a temporal relationship between cause and effect.

**Conclusion**

A significant portion of study participants had poor knowledge and a negative attitude towards cataract. Which were

### Table 6

| Variable          | Categories            | Positive Attitude (n=236) | Negative Attitude (n=387) | COR (95% CI) | AOR (95% CI) | P-value |
|-------------------|-----------------------|---------------------------|---------------------------|--------------|--------------|---------|
| Age               | 18–29                 | 72 (30.5%)                | 129 (33.3%)               | 0.614 (0.346–1.088) | 0.677 (0.462–1.665) | 0.689   |
|                   | 30–39                 | 84 (35.6%)                | 159 (41.1%)               | 0.581 (0.332–1.018) | 0.768 (0.422–1.397) | 0.387   |
|                   | 40–49                 | 50 (21.2%)                | 66 (17.1%)                | 0.833 (0.45–1.543) | 0.882 (0.462–1.684) | 0.704   |
|                   | >50                   | 30 (12.7%)                | 33 (8.5%)                 | 1            | 1            |         |
| Education         | Cannot read and write | 44 (18.6%)                | 52 (13.4%)                | 2.216 (1.165–4.217) | 1.663 (0.854–3.239) | 0.135   |
|                   | Can read and write    | 49 (20.8%)                | 71 (18.3%)                | 1.808 (0.972–3.362) | 1.495 (0.791–2.826) | 0.216   |
|                   | Primary               | 73 (30.9%)                | 137 (38.4%)               | 1.396 (0.783–2.486) | 1.313 (0.731–2.359) | 0.362   |
|                   | Secondary             | 49 (20.8%)                | 72 (18.6%)                | 1.782 (0.959–3.314) | 1.794 (0.958–3.36)  | 0.68    |
|                   | Collage and above     | 21 (8.9%)                 | 55 (14.2%)                | 1            | 1            |         |
| Previous eye examination | Yes                  | 121 (51.3%)               | 159 (41.1%)               | 1            | 1            |         |
|                   | No                    | 115 (48.7%)               | 228 (58.9%)               | 0.663 (0.478–0.918) | 0.856 (0.6–1.221)   | 0.39    |
| Self-history of cataract | Yes                  | 55 (23.3%)                | 28 (7.2%)                 | 1            | 1            |         |
|                   | No                    | 181 (76.7%)               | 359 (92.8%)               | 0.257 (0.157–0.418) | 0.257 (0.157–0.418) | <0.0001 |
| Family history of cataract | Yes                  | 208 (88.1%)               | 360 (93%)                 | 1            | 1            |         |
|                   | No                    | 28 (11.9%)                | 27 (7%)                   | 1.795 (1.03–3.128) | 0.928 (0.487–1.770) | 0.821   |
| Availability of eye clinic | Yes                  | 149 (63.1%)               | 226 (68.7%)               | 1            | 1            |         |
|                   | No                    | 87 (36.9%)                | 121 (31.3%)               | 1.284 (0.913–1.805) | 1.094 (0.754–1.587) | 0.636   |
significantly associated with low educational level, earning an average monthly income of 350–820 Ethiopian birr, not having previous eye examination, unavailability of the eye clinic, and no previous self-history of cataract. So, it is recommended that stakeholders in different hierarchies need to exert efforts on creating awareness about cataract by considering the education level of the community. Moreover, attention should be given to the availability and accessibility of the primary eye care unit.

**Disclosure**

The authors report no conflicts of interest in this work.

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