

Research Article

Cataract Prevalence and Its Associated Factors among Adult People Aged 40 Years and above in South Ari District, Southern Ethiopia

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Background. Cataract is the leading cause of blindness in Ethiopia. However, the treatment was only surgery; the expected person could not use the surgical service. So far, the World Health Organization's goal of 2,000 people using the treatment out of a million people could not be met. **Objective.** The aim of this study was to assess the prevalence of cataract and factors associated with among adult people aged 40 years and above in South Ari district of South Omo Zone, Ethiopia. **Method.** A community-based cross sectional study was conducted in South Ari district of South Omo Zone, Ethiopia; samples were selected using simple random sampling and eye examination. Data were collected using pretested structured questionnaires. Data quality was ensured by daily supervision completeness and consistency. The data were coded, entered, and cleaned by using Epi.info version 7 and were analyzed by using SPSS version 20. Bivariate and multivariable analysis was carried by binary logistic regression. Significances were declared by using a p value of <0.05 and AOR of confidence intervals. **Result.** In this study, the prevalence of cataract was found to be 7.8% (95% CI: 5.0–10.6). There is an increased chance of developing cataract among females (AOR 3.52; 95% CI: 1.39–8.83), individuals with known history of hypertension (AOR 4.5; 95% CI 1.56–13.21), adults aged 70–79 years (AOR 5.07 95% CI: 1.09–23.62), and adults aged 80 years and above (AOR 6.01; 95% CI: 1.29–27.92). **Conclusions.** Cataract prevalence was found to be high among the study participants. Age, sex, and known history of hypertension were factors associated with cataract.

1. Background

In the 10th revision of the WHO International Statistical Classification of Diseases, Injuries, and Causes of Death, “Blindness” is defined as visual acuity of less than 3/60, or a corresponding visual field loss to less than 10°, in the better eye with the best possible correction. In view of the proportion of treatable eye diseases or treatable causes of blindness, such as cataract, trachoma, onchocerciasis, and some eye conditions in children, it was estimated that 75% of all blindness in the world could have been avoided [1].

Worldwide, 285 million people are estimated to be visually impaired: 39 million are blind, and 246 have low vision. Cataract is responsible for almost half of the global blindness. About 90% of the world's visually impaired lives in low-income countries. Of those people living with blindness, 82% are aged 50 and above; this group of people represents 19% of the world's population. The problem is too critical in developing countries, where one blind individual takes two individuals out of the work force, if the blind person requires the care of an able adult [1, 2].

In developing countries, cataract accounts for 50% of blindness, while in developed countries, it accounts for only

5% of blindness. In a study done in rural China, the prevalence of posterior subcapsular cataract was found to be 4.4% [3]. In Indonesia, the prevalence of blindness due to cataract was 0.78% [4]. In India, cataract was responsible for causing blindness in 0.73% of the population [5]. In Pakistan, cataract is causing bilateral blindness in 1.75% of the population [6].

In many African countries, cataract is the leading cause of blindness [7]. In a study done in Nigeria, cataract is responsible for causing 44.2% of the total blindness [8]. By the same way, in Kenya, cataract is the leading causes of blindness and causes 42.9% of the blindness's [9]. In Sudan, cataract by far causes 60% of the blindness, and it is among the highest in Africa [10]. In a study done in Cape Town of South Africa, cataract is responsible for causing 27% of the total blindness [11]. In Ethiopia, cataract is responsible for causing 49.9% of the blindness among the total 1.6% blind people [12–14].

The WHO in its Vision 2020 “the right to sight” aims to eliminate blindness due to cataract by creating demand for the service, developing and mobilizing local man power and resources to provide cataract services, promoting services at a cost that all patients can afford, promoting services that are close to the community, and by creating good partnership between government and nongovernmental organizations. Even though there are lots to be done, Ethiopia launched Vision 2020 initiative in September 2002 [1, 12].

2. Materials and Methods

2.1. Study Area and Period. The study was conducted from September to October 2021 in South Ari district of South Omo Zone, Southern Ethiopia. South Omo Zone is one of the 15 zones found in the SNNPR, with 8 rural districts and 1 town administration. According to the census projection for 2017, there are 783,264 residents living in the zone with diverse ethnic groups. South Ari district is one of the 8 districts found in the South Omo Zone having 255,361 residences in 2017. The zone is 750 km and 525 km far from Ethiopian capital Addis Ababa and regional capital Hawassa in southwest direction. The Secondary Eye Care Unit of Jinka General Hospital is the only cataract-related service-delivering institution in the zone.

2.2. Study Design. A community-based cross-sectional study design was used.

2.3. Population

Source population: all adult population aged 40 years and above found in South Ari district of South Omo Zone

Study population: all adult population aged 40 years and above found in the selected kebeles of South Ari district of South Omo Zone

Inclusion criteria: all adults aged 40 years and above found in the selected kebeles of South Ari district and who reside in the area for a minimum of six months before the study period

Exclusion criteria: individuals who were seriously ill during the study period and do not hear

2.4. Sample Size Determination and Sampling Procedure

2.4.1. Sample Size Determination. The sample size was determined using the double population formula by using Epi.info version 7, 1 : 1 ratio, and 80% power. The sample size is determined by assuming cataract prevalence of 3.64% taken from a study done on low vision and blindness on adults above 40 years of age in Gurage zone, central Ethiopia, giving any particular outcome to be within 2% marginal error to increase sample size and 95% confidence interval of certainty [14] (see Table 1).

The sample size was obtained from one objective in which prevalence of cataract was 333. It was multiplied by 10% for nonresponse rate. The total sample size was 366, which is greater than the second objective sample size. So, 366 was the sample size of the study.

2.4.2. Sampling Procedure. A simple random sample selection procedure was applied. From the 50 kebeles found in South Ari district, 6 kebeles were randomly selected using the lottery method. After the number of adults aged 40 years and above was identified in each kebele, the sample was proportionally divided among each kebele. The samples were then selected using the simple random sampling technique (see Figure 1).

2.5. Variables. The dependent variable is the occurrence of cataract (yes/no).

Independent variables are as follows:

- (i) Sociodemographic factors: sex, age, educational level, occupation
- (ii) Systemic illnesses: hypertension, diabetes mellitus, arthritis
- (iii) Current eye condition: visible cloudiness, previous eye surgery
- (iv) Previous history: trauma to the eye, positive family history

2.6. Operational Definitions

Blindness: visual acuity of less than 3/60, or a corresponding visual field loss to less than 10°, in the better eye with the best possible correction [1]

Social blindness: visual acuity result of less than 3/60 in the best eye with the best possible correction [1]

Economic blindness: visual acuity result of less than 6/60 but greater than or equal to 3/60 in the better eye with the best possible correction [1]

Low vision: visual acuity of less than 6/18 but equal to or better than 3/60, or a corresponding visual field loss to less than 20°, in the better eye with the best possible correction [1]

TABLE 1: Sample size determination for associated risk factors of cataract among adult people aged 40 years and above in South Ari district, Southern Ethiopia, 2021.

S. no.	Main factors	CI (%)	Power (%)	Ratio	Outcome in unexposed group (p_1)	Outcome in exposed (p_2)	OR	Sample size	Total sample size	Reference
1	Objective one									
1.1	Prevalence	95	80	1:1	3.64	96.36	2.59	333	366	[8, 9]
2	Objective two									
2.1	Cigarette smoking	95	80	1:1	49.1	12.6	2.1	264	288	[8]
2.2	Occupation	95	80	1:1	24.9	54.4	2.0	331	364	[15]
2.3	Systemic illness	95	80	1:1	86.8	13.2	2.3	314	345	[8]

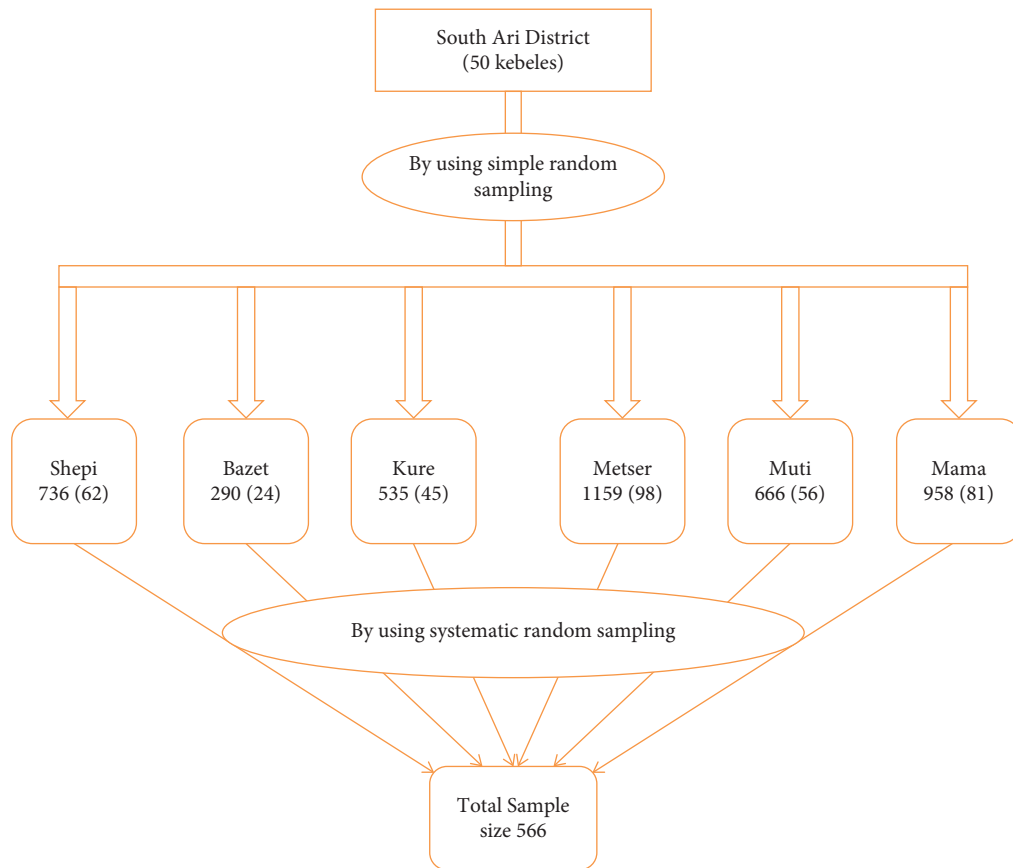


FIGURE 1: Schematic presentation of sampling procedure on prevalence of cataract and associated factors in South Ari district, Southern Ethiopia, in December 2021.

Bilateral blindness: a presenting visual acuity of less than 3/60 in the better eye [5]

Cataract blindness: a presenting visual acuity of less than 3/60 in the better eye, caused by lens opacity [1]

Cataract: visual acuity of less than 3/60 in the better eye that can be explained by clear visual cloudiness [1]

Barrier: factors that prevent a patient from accessing care [3]

2.7. Data Collection Tools and Procedures. The data were collected by using a pretested structured data collection instrument developed from different literature studies. The data were collected in three stages. The first stage involved

registration of eligible people which incorporated registration of sociodemographic data like age, sex, ethnicity, educational level, religion, and occupation. The second stage had visual acuity testing of each eye. The visual acuity was measured using a modified Snellen’s “E” Tumbling chart. All individuals with vision less than 3/60 in one or both eyes proceeded to the third stage, while those with vision of 3/60 or better were not examined further. The first and second stages were piloted by two ophthalmic nurses. The third stage of data collection was conducted by a cataract surgeon. Using a pen torch and direct ophthalmoscope, the eyes were examined for the presence of cataract and their maturity level was graded. The people with cataract in one or both eyes were asked why they had not had cataract surgery. At the end of the examination, all people with cataract and

other treatable blindness were referred for treatment to the nearby Jinka General Hospital Secondary Eye Care Unit.

2.8. Data Quality Assurance. Training was given for both data collectors and supervisor for two days before the pretest and for a day after the pretest on the objective of the study, procedures, and techniques of data collection, review of key terminologies, and ethical issues of the study by the principal investigator. The data collection checklist was pretested on eighteen adults aged 40 years and above in two rural kebeles found in Jinka town administration having similar geographic and demographic nature with the study setting before the actual data collection to make sure that the questions were clear, consistent, and could easily be understood by the data collectors. The overall activity of data collection was supervised and coordinated by the principal investigator and trained supervisor. During data collection period, the collected data were checked for completeness and for its consistencies by the principal investigator and supervisor everyday. After data collection, each data collection checklist was checked for completeness and consistency.

2.9. Data Analysis and Presentation. Collected data were entered to Statistical Package for Social Science (SPSS) version 20 for analysis. Descriptive statistics was applied to describe variables of the study. In descriptive statistics, tables, graphs, and frequencies were used to present the information. Association of the independent variables with the dependent variables (presence or absence of cataract) was computed using the binary logistic regression model. Bivariate and multivariable analyses were done to identify factors which were statistically significant with the development of cataract, and results were presented using COR and AOR with their 95% confidence intervals. Bivariate analysis at significance level of 0.25 was included for the multivariate analysis. The Hosmer and Lemeshow goodness-of-fit test having a P value >0.05 was selected as a candidate for multivariate analysis. Finally, the association of independent variables with the outcome variable was presented using AOR with their 95% confidence interval.

3. Results

3.1. Sociodemographic Characteristics. A total of 366 adults aged 40 years and above participated in the study with the response rate of 98.1%. Seven (1.9%) individuals were not willing to take the eye examination. Half of the study participants (173 (48.2%)) were in the age range of 40–49 years, followed by those in the age group of 50–59 years who were 94 (26.2%). Sex wise, 197 (54.9%) of participants were male and 162 (45.1%) were females (Table 2).

With respect to ethnicity composition, a vast majority of 344 (95.8%) were Ari followed by Amhara (13 (3.6%)). In terms of educational level 1, 83.8% of the study participants were illiterate. Farming was the leading type of occupation constituting 218 (60.7%) of participants followed by being housewife, 34.8%. Pertaining to religion, 55.2% were protestant and 33.1% were orthodox (Table 2).

TABLE 2: Sociodemographic characteristics of participants in South Ari district, Southern Ethiopia, in December 2021 ($n = 359$).

	Variable	Frequency	Percentage
Sex	Male	197	54.9
	Female	162	45.1
Age	40–49	173	48.1
	50–59	94	26.2
	60–69	39	10.9
	70–79	34	9.5
	>80	19	5.3
Religion	Orthodox	119	33.1
	Protestant	198	55.2
	Pagan and others	39	11.7
Ethnicity	Ari	344	95.8
	Amhara and others	13	4.2
Educational level	Illiterate	301	83.8
	Can read and write	9	2.5
	1–4	26	7.3
	Grade 5 and above	23	6.4
Occupation	Farmer	218	60.7
	Housewife	125	34.8
	Employee (other)	16	4.5

3.2. Prevalence of Cataract. The visual acuity test result of the right eye revealed that 66% (95% CI: 61.4–71.4) of the study participants had a vision of $\geq 6/18$ followed by 58 (16.2%) having visual acuity of $< 3/60$. Similarly, those having a visual acuity of $\geq 6/18$ were found to be predominant in the left eye, 63.9% (CI: 59.1–68.6) followed by individuals with a vision of $< 6/18 - \geq 6/60$ which composed 17.8% (CI: 16.0–18.2) (Table 3).

The visual acuity test result of the best eye showed that 71.3% (95% CI: 66.7–75.9) had a visual acuity of $\geq 6/18$, 49 (13.6% CI: (11.3–15.3)) had $< 6/18 - \geq 6/60$ vision, and 48 (13.4% CI: (11.1–15.2)) had a visual acuity of $< 3/60$. In other words, 256 (71.3% CI: (68.2–74.1)) of the study participants had normal vision and 14% had low vision. The remaining 15% had blindness, of whom 6 (2%) had economic blindness and 49 (13%) had social blindness (Figure 2).

During eye examination, visible cloudiness was observed in 81 (22.6% (CI: 21.9–23.1)) participants on their right eye and the same cloudiness was observed on the left eye of 78 (21.7% (CI: 20.9–22.2)) participants. In summary, 25.6% (95% CI: 21.3–30.3) participants had a visible cloudiness on their either eye.

Cataract was found in 28 (7.8% (95% CI: 5.0–10.6)) participants. The prevalence of cataract showed a rise with age, being 5.2% among the age group of 40–49 years to 21.2% among those aged 80 years and above (Figure 3).

From those who had cataract majority, 19 (67.9%) had bilateral cataract while the remaining 9 (32.1%) had a unilateral cataract. Regarding the stage of cataract, 20 (71.4%) had mature cataract and the remaining 8 (28.6%) had hypermature cataract.

Men and women were found to have different prevalences of cataract. Accordingly, the prevalence of cataract was found to be 4.57% among men and 11.75% among women.

TABLE 3: Visual acuity result of left and right eye of participants in South Ari district, Southern Ethiopia, in December 2021.

Age in years	Visual acuity result								Total	
	≥6/18		<6/18 - ≥6/60		<6/60 - ≥3/60		<3/60			
	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left
40-49	142	136	13	17	1	1	17	19	173	173
50-59	57	55	22	23	1	1	12	15	92	94
60-69	22	22	8	11	0	1	9	5	39	39
70-79	13	14	6	6	2	0	13	0	34	34
>80	3	3	6	7	3	0	7	9	19	19
Total	237	230	55	64	7	3	58	62	357	359

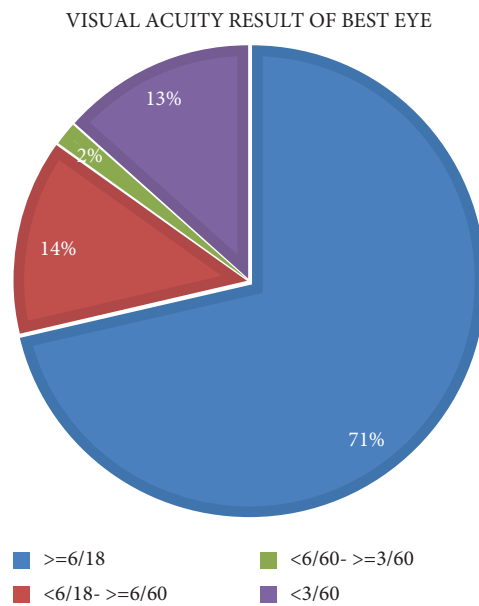


FIGURE 2: Visual acuity result of best eye in South Ari district, Southern Ethiopia, in December 2021.

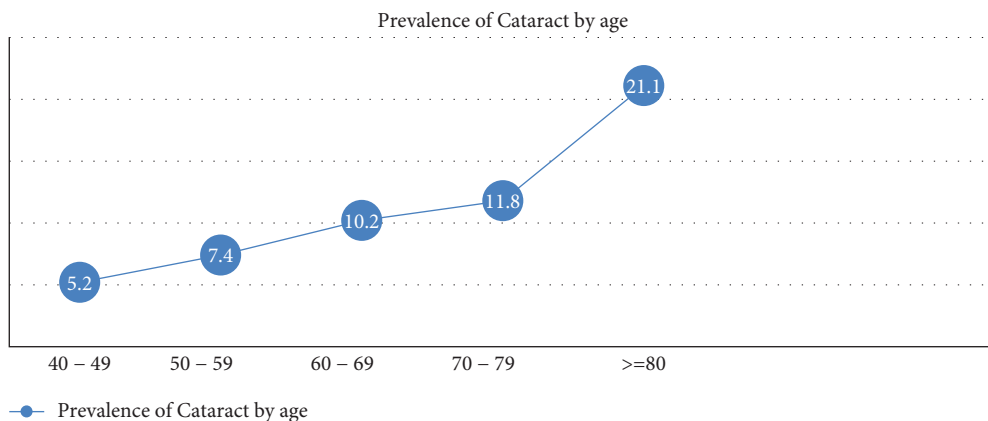


FIGURE 3: Prevalence of cataract with age in South Ari district, Southern Ethiopia, in December 2021.

Only 10 (35.7%) of those having cataract have had a surgery prior to the study, while the vast majority did not have. Of those who had a previous eye surgery, 63.6% experienced a cataract surgery and 36.4% experienced a trichomatous trichiasis surgery.

Regarding already known status of systemic illness, a vast majority of 292 (81.3%) reported as having no known history of the commonly recognized systemic illnesses. From those who reported as having a known history of systemic illness, 37 (55.2%) reported as having a known history of

hypertension and 13 (19.4%) reported as having a known history of diabetes mellitus. A history of trauma to the eye was reported by 33 (9.2%) participants, and 9 (2.5%) reported as having a positive family history of cataract.

From those who were found to have cataract, 10 (35.7%) thought that they had cataract due to age followed by 6 (21.5%) participants who thought cataract is their problem correctly. The remaining 17.9% considered other diseases as a cause and 7.1% considered natural as the cause of their blindness. Surgery was considered by 8 (28.5%) participants as a remedy followed by 7 (25%) who thought cataract had no treatment (Table 4).

3.3. Reason for Failure to Utilize Cataract Surgical Service. Only 25% (95% CI 10.7–42.9) of those who had cataract had ever tried a surgery for their problem. The vast majority (75%) failed to try the surgery due to many reasons. Cost was reported repeatedly by 71.4% of participants as a leading cause for failure to try surgery followed by no one to accompany, which was a concern of 52.4% participants. Not knowing where to get the service, too far distance, and no trust on surgery were among the reasons for failure to access surgery, being a disquiet of 23.8%, 19%, and 19% of participants, respectively (Figure 4).

3.4. Bivariate Analysis Result. Accordingly, in the bivariate analysis, the following variables with a p value less than 0.25 were candidates to multivariable analysis: adults aged 80 years and above, female sex, history of hypertension, and trauma to the eye (see Table 5).

3.5. Multivariable Analysis Result. The logistic regression technique was used to assess the relative effect of the explanatory variable on the outcome variable. To avoid an excessive number of variables and unstable estimates in the subsequent model, only variables with a P value less than 0.25 were kept in the subsequent analyses. The multivariable analysis result showed that from the total five variables, four variables were found to have significant independent association with cataract.

According to the sex of the respondents, females were 3.5 (AOR 3.52; 95% CI: 1.39–8.83) times more likely to develop cataract than males. Individuals with a known history of hypertension were 4.5 (AOR 4.5; 95% CI 1.56–13.21) times more likely to develop cataract than those with no known history of systemic illnesses. Adults in the age group of 70–79 were 5 times (AOR 5.07; 95% CI: 1.09–23.62) and those aged 80 years and above were 6 (AOR 6.01; 95% CI: 1.29–27.92) times more likely to develop cataract than individuals in the age group of 40 to 49 years (see Table 5).

4. Discussion

The finding of this study revealed the prevalence and associated factors of cataract. The overall prevalence of cataract in this study was 7.8% (95% CI: 5.0–10.6). The associated factors of cataract in this study were adults aged 80 years and

TABLE 4: Patients view on cause and treatment of cataract in South Ari, Southern Ethiopia, in December 2021 ($n = 28$).

		Frequency	Percentage
Cause of visual reduction	Age	10	35.7
	Natural	2	7.1
	Cataract	6	21.5
	Other disease	5	17.9
	Trauma	2	7.1
	Other	3	10.7
Treatment	No treatment	7	25.0
	Eye drop	3	10.7
	Surgery	8	28.5
	Natural can heal	5	17.9
	Other	5	17.9

above, female sex, history of hypertension, and trauma to the eye, which were significantly associated with cataract.

The prevalence of cataract in the study area was 7.8% which is relatively higher than the reported prevalence of 6.28% in Kenya and 3.64% in Gurage zone and lower than 13.27% in Sudan and 15% in central Ethiopia [9, 10, 14, 16]. Worldwide, the prevalence of cataract among adults aged 40 years and above has been reported to vary between 1.6% and 35.1% by different researchers [3, 6, 15, 17–19]. There are several factors influencing the difference in the prevalence between countries and researchers, such as variations in reporting methods and standards. There may also be measurement bias and errors in the ascertainment of cataract.

In this study, the prevalence of cataract rises with age from 5.2% in the age group of 40–49 to 21.1% among those aged 80 years and above. This finding is consistent with studies conducted in rural India zone and Gurage [5, 14]. Women were found to have a higher prevalence of cataract than men. The result of this study revealed that 11.73% women and 4.57% men had cataract. This finding is consistent with studies done in Pakistan, India, and different parts of Ethiopia [5, 6, 12].

In this study, 67.9% of the reported cataract was bilateral, which is consistent with the reported prevalence of bilateral cataract in Pakistan, which is 61.9% [6]. The majority 71.3% (95% CI: 66.7–75.9) of participants had a visual acuity of $\geq 6/18$; and one fourth of the study participants 25.6% had visible cloudiness in their either eye which is consistent with studies done in Sudan and India [10, 18].

Surgery was considered as a treatment for cataract by 28.6% of participants of this study; this finding is relatively higher than similar study finding in rural India which reported that 13.3% considered surgery as a treatment for their problem [20]. This may be explained by the time of the study conducted which resulted in the advancement of information communication and expansion of health facilities.

One fourth of the study participants, 25% (95% CI 10.7–42.9), had visited medical care for cataract-related service. This finding is higher than the reported trend of seeking for care among individuals with cataract in Gurage zone (3.5%) and rural India (13%) [14, 18]. This may be

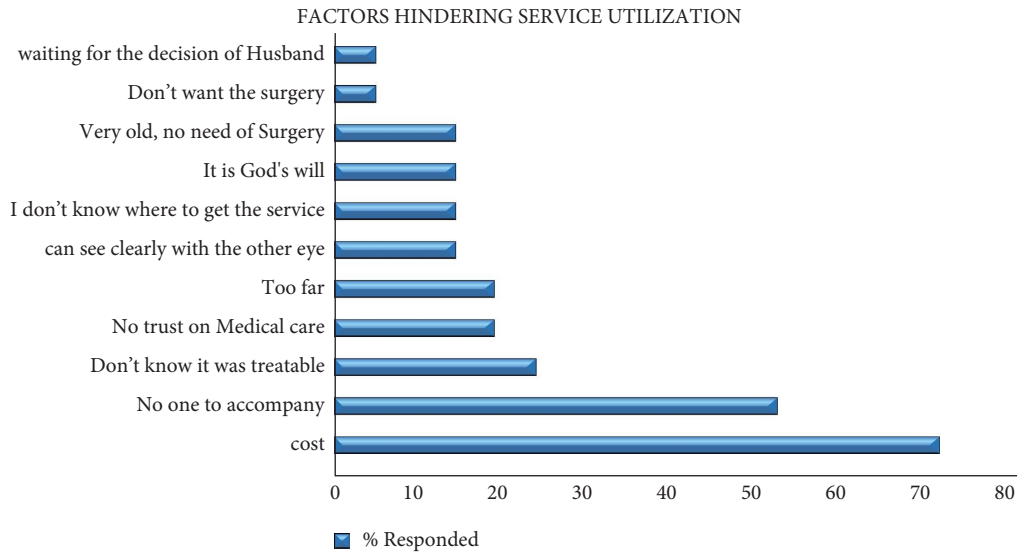


FIGURE 4: Factors influencing individuals with cataract from seeking medication in South Ari, Southern Ethiopia, in December 2021.

TABLE 5: Bivariate and multivariable logistic regression analysis of cataract prevalence and factors associated with it in South Ari district, Southern Ethiopia, in December 2017.

Variables	Cataract		COR (95% CI)	AOR (95% CI)	
	Yes	No			
Age	40-49	9	164	1.0	1.0
	50-59	7	87	2.0 (0.44-9.13)	2.99 (0.57-15.70)
	60-69	4	35	2.33 (0.51-10.58)	2.02 (0.39-10.59)
	70-79	4	30	3.31 (0.86-12.72)	5.07 (1.09-23.62)**
	≥80	4	15	4.86 (1.34-17.67)*	6.01 (1.29-27.92)**
Sex	Male	9	188	1.0	1.0
	Female	19	143	2.77 (1.22-6.32)*	3.52 (1.39-8.83)**
Known history of	Hypertension	7	30	3.55 (1.37-9.19)*	4.54 (1.56-13.21)**
	Diabetes mellitus	1	12	1.63 (0.17-15.51)	1.72 (0.16-18.71)
	Asthma	1	8	1.87 (0.20-17.46)	3.21 (0.27-37.79)
	Arthritis	1	7	2.8 (0.31-25.26)	4.69 (0.45-49.3)
	No	18	274	1.0	1.0
Previous history of	Trauma to the eye	6	27	3.13 (1.16-8.42)*	2.51 (0.84-7.44)
	Positive family history	1	8	1.77 (0.19-17.02)	1.45 (0.13-16.22)
	No	21	296	1.0	1.0

explained by the time of the research conducted which resulted in the advancement of information communication and expansion of health facilities.

Cost related to surgery was reported by 71.4% of the study participants as the main barrier for accessing medical care. The findings are comparable with results of many studies conducted in different parts of Ethiopia, 67.3% in Gurage and 78.1% in Central Ethiopia [21]. The finding is also comparable with results of many developing countries: Kenya 46%, Sudan 45.8%, Nigeria 61%, and Pakistan 76.1% [6, 10, 17].

After adjusting for possible confounders, age is one of the factors associated with the occurrence of cataract. In this study, adults aged 70 years and older were more likely to develop cataract as compared to those aged 40-49 years of age. The association of age with development of cataract was

also noted in several other studies conducted in different parts of the world [5, 20, 22]. This may be explained by the natural process of protein clump, which is the core component of lens in addition to water, through time. As a person gets older, the protein component of the lens which was arranged in a precise way to keep the lens clear and let light pass through it may clump together and start to cloud the lens which may grow larger with time making it harder to see, leading to faster development of cataract.

Sex has been significantly associated with cataract. Being female has significant association with the chance of developing cataract. This finding is consistent with the studies done in Gurage, in eight regions of Ethiopia, India, and Pakistan [6, 12, 14, 16, 20]. This may be explained by the poor access and poor health facility utilization trend females had in the area.

In this study, having a known history of hypertension has a statistically significant association with the development of cataract. Adults with a known history of hypertension are more likely to develop cataract than those with no known history of hypertension. This result is consistent with finding in Korea [15]. This may be explained by the vasospasm and ischemic change nature of hypertension on different organs of the body. The eye is one of the sensitive organs to be affected by this change, and development of cataract is the manifestation.

5. Strengths and Limitations of the Study

5.1. Strengths of the Study. The analytic approach and community-based study help to detect the true magnitude and factors and helps to generalize the finding.

5.2. Limitation of the Study. Factors like the use of steroid, long time exposure to X-ray and UV rays, hepatitis B infection, myopia, and other ocular comorbidities that might contribute to poor vision along with cataract were not assessed during data collection, and thus, their association with cataract was not drawn.

6. Conclusion and Recommendations

6.1. Conclusion. Generally, the prevalence of cataract among adults aged 40 years and above was high. The prevalence increased with age. Cataract-related cost was found to be the main barrier to service utilization among patients with cataract.

In this study, respondents' age, sex, result, and known history of hypertension were found to have statistically significant association with cataract. Accordingly, older age, female sex, and individuals with a known history of hypertension had a higher chance of developing cataract.

6.2. Recommendations

6.2.1. To Woreda District. It is better to improve services like examination room in each health institution and to give information to community.

6.2.2. To Community. It is better to come to health institutions as early as possible to examine eye problems even if it is cataract or not.

Data Availability

The dataset analyzed during the study was available from the corresponding author on reasonable request.

Ethical Approval

Ethical clearance was obtained from the Ethical Review Committee of Arba Minch University, College of Medicine, and Health Science Department of Public Health, and a formal letter for cooperation was obtained. Permission was asked and obtained from South Ari district health office and

selected kebeles. The study participants were informed that there is no direct financial benefit and risk from this study, but the study will help them to know whether they had cataract or not and will help them in indicating cure for their problem. On the other hand, the study findings would be used to design strategies for cataract service uptake. Concerning confidentiality, names of the respondents were not included in the questionnaire.

Consent

Informed consent was obtained from study participants after a necessary explanation about the purpose, benefit, and risk of the study, and also their right on decision of whether or not participating in the study was made.

Conflicts of Interest

The authors would like to declare that they have no conflicts of interest in this study.

Authors' Contributions

TW has conceptualized the manuscript, performed data analysis, made interpretation, and drafted the manuscript. WG and DM have participated in the revision of the study design, data collection techniques, and in the statistical analysis. GG and AA have participated in the revision of data analysis and revised the paper for intellectual content and have participated in the drafting of the manuscript. All authors reviewed and approved the final version.

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