

BARRIERS IN UTILIZING EYE CARE SERVICES BY GLAUCOMA PATIENTS IN PAKISTAN

Submitted: 01 January, 2020
Accepted: 27 February, 2020

Syeda Mishal Fatima¹
Saman Ali²
Hafiza Ammara Rasheed³
Muhammad Ali Naqvi⁴

**For Authors' affiliation & contribution
see end of Article**

Corresponding Author:

Syeda Mishal Fatima
BSc (hons) optometry
College of Ophthalmology & Allied Vision Sciences,
Lahore.
mishalnaqvi75@gmail.com

ABSTRACT

PURPOSE: To investigate the barriers against utilizing the eye care services by patients who are suffering from glaucoma in Pakistan and to identify the main area for improvement and further research.

METHOD: Total of 92 subjects, aged 16 or above, were selected through a non-probability purposive sampling technique from the patients visible in eye OPD in Mayo Hospital. Information regarding the barriers of utilizing eyecare services was collected from this population by interviewed them and the data was noted on the questionnaire. Ethical approval was sought from ERB of the COAVS.

RESULT: This study included a total of 92 subjects. 50 subjects were males and 42 were female. In this study, 75% of participants faced economic barriers, 16.30% of participants were unsatisfied with patient-doctor relation, 27.17% were emotionally disturbed, 30.43% suffered from medication issues and 22.83% patients did not complete their follow-up regularly. The data was analyzed by software SPSS and for qualitative data descriptive statistics was applied such as graphs and frequency tables, Chi-square test was used to check the significance of the results.

CONCLUSION: This descriptive cross-sectional study concluded that the major hurdle to utilize eye care service is economic issues that was reported by 75% of the participants. The other barriers including medication problems, non-adherence, emotional barriers and patient-doctor trust issues are also significant as their p-value is <0.05.

KEYWORD: emotional, eye care service, follow-up, glaucoma, medication, patient-doctor trust, socio-economic issue.

INTRODUCTION

Glaucoma is a progressive, chronic and most often asymptomatic disease which may or may not be related with Intraocular pressure (IOP).¹ According to WHO, it is the 2nd most leading cause of blindness worldwide. In public screening risk factors of glaucoma are not specified.¹⁻⁵ Glaucoma can cause visual field loss because of the pathological changes in the optic nerve which may result in blindness if it remains untreated. There are many types of glaucoma but on a population-based epidemiological study; normal tension glaucoma and primary open angle glaucoma are considered to be the most common type of glaucoma.¹

Glaucoma problems are more common in males as compared to females and in old age group. In a cross-sectional survey, 60% of patients reported for one or more problems with glaucoma treatment. While 14% of patients reported for no problem.⁶ Patients with

glaucoma visual impairment are significantly more likely to become blind at the beginning of treatment as compared to other patients with VA is normal.⁷ A survey of hospitals has shown that approximately 30–50% of patients with glaucoma are blind when they are presented to the hospitals.⁸

Knowledge of caring for glaucoma among the patients is limited, with some studies in the setting of a Punjab hospital of Pakistan. According to a research done in Pakistan, the prevalence of blindness due to glaucoma among poor people was not surprising, as preventing blindness from glaucoma requires initial presentation and diagnosis.⁹ Eye care service utilization in glaucoma is equally influenced by the factors that affect utilization of health services in general.¹⁰

Several studies have shown that inadequate knowledge and awareness about the importance of eye care

services in glaucoma and strategies for minimizing barriers contribute to a lot of problems with eye disease management plans and their low eye care utilization rate.¹¹ There are many other factors that cause problem in the use of eye care services in glaucoma which includes; lack of awareness about the progression of disease, economic problems included not able to pay for exams, spectacles and co-exams; communication issues, personal issues, transportation problems, emotional distress and the trust issues with the staff and doctors of the hospital.³ There are some other barriers address three 'A' which includes awareness, adherence and access. As in under developed areas of Punjab people are less educated and there is no proper setup to guide them about disease and those people considered it temporary. They are less likely to continue their medical treatment and more likely to refuse surgery. Access is most significant barrier to glaucoma, most of the patients want treatment but they don't have access because of poor income. Some patients have extended families who pay for their treatment but everyone is not fortunate. Addressing these obstacles is vital to ensure that patients receive quality eye care and treatment to prevent glaucoma progression and subsequent vision loss.¹⁴

METHODOLOGY

This descriptive cross-sectional survey was carried out between September 2019 to December 2019 in which 92 patients were involved who suffered from glaucoma and visited Mayo hospital Lahore for an eye examination. The sampling method used in this study is Non-Probability Purposive Sampling. The inclusion criteria were (1) patient should have a medical record with documentation of glaucoma (2) age of the patient range between 16 years to 60 years (3) previously diagnosed primary angle-closure glaucoma, Primary Open Angle Glaucoma (POAG), Normal Tension Glaucoma (NTG), or exfoliation syndrome with glaucoma while the exclusion criteria were (1) any history of refractive surgery (2) any ocular pathology (3) Not able to participate in the research study. In this study, dependent variables are gender and glaucomatous patients while independent variables are the duration of disease and type of glaucoma. The instrument used were a pen torch, air puff tonometer for IOP measurement, and a questionnaire for data collection.

DATA COLLECTION

There were 92 patients and each patient was interviewed for 10 minutes and all the information was recorded on the questionnaire. The interview was taken in Urdu\Punjabi language and translate into the English language so that minimum information was lost or simplified in the translation. Throughout the interview, we used the word 'kalamotiya' instead of glaucoma which is the standard term. The purpose was to explore the attitude, behavior, and the barriers which patient faces during treatment and to give them awareness about the disease and patients could ask the questions at the end.

QUESTIONNAIRE DEVELOPMENT

A Performa/ questionnaire was prepared to interview the patients (annexure 1) using a prior assumption for literature and personal insight of the patients. This questionnaire includes 1) social barriers 2) transportation issue 3) emotional issues 4) escort issues (means did they prefer to come with the escort or not) 5) medicine cost issues 6) medicine availability issues 7) follow up issues 8) doctor and patients trust issues and many more. The assumptions were not allowed to stop the point of view. Its purpose was to create an enhanced dataset that represented the views of all participants.

DATA ANALYSIS METHOD

Data was entered and analyzed using Software SPSS 20.0. For qualitative data descriptive statistics such as graphs and frequency tables were calculated, chi-square test was used to check the significance of results. P-value equal to or less than 0.05 was considered as significant.

RESULTS

Table -1: Frequency of Barriers for Utilizing Eye Care Services In Glaucoma

Title	Agree/Disagree	Frequency	Percentage	P-Value
Patient - Doctor- Trust	Agree	77	83.7	0.000
	Disagree	15	16.3	
Personal-Life-Effect	Agree	43	46.7	0.602
	Disagree	49	53.3	
Emotional - Issues	Agree	25	27.2	0.000
	Disagree	67	72.8	
Social - Issues	Agree	40	43.5	0.251
	Disagree	52	56.5	
Medicine issue	Agree	64	69.6	0.000
	Disagree	28	30.4	
Economic issue	Agree	23	25	0.000
	Disagree	69	75	
Follow - up issue	Agree	71	77.2	0.000
	Disagree	21	22.8	

Among 92 subjects enrolled, 45.65% were female and 54.35% were male. Table 1, showed that 46.74% of participants agreed that this disease affected their personal life while 53.26% of participants denied the effect on their personal life. 83.70% of participants agreed that they were satisfied with the treatment they received from the eye specialist but 16.30% of participants disagreed with the patient-doctor relation. 43.48% of subjects agreed that they faced many social issues while 56.52% of subjects were reported that they did not face any social problem. 27.17% of participants reported that they were emotionally disturbed while on the other hand, 72.83% of participants disagreed with the emotional issues. 25% of subjects were agreed that they can afford the cost of the treatment but 75% of subjects disagreed with the affordability of treatment cost. 69.57% of subjects were agreed that they can easily get their medicine while 30.43% of subjects reported that they could not get medicines easily from the market and have medication issues. 77.17% of patients reported that they have done their follow-up regularly but 22.83% of patients reported that they could not done their follow up regularly. As the p-value of patient-doctor trust, economic problem, emotional issue, follow up the issue and medication issue are <0.05 so they are significant barriers while the personal problem and social problem are non-significant barriers.

DISCUSSION

35% of glaucomatous patients included in this study, had a blind or visually impaired eye. These participants noticed the decrease of vision but did not seek treatment because problems related to vision were not a priority for a high proportion of the under-developed area.

A study in New York showed about 71 unique barriers in utilizing eye care services in glaucoma and they divided participants into four group¹⁵ while in my study 16 different barriers were found for utilizing the eye care services for their respective treatment. We divided these obstacles into seven different groups which included personal life problems, social issues, emotional issues, patient-doctor trust problems, economic (financial) problem medication problems, and follow-up obstacles. Economic problem was reported as the biggest obstacle to getting regular eye

care, as many participants mentioned that they could not afford the cost of eyeglasses, examination test (visual field test, OCT, IOP) and medication was still significant. The economic problem also included the inability to pay for transportation.

Trust with the eye care provider is the next common barrier to utilize the eye care source. As participants wanted a better communication level before, after, and during the visit between patient and doctor. Patients wanted that doctor needs to explain about the disease and its progression more clearly in 'non-medical' terms. For this purpose, the provider should show more care for the patient and be gentle during treatment. Most elderly participants stated that they are emotionally disturbed because they could not see properly and can't perform their work while younger participants in that group disagreed with their statement and showed they are emotionally stable.

Some patients did not have easy access to medicines in their local market and the other significant barrier was a lack of regular follow-up. But in glaucoma treatment follow-up is considered as the most important step, to check the improvement of visual function so the doctor must inform the patient to take this condition seriously and do their follow up regularly. Access to the clinic, especially for the eye care provider and lack of transportation and distance, has been identified as an important barrier in current and previous studies. Traveling long distances or living in a rural community not only disrupts regular eye care but also provides proper care for other ailments such as diabetes.

The results obtained here indicated that the focus of eye care programs was to go beyond identifying glaucoma cases if the burden of blindness was due to glaucoma. To educate patients and clinicians better and to improve the market availability of medicines, strategies are urgently needed to ensure follow-up and adherence to the suggested therapy and availability of medicines.

CONCLUSION

This descriptive cross-sectional study concluded that the major hurdle to utilize eye care service is economic issue as 75% participants were not able to pay their transport bills, hospital bills, medicines bill and they did not have strong financial background. The other barriers include medication problem, non-adherence,

social barrier and patient doctor trust issue. There was no statistically significant difference in gender for the use of eye care services in glaucoma treatment (p-value=0.466).

RECOMMENDATIONS

After conducted this study it is recommended that:

- Health care provider should arrange more free medical camps in under developed area so theeconomic issues should be reduced.
- Doctor should guide patients about the treatment properly.
- The clinical examination fees should be minimum so they can afford examination.
- There should be camps arranged for free medication.
- Glaucoma awareness session should be arranged.

Authors' Affiliation & Contribution

¹Syeda Mishal Fatima
BSc (Hons) optometry COAVS
mishalnaqvi75@gmail.com
Study design, methodology, data collection

²Dr. Saman Ali
MS (Ophth),
Ophthalmologist, Mayo hospital Lahore
drsamanali@hotmail.com
Results, Discussion

³Hafiza Ammara Rasheed
MPhil
COAVS
hummararasheed@gmail.com
Data analysis

⁴Muhammad Ali Naqvi
BSc (hons) optometry
COAVS
s.alinaqvi@gmail.com
Proof Reading/ Editing The Script

REFERENCES

1. Robin A, Grover D. Compliance and adherence in glaucoma management. *Indian J Ophthalmol.* 2011;59 Suppl(Suppl1):S93-6. doi: 10.4103/0301-4738.73693.
2. Mason RJO, Kosoko, Wilson, Martone, Cowan, Jr, Gear and Ross-Degnan. National survey of the prevalence and risk factors of glaucoma in St. Lucia, West Indies. Prevalence findings. *Ophthalmol.* 1989;96(9):1363-8.
3. Kahn HA, Milton RC. Revised Framingham eye study prevalence of glaucoma and diabetic retinopathy: *Am J Epidemiol*; 1980;111(6):769-76.
4. Tielsch JM, Sommer A, Katz J, Royall RM, Quigley HA, Javitt J. Racial variations in the prevalence of primary open-angle glaucoma: the Baltimore Eye Survey. *JAMA Ophthalmol.* 1991;266(3):369-74.
5. Klein BE, Klein R, Sponsel WE, Franke T, Cantor LB, Martone J, et al. Prevalence of glaucoma: the Beaver Dam eye study. *Ophthalmol.* 1992;99(10):1499-504.
6. Manhas A, Manhas RS, Manhas GS, Gupta DJ. Profile of patients of glaucoma in Jammu province (a hospital based study) *IJMBS* 2019;3(10):32553. doi 10.32553/ijmbs.v3i10.622
7. Cross V, Shah P, Bativa R, Spurgeon P. ReGAE 2: glaucoma awareness and the primary eye-care service: some perceptions among African Caribbeans in Birmingham UK. *Eye (Lond).* 2007 Jul;21(7):912-20. doi: 10.1038/sj.eye.6702461.
8. Mafwiri M, Bowman R, Wood M, Kabiru J. Primary open angle glaucoma presentation at a tertiary unit in Africa: intraocular pressure levels and visual status. *Ophthalmic Epidemiol* 2005;12(5):299-302
9. Lodhi FS, Montazeri A, Nedjat S, Mahmoodi M, Farooq U, Yaseri M, et al. Assessing the quality of life among Pakistani general population and their associated factors by using the World Health Organization's quality of life instrument (WHOQOL-BREF): a population based cross-sectional study. *Health Qual Life Outcomes.* 2019;17(1):9
10. Olusanya BA, Ashaye AO, Owoaje ET, Baiyeroju AM, Ajayi BG. Determinants of utilization of eye care

services in a rural adult population of a developing country. *Middle East Afr J Ophthalmol*. 2016;23(1):96

11. Owsley C, Mcgwin Jr G, Stalvey BT, Weston J, Searcey K, Girkin. Educating older African Americans about the preventive importance of routine comprehensive eye care. *J Natl Med Assoc*. 2008;100(9):1089-95.
12. Janiszewski R, Heath-Watson SL, Semidey AY, Rosenthal AM, Do QN. The Low Visibility of Low Vision: Increasing Awareness through Public Health Education, *Journal of Visual Impairment & Blindness* 2006;100(1_suppl). doi:10.1177/0145482X0610001S08.
13. Palagyi A, Ramke J, Du Toit R, Brian G. Eye care in Timor-Leste: a population-based study of utilization and barriers. *Clin Exp Ophthalmol*. 2008;36(1):47-53.
14. Sleath B, Blalock SJ, Carpenter DM, Sayner R, Muir KW, Slota C, et al. Ophthalmologist-patient communication, self efficacy, and glaucoma medication adherence. *J Ophthalmol* 2015;122(7):1308-16
15. Chandrashekhar T, Bhat H, Pai R, Nair S. Coverage, utilization and barriers to cataract surgical services in rural South India: results from a population-based study. *J Public Health*. 2007;121(2):130-6.