

BARRIERS OF EYE CARE SERVICES FOR CATARACT PATIENTS IN AZAD JAMMU AND KASHMIR

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ABSTRACT

Purpose: To find the barriers in eye care service for cataract patients in Azad Jammu and Kashmir.

Design: Cross-sectional study.

Method: 60 Cataract patients (30 males and 30 females) of Azad Kashmir. Log MAR Visual acuity chart was used to assess visual acuity. The confidence interval of 0.95 with α of 0.05 was taken. Refraction was done and appropriate glasses

Result: The majority of people with school-level education have experienced cataracts. It may be due to a lack of awareness. 30/74 people with 1 year cataract have experienced decreased vision for 1 year. And 6/12 for 3 years ($p=0.403$). 40/74 & 12/74 people housewives and labourers, respectively, experienced cataracts for 1 year. And 6/12 for 3 years of people related to labouring ($p=0.012$). The majority of people living in rural areas were affected more, 58/74 for 1 year, 26/34 for 2 years, 10/12 for 3 years ($p=0.947$). Most people with surgery phobia are affected more as compared to those who don't have issues with the surgery, 38/74 for 1 year, 22/34 for 2 years and 8/12 for 3 years affected by cataract ($p=0.339$).

Conclusion: The majority of people with school-level education, living in rural areas, never examine their eyes due to surgery phobia and doing housework or labouring have experience.



KEYWORDS: Visual acuity, Log MAR chart, Refraction, Awareness, Surgery phobia, Rural population, Educational level, Socioeconomic factors

INTRODUCTION: In the late 20th century cataracts was an important problem globally but was not recognized widely as such as today. Now it is a significant problem and its significance is understood in a better way. Worldwide, cataracts is one of the major cause of blindness for 51% of total blindness ¹ and there is regional variation also exist in it. Globally the Americans have the least prevalence of blindness and south East Asian countries have the largest.^{2, 3} Instead of the occurring of the cataracts, there is also some other issue like hospital facilities and other to prevent the growing prevalence of the cataract.⁴⁻⁶ In contrary of the hospital-based studies, the population base studies shown variety in term of post-operative visual outcomes, in both cases of intra-country and inter-country.⁷⁻¹⁰ There is also much difference in habitat like urban and rural societies. This difference is mainly due to quality of surgery, surgical facilities, efficiency of surgeons and the use of spectacle in post-operative. These differences are due to reality that population-based studies include all type of cases of every age group but hospital-based studies provide only specific and limited cases. ¹¹The main challenge is to eradicate its causes so that it is no longer a big problem at the start of the next century. The chance of cataract increases with increasing age.

In a study conducted in Australia, it is come to know that the chances of cataract increase double with every 10th year of age after forty years, so everyone in their 90^s is affected. The same results gathered from different studies conducted in other developed countries.¹²⁻¹⁵ In a study conducted in India it is found that in twelve million people blindness is caused by cataract. In 1989-1996 there was increment in rate of cataract surgeries from 1.2 million to 2.7 million. The difference is very significant; however, the figure does not indicate the extent to which the problem of cataract blindness has been reduced. The main determinant of visual impairment is cataract worldwide, with approximately thirty seven million people affected according for forty eight percent of global blindness.

In South Indian States, avoidable blindness especially which is caused by cataract and refractive error such as myopia, astigmatism are main dilemma between older adults, females, the uneducated and the people in rural areas. Refractive errors with 33.8% and Cataract with 21.4% recorded for more than 1/2 of the OPD attendance at a military hospital in Ladakh, Kashmir. In 1999 the avoidable blindness was eliminated with the global strategy i.e. "The Right to Sight", that was commenced by World Health Organization in affiliation with a number of international nongovernmental organizations (NGOs) with



the motto of vision 20/20.¹⁶⁻¹⁹ As mentioned earlier, in diabetic patients, visual impairment is mainly caused by cataract. Patients with diabetes mellitus also have increased prevalence and development of cataract. Clinical epidemiology and basic research studies reveal association among these two major problems (diabetes and cataract). Because of the raised number of type 1 and type 2 diabetes the incidence of diabetic cataracts gradually increases worldwide.^{20, 21} In developing countries, the diabetes and cataract have large health and financial concern because diabetes therapy is inadequate and cataract surgery is frequently unavailable.²² In many parts of the globe, mainly the most cases of blindness are avoidable or manageable by surgery and or refractive error corrections (refraction), however, the availability of these resources cannot cope with demand for eye care. The main reason of this is because in many countries, eye care services are not readily available due to inadequacy of trained personnel or due to the fact that eye care practitioners are usually do not concentrated in the rural areas.^{23, 24} There are three primary factors namely: availability, affordability and accessibility. These three A of eye care services could influence the prevention of visual impairment worldwide. Also, there are many secondary factors which can play a role as barrier to utilizing the present and easily accessible as well as affordable eye care services. These factors are: Demographic, Personal and Socio-economic. In a research it is found that, according to Andersen, health care services use is determined by social, health service system and individual factors. Individual factors include the need, enabling factors, and predisposing factors. The possibility of an individual's utilizing health care services is affected by the collaboration of these various factors. The usage of eye care services also concerns these factors.^{23, 25} In this study we will focus on socioeconomic barriers of cataract patients for eye care services in Kashmir, Pakistan

MATERIALS AND METHODS

A Cross sectional study of 60 Patients of cataracts was conducted in Azad Jammu and Kashmir. Non probability purpose sampling technique was used to collect the data. Self-made Performa was used for data collection. Instruments LogMar Chart, Pen torch was used. For data analysis SPSS softwear and paired sample T test was used.

Results

Literacy * Duration Cataract Cross tabulation

	Duration Cataract			Total
	1 year	2 year	3 year	

	Count	16	12	2	30
College	% within Literacy	53.3%	40.0%	6.7%	100.0%
	Count	16	10	2	28
no	% within Literacy	57.1%	35.7%	7.1%	100.0%
	Count	30	10	6	46
school	% within Literacy	65.2%	21.7%	13.0%	100.0%
	Count	12	2	2	16
university	% within Literacy	75.0%	12.5%	12.5%	100.0%
Total	Count	74	34	12	120
	% within Literacy	61.7%	28.3%	10.0%	100.0%

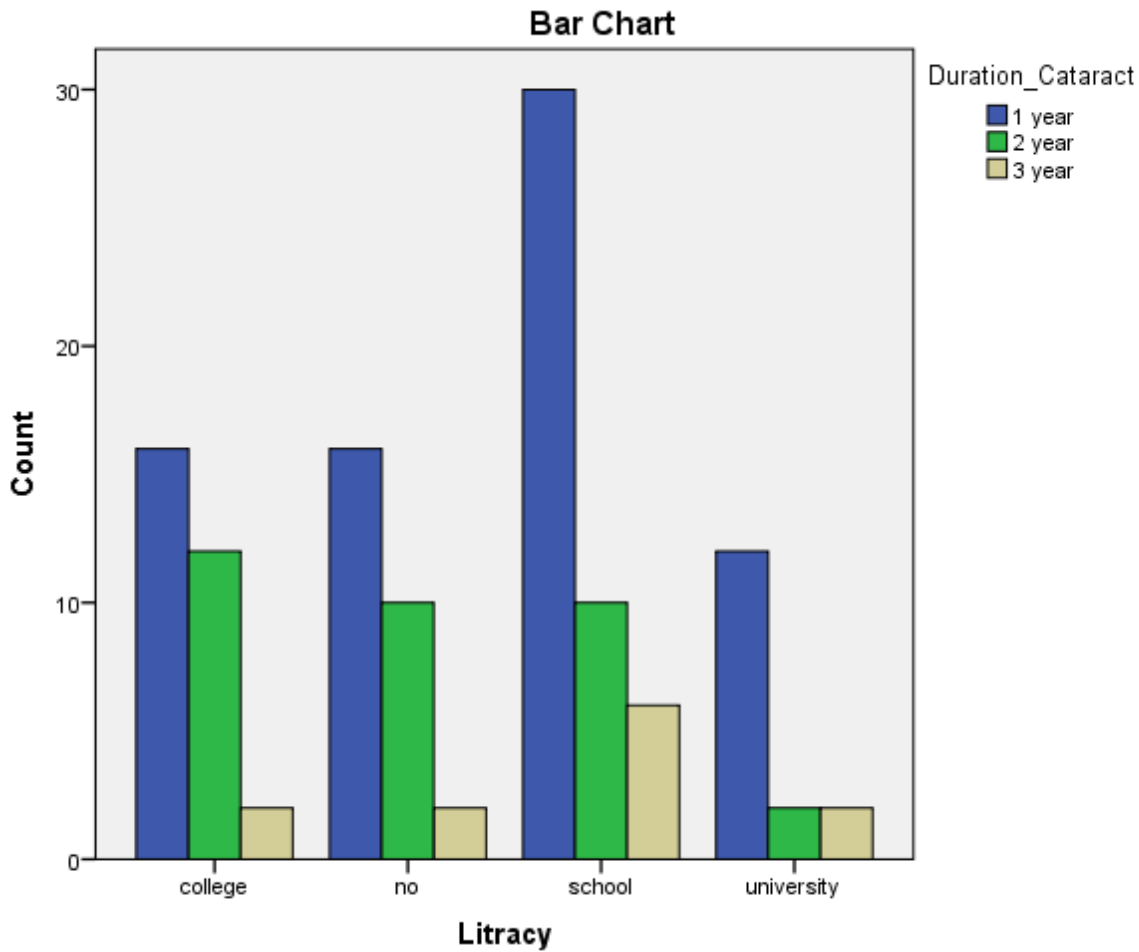
The literacy is compared across the duration of cataract. The majority of people with school level education have experience cataract. It may be due to lack of awareness. 30/74 people with 1 year cataract have experiencing decrease vision for 1 year. And 6/12 for 3 years.

Chi-Square Tests

	Value	Df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)
Pearson Chi-Square	6.175 ^a	6	.404	.414
Likelihood Ratio	6.421	6	.378	.433
Fisher's Exact Test	6.092			.403
N of Valid Cases	120			

a. 5 cells (41.7%) have probably count less than 5. The lowest estimated count is 1.60.

The fisher's exact test is used in this study. The result presented that there is no statistically significant difference between literacy ($p=0.403$). However, people with school level education recorded more affected as compared to other.



Occupation * Duration Cataract Cross tabulation

		Duration Cataract			Total
		1 year	2 year	3 year	
Housewife	Count	40	14	2	56
	% within	71.4%	25.0%	3.6%	100.0%
	Occupation				
Job	Count	16	6	2	24
	% within	66.7%	25.0%	8.3%	100.0%
	Occupation				
Occupation Labour	Count	12	6	6	24
	% within	50.0%	25.0%	25.0%	100.0%
	Occupation				
Nothing	Count	0	4	0	4
	% within	0.0%	100.0%	0.0%	100.0%
	Occupation				
Teacher	Count	6	4	2	12
	% within	50.0%	33.3%	16.7%	100.0%
	Occupation				
Total	Count	74	34	12	120
	% within	61.7%	28.3%	10.0%	100.0%
	Occupation				

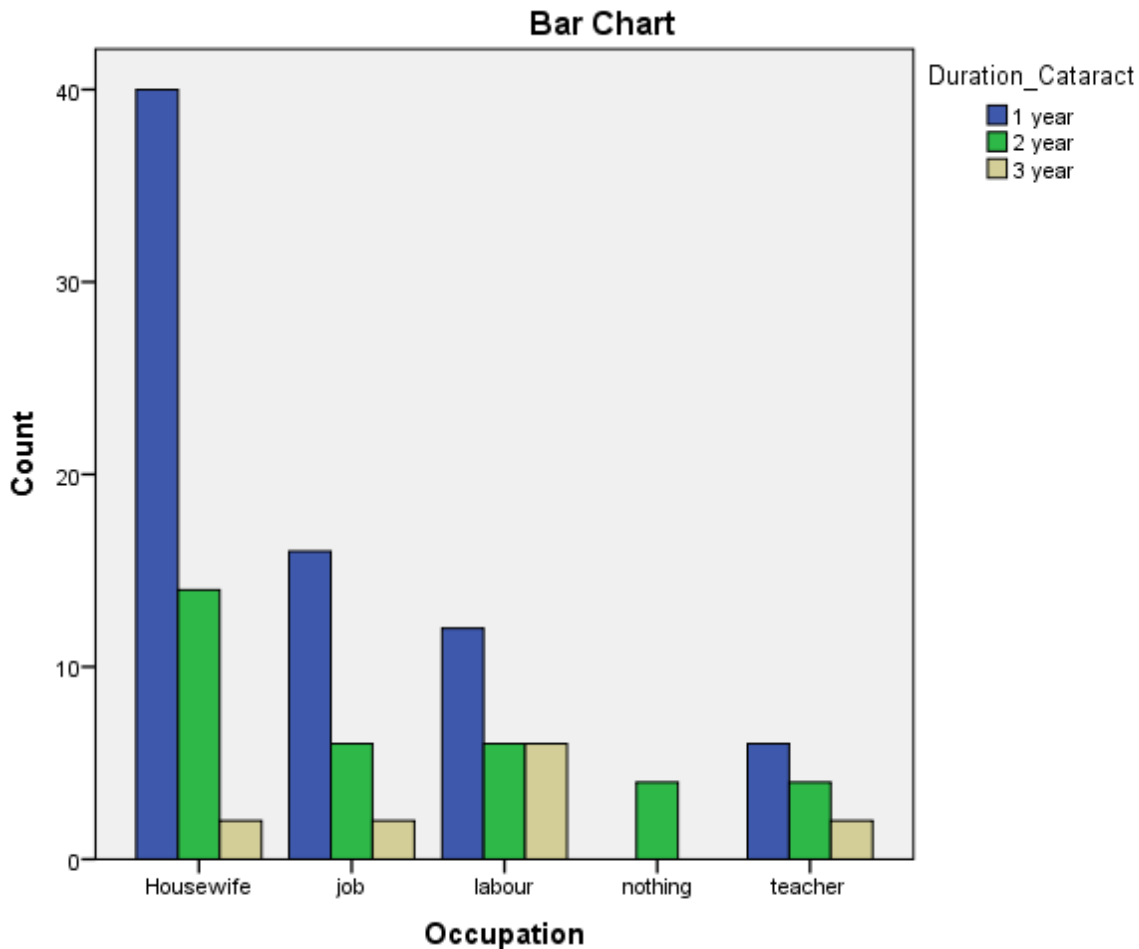
The profession is compared across the duration of cataract. The majority of people of housewife and laboring profession have experience cataract. It may be due to lack of awareness and clean environment. 40/74 & 12/74 people of housewife and laboring, respectively, experiencing cataract for 1 year. And 6/12 for 3 years of people related to laboring.

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)
Pearson Chi-Square	20.703 ^a	8	.008	.010
Likelihood Ratio	19.773	8	.011	.015
Fisher's Exact Test	17.570			.012
N of Valid Cases	120			

a. 7 cells (46.7%) have expected count less than 5. The minimum expected count is .40.

The fisher's exact test is used in this study. The result showed that there is marked difference between profession and duration of cataract ($p=0.012$). However, people with laboring and housewife, recorded more affected as compared to other.



Habitat * Duration Cataract Cross tabulation

		Duration Cataract			Total
		1 year	2 year	3 year	
Habitat	Count	58	26	10	94
	Rural % within	61.7%	27.7%	10.6%	100.0%
	Habitat				
	Count	16	8	2	26
	Urban % within	61.5%	30.8%	7.7%	100.0%
	Habitat				
Total	Count	74	34	12	120
	% within	61.7%	28.3%	10.0%	100.0%
	Habitat				

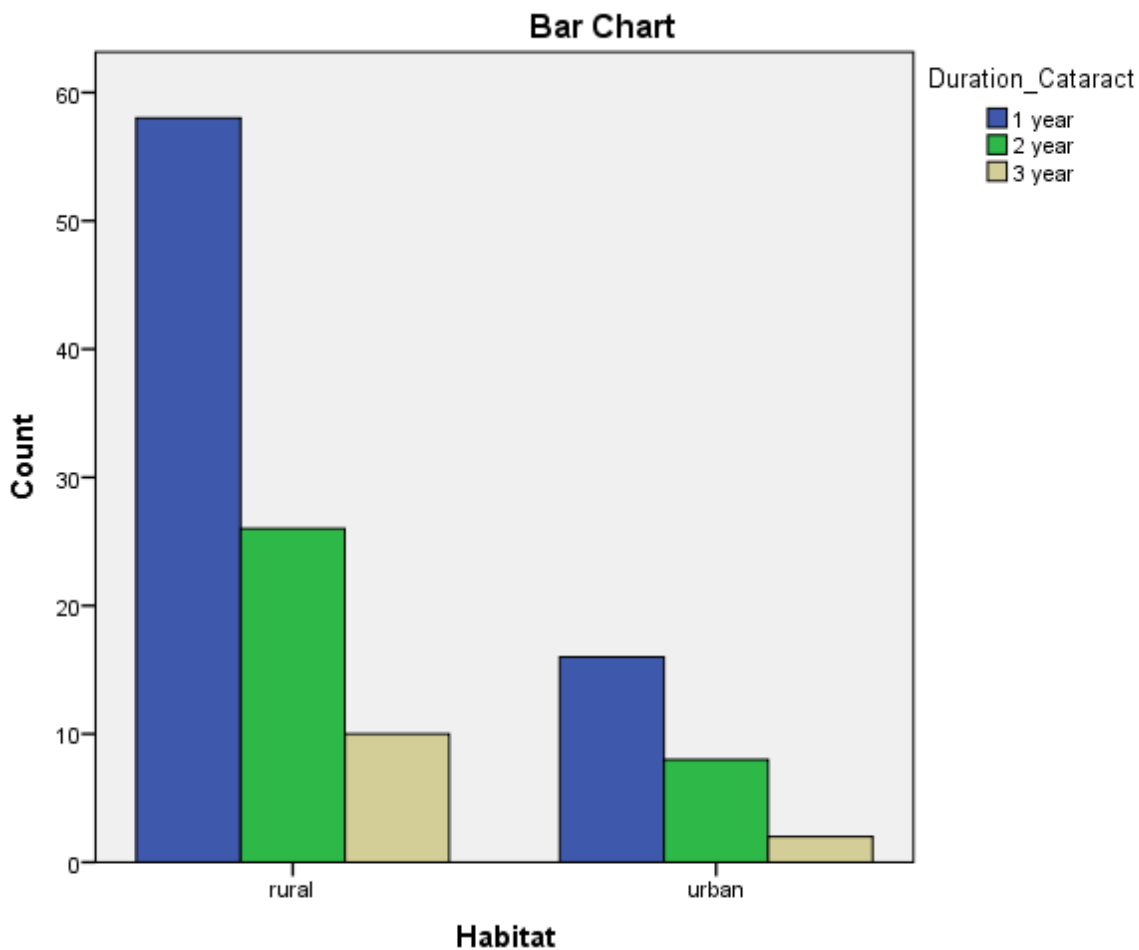
The Habitat is compared across the duration of cataract. The majority of people living in rural areas affected more, 58/74 for 1 year, 26/34 for 2 year, 10/ 12 for 3 year.

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)
Pearson Chi-Square	.246 ^a	2	.884	.900
Likelihood Ratio	.256	2	.880	.900
Fisher's Exact Test	.225			.947
N of Valid Cases	120			

a. 1 cells (16.7%) have expected count less than 5. The minimum expected count is 2.60.

The fisher's exact test is applied to this study. The result showed that there is no statistically difference between Habitat and duration of cataract (p=0.947). However, people living in rural areas affected more.



Previous Examination * Duration Cataract Cross tabulation

		Duration Cataract			Total	
		1 year	2 year	3 year		
Previous examination	no	Count	50	24	10	84
		% within Previous Examination	59.5%	28.6%	11.9%	100.0%
	yes	Count	24	10	2	36
		% within Previous Examination	66.7%	27.8%	5.6%	100.0%

	Count	74	34	12	120
Total	% within Previous Examination	61.7%	28.3%	10.0%	100.0%

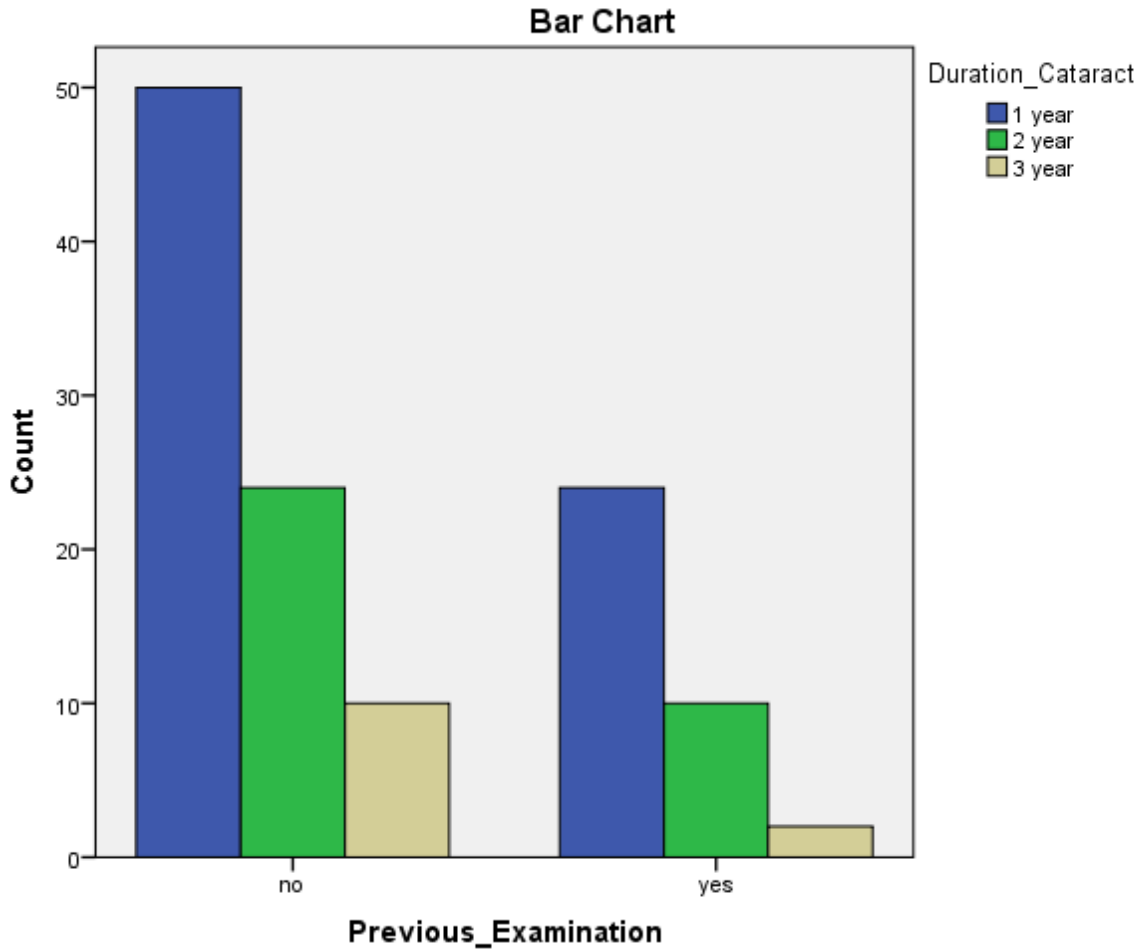
Duration of cataract is compared with the pervious examination history. Majority of people who never examine their eyes affected more, 50/74 for 1 year, 24/34 for 2 year and 10/12 for 3 year.

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)
Pearson Chi-Square	1.230 ^a	2	.541	.551
Likelihood Ratio	1.347	2	.510	.551
Fisher's Exact Test	1.072			.604
N of Valid Cases	120			

a. 1 cells (16.7%) have expected count less than 5. The minimum expected count is 3.60.

The fisher's exact test is applied to this study. The result showed that there is no statistically difference between those who examine their eye previously and those who never ($p=0.604$). However, people who never examine affected.



Surgery Phobia * Duration Cataract Cross tabulation

			Duration Cataract			Total
			1 year	2 year	3 year	
Surgery Phobia	no	Count	36	12	4	52
		% within Surgery Phobia	69.2%	23.1%	7.7%	100.0%
	yes	Count	38	22	8	68
		% within Surgery Phobia	55.9%	32.4%	11.7%	100.0%

	% within Surgery	55.9%	32.4%	11.8%	100.0%
	Phobia				
	Count	74	34	12	120
Total	% within Surgery	61.7%	28.3%	10.0%	100.0%
	Phobia				

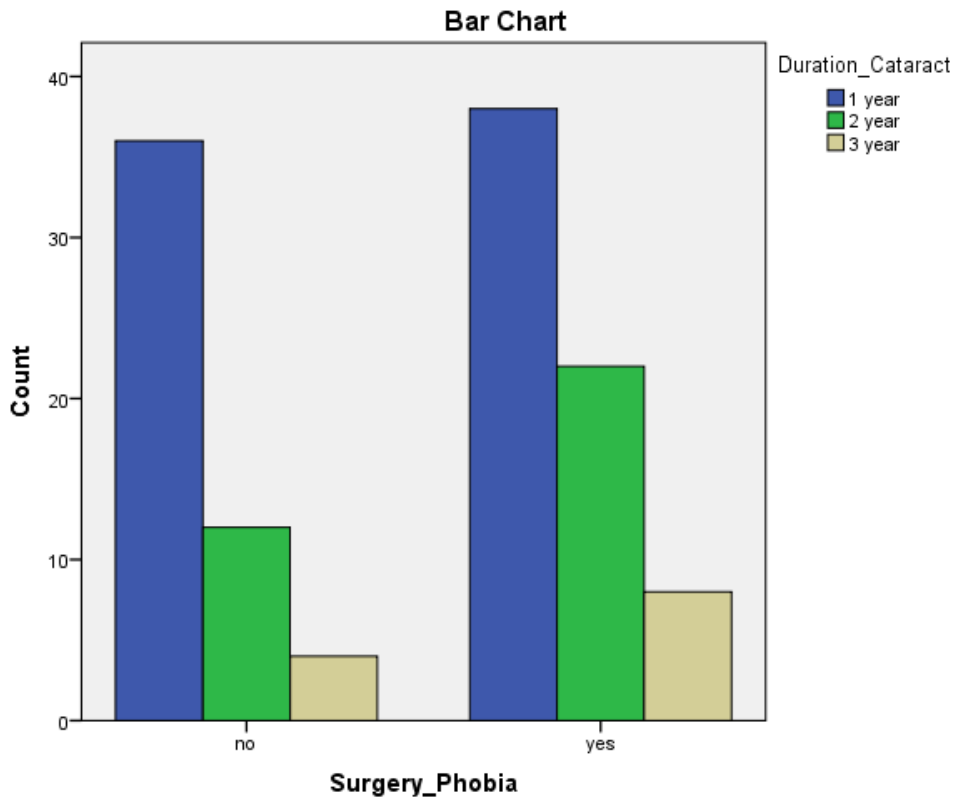
The duration of cataract is compared between those with surgery phobia and those who don't. Most people with surgery phobia affected more as compared to those who don't have issue with surgery, 38/74 for 1 year, 22/34 for 2 year and 8/12 for 3 year affected by cataract.

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)
Pearson Chi-Square	2.235 ^a	2	.327	.339
Likelihood Ratio	2.259	2	.323	.353
Fisher's Exact Test	2.171			.339
N of Valid Cases	120			

a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 5.20.

The fisher's exact test is applied to this study. The result showed that there is no statistically difference between those who have surgery phobia and those who don't (p=0.339). However, people with surgery phobia affected more.



The visual acuity was compared across the duration of cataract. The independent sample kruskalWallis test will be applied. The result showed that there is no statistically significant difference between them ($p=0.093$).

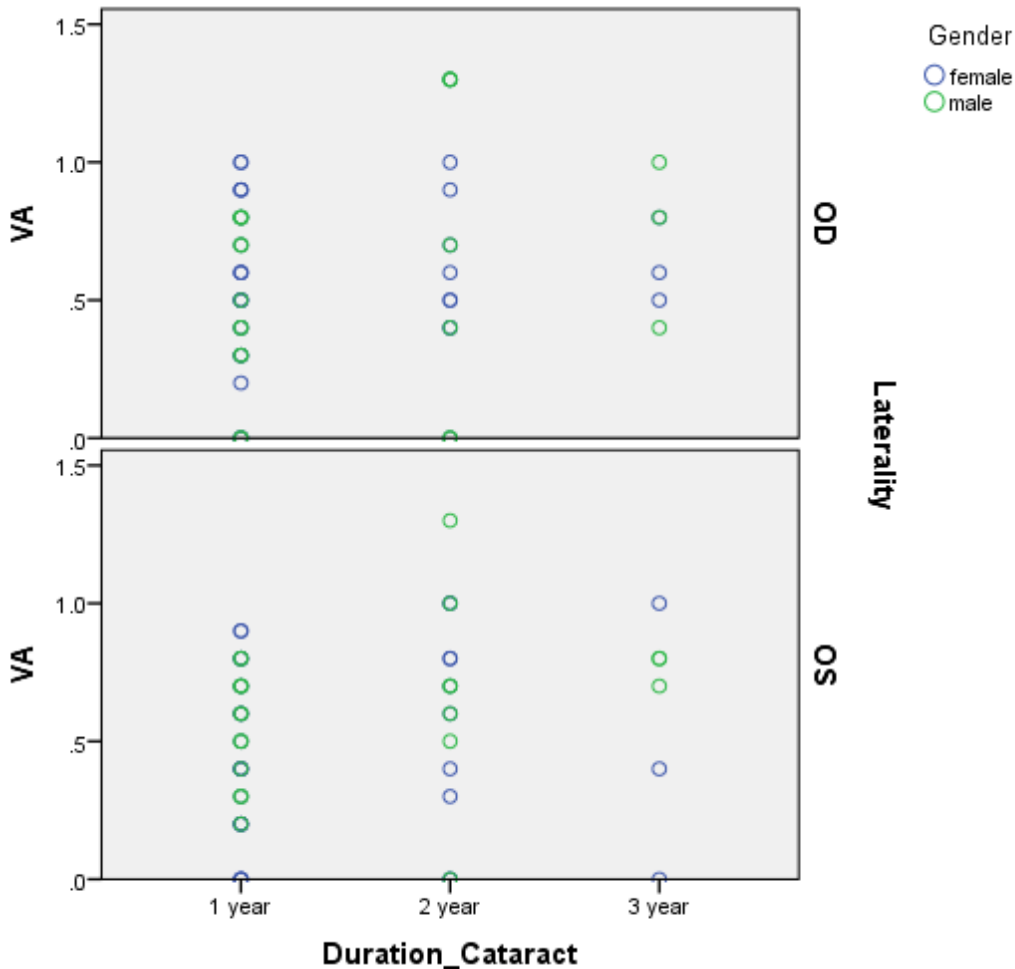
Descriptive Statistics

Duration Cataract		N	Minimum	Maximum	Mean		Std. Deviation
		Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic
1 year	VA	74	.0	1.0	.499	.0330	.2840
	Valid N (list wise)	74					
2 year	VA	34	.0	1.3	.638	.0713	.4156

	Valid N (list wise)	34					
	VA	12	.0	1.0	.650	.0830	.2876
3 year	Valid N (list wise)	12					

The mean value visual acuity is 0.499 ± 0.284 (SE. 0.033), 0.638 ± 0.4156 (SE. 0.0713) and 0.65 ± 0.2876 (SE. 0.083) for cataract duration of 1 year, 2 year and 3 year, respectively. However, the visual acuity increases as the duration of glaucoma increase.

Graphical Presentation of Table 6:



Discussion

In this research 60 (30 male and 30 female) cataract patients were examined and their history recorded. The parameters compared were their profession, habitat and education level. The literacy is compared across the duration of cataract. The majority of people with school level education have experienced cataract. It may be due to lack of awareness. 30/74 people with 1 year cataract have experienced decrease vision for 1 year. And 6/12 for 3 years. The Fisher's exact test is applied to this study. The result showed that there is no statistically significant difference between literacy ($p=0.403$). However, people with school level education recorded more affected as compared to others. The profession is compared across the duration of cataract. The majority of people of housewife and laboring profession have experienced cataract. It may be due to lack of awareness and clean environment. 40/74 & 12/74

people of housewife and laboring, respectively, experiencing cataract for 1 year. And 6/12 for 3 years of people related to laboring. The fisher's exact test is applied to this study. The result showed that there is marked difference between profession and duration of cataract ($p=0.012$). However, people with laboring and housewife, recorded more affected as compared to other. The Habitat is compared across the duration of cataract. The majority of people living in rural areas affected more, 58/74 for 1 year, 26/34 for 2 year, 10/ 12 for 3 year. The fisher's exact test is applied to this study. The result showed that there is no statistically difference between Habitat and duration of cataract ($p=0.947$). However, people living in rural areas affected more. Duration of cataract is compared with the pervious examination history. Majority of people who never examine their eyes affected more, 50/74 for 1 year, 24/34 for 2 year and 10/12 for 3 year. The fisher's exact test is applied to this study. The result showed that there is no statistically difference between thosewho examine their eye previously and those who never ($p=0.604$). However, people who never examine affected more. The duration of cataract is compared between those with surgery phobia and those who don't. Most people with surgery phobia affected more as compared to those who don't have issue with surgery, 38/74 for 1 year, 22/34 for 2 year and 8/12 for 3 year affected by cataract. The fisher's exact test is applied to this study. The result showed that there is no statistically difference between those who have surgery phobia and those who don't ($p=0.339$). However, people with surgery phobia affected more.

Conclusion

As per my observation it is concluded that the people living in rural area, have education level of school or less, doing housework and not doing appropriate things of cleanliness and those who are surgery phobic affected more. The majority of people with school level education have experience cataract. It may be due to lack of awareness. 30/74 people with 1 year cataract have experiencing decrease vision for 1 year. And 6/12 fat 3 years ($p=0.403$). 40/74 & 12/74 people of housewife and laboring, respectively, experiencing cataract for 1 year. And 6/12 for 3 years of people related to laboring ($p=0.012$). The majority of people living in rural areas affected more, 58/74 for 1 year, 26/34 for 2 year, 10/ 12 for 3 year ($p=0.947$). Most people with surgery phobia affected more as compared to those who don't have issue with surgery, 38/74 for 1 year, 22/34 for 2 year and 8/12 for 3 year affected by cataract ($p=0.339$).

Recommendation

My study found that the majority of people with school level education, living in rural areas, never examine their eye due to surgery phobia and doing housework or laboring have experience. It is recommended to create awareness in the society and provide them basic facilities to control cataract and other major causes of blindness.

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pro forma

Barriers in eye care services for cataract patients in Azad Jammu and Kashmir.

College of ophthalmology and Allied Vision Sciences

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PATIENT PROFILE Case no: _____

Patient Name: _____

Age/Gender: _____ Father/Husband Name _____

Address: _____

Visual Acuity RIGHT _____ LEFT _____

	OD	OS
--	----	----

visual functions

auto-refraction		
subjective refraction		

Literacy		
education	Yes	No
School level		
College level		
University Level		



Profession		
	Yes	No
Teacher		
Engnr/Dr		
Labour		
Others		

Habitat		
	Yes	No
urban		
rural		



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