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Assessment of Knowledge and Attitude about Cataract in Patients Undergoing Cataract Surgery

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ABSTRACT

More than 90% of disability-adjusted life years developing countries are caused by cataract. The lack of knowledge about the disease and its treatment remains a major obstacle in reducing blindness due to cataracts in developing countries, particularly in rural areas. Nonreliability over quality of available services, problem of transportation and worries over cost of surgery were the four main barriers. To assess the knowledge and attitudes regarding cataract and its surgery. Cross-sectional study was carried out in the Ophthalmology OPD of NKPSIMS and LMH, Nagpur after obtaining approval from the Institutional Ethics committee. This study was conducted on138 patient of cataract 60 years and above over 3 months. Patients were interviewed in Ophthalmology OPD using a structured questionnaire. Questions were asked in their local language and the responses were collected in a google form. The questionnaire contains questions related to knowledge as well as attitude. Firstly, the questions are separated and then are converted into codes. i.e., "0" and "1" where 0 represents the Incorrect answer whereas "1" represents the correct answer. Regarding knowledge, out of 138 participants, 97 (70.3%) were aware of cataract. More than half of the 73 (52.9%) participants reported that increasing age was the likely reason for their cataract, while 11 (8%) participants reported malnutrition as a potent cause, another 20 (14.5%) participants reported outdoor/physical activity as the reason, there also were 34 (24.6%) such participants who did not know the reason for their acquisition of cataract. This study showed that the overall attitude of the participants towards cataract was 44.90%. Majority of the participants had moderate knowledge about cataract but negative attitude towards its treatment. In the public's perception, cataract surgery and its procedures are often misunderstood. So, it is recommended to apply efforts on creating awareness about disease, its cause and treatment. It can be done by doing mass campaigns, mass media, social media awareness, community sensitization and mobilization.

OPEN ACCESS

Key Words
Knowledge, attitude, cataract

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INTRODUCTION

Globally, about 38 million people are blind[1]. More than 90% of disability-adjusted life years developing countries are caused by cataract ,which contribute to blindness and visual impairment[2].

A cataract is a cloudiness of lens within the eye, resulting in decrease in vision[3]. There are many causes of cataracts, including ageing, hereditary factors, trauma, metabolic disorders and nutritional deficiencies. Symptoms may include faded colours ,blurry vision ,trouble with bright lights ,trouble seeing at night-time and haloes around light[4]. There is a consequential effect of cataracts on individuals, families, communities and the nation as a whole in terms of visual disability. As a result, it reduces quality of life, independence and economic and social interaction. There is huge economic impact on developing countries due to cataract, including loss of job and additional care giving expenses[5].

Lack of knowledge, nonreliability over quality of available services, problem of transportation and worries over cost of surgery were the four barriers proposed by Yorstan[6]. The lack of knowledge about the disease and its treatment remains a major obstacle in reducing blindness due to cataracts in developing countries, particularly in rural areas.

Therefore, the present study was conducted to assess the knowledge and attitudes regarding cataract and its surgery.

MATERIALS AND METHODS

Study design: Cross-sectional study which was carried out in the Ophthalmology OPD of NKPSIMS and LMH, Nagpur after obtaining approval from the Institutional Ethics committee.

Inclusion criteria:

- Patients with cataract 60 years and above

Exclusion criteria:

- Patients with diseases other than cataracts, such as glaucoma, uveitis and retinal diseases
- Patients who did not provide consent for the study

Study duration: 3 months Considering the Prevalence(P) 90% and confidence level (CL) 95% the sample size calculated was 138[7].

Sampling technique: Convenient sampling, consecutives patients were taken.

Procedure: Patients were interviewed in Ophthalmology OPD using a structured questionnaire. Questions were asked in their local language and the responses were collected in a google form.

Data collection: After interviewing patients the data was collected and entered into MS Excel and Statistical analysis was done using IBM SPSS 2020 software.

The questionnaire contains questions related to knowledge as well as attitude. Firstly, the questions are separated and then are converted into codes. i.e., "0" and "1" where 0 represents the Incorrect answer whereas "1" represents the correct answer. All the questions related to knowledge are combined to get the descriptive statistics such as mean (5.24), standard deviation (1.703) and range (0-8). After that, the complete coded data for all respondents are divided into three levels. Viz; "Inadequate" for range 0-2, "Moderate" for range 2-5 and "Adequate" for range, "5-8".

Similarly, the questions related to Attitude are combined to get the descriptive statistics such as mean (5.22), standard deviation (1.709) and range (0-8). After that, the complete coded data for all respondents are divided into two levels. viz; "Negative attitude" for range 0-4 and "Positive attitude" for range 4-8.

RESULTS

Based on the knowledge of the patients: Of the 138 participants, 97 (70.3%) were aware of cataract. More than half of the 73 (52.9%) participants reported that increasing age was the likely reason for their cataract, while 11 (8%) participants reported malnutrition as a potent cause, another 20 (14.5%) participants reported outdoor/physical activity as the reason, there also were 34 (24.6%) such participants who did not know the reason for their acquisition of cataract (Table 1).

Moreover, 114 (82.6%) participants agreed that cataract was treatable. 63 (45.7%) participants answered that lens was removed as a part of cataract surgery treatment.

Meanwhile, more than half of the 85 (61.6%) participants agreed to the requirement of spectacles after cataract surgery. After being asked if a cataract will reoccur after its surgery, a majority 70 (50.7%) of participants denied.

Additionally, when asked if cataract could eventually lead to blindness of their eyes, more than half 90 (65.2%) of participants agreed. A large proportion 60 (43.5%) of participants stated the use of protective measures as a post-surgery modification in their routine activities, 42 (30.4%) participants mentioned diet-related changes, while 36 (26.1%) participants said they would limit their outdoor work (Table 2).

More than three-quarters 108 (78.3%) of participants stated surgery to be the rightful treatment for cataract. 96 (69.6%) participants believed that cataract surgery was affordable, while others did not. Almost all participants, 119 (86.2%) said that cataract

Table 1: Summary of the response to the Knowledge based questionnaire

	Summary of the response to the Knowledge based questionnaire		
Questionnaire/response	Frequency	Percentage	Confidence interval (%)
Do you know what is cataract?			
No	41	29.7	[22.5,37.7]
Yes	97	70.3	[62.3,77.5]
Are cataract caused by anything in particular?			
Age related	73	52.9	[4.3,43.5]
I have no idea	34	24.6	[18.1,31.9]
Malnutrition	11	8	[3.6,13]
Outdoor/physical activity	20	14.5	[8.7,21]
Do you think cataract is treatable?			
No	24	17.4	[10.9,23.9]
Yes	114	82.6	[76.1,89.1]
How is cataract operated in hospital?			
Eye is removed	16	11.6	[6.5,16.7]
I don't know	48	34.8	[26.8,42.8]
Lens is removed	63	45.7	[37.7,53.6]
Other	11	8.0	[3.6,12.3]
Would you require to use spectacles after cataract surgery			
I don't know	26	18.8	[12.3,25.4]
No	27	19.6	[13.0,26.1]
Yes	85	61.6	[53.6,70.3]
Do you think cataract will reoccur after surgery			
No	70	50.7	[42.8,58.7]
Yes	68	49.3	[41.3,57.2]
Do you think cataract can lead to blindness?			
No	48	34.8	[26.8,42.8]
Yes	90	65.2	[57.2,73.2]
What modification would you like to make in your day to day routine after cataract surgery?			
Diet related	42	30.4	[22.5,39.1]
Limit outdoor work	36	26.1	[18.8,34.1]
Protective measures	60	43.5	[35.5,51.4]

Table 2: Summary of the response to the Attitude based questionnaire

	Summary of the response to the Attitude based questionnaire		
Questionnaire/response	Frequency	Percentage	Confidence Interval (%)
What do you think is the treatment of cataract?			
Medical	24	17.4	[11.6,23.9]
Spiritual	6	4.3	[1.4,8.0]
Surgery	108	78.3	[71.7,84.8]
Do you think cataract is treatable without surgery?			
No	82	59.4	[51.4,68.1]
Yes	56	40.6	[31.9,48.6]
Do you think cataract surgery is affordable?			
No	42	30.4	[22.5,38.4]
Yes	96	69.6	[61.6,77.5]
Do you think cataract surgery is safe?			
No	19	13.8	[8,19.6]
Yes	119	86.2	[80.4,92]
In which season would you like to get Operated?			
Any season	72	52.2	[43.5, 60.1]
Rainy	22	15.9	[10.1,22.5]
Summer	13	9.4	[5.1,14.5]
Winter	31	22.5	[15.2, 29.7]
How long does it take to recover from cataract surgery?			
1 month	81	58.7	[50.0,66.7]
4-6 month	38	27.5	[20.3,35.5]
6-12 month	14	10.1	[5.8,15.2]
1-2 years	5	3.6	[0.7,7.2]
After cataract surgery, how long does one need to follow restrictions?			
1 month	67	48.6	[39.9,56.5]
3 months	46	33.3	[25.4,42]
6 months	15	10.9	[5.8,16.7]
1 year	10	7.2	[2.9,11.6]
Do you think a healthy diet can reduce the risk of cataract			
No	40	29.0	[21.7,37]
Yes	98	71.0	[63.0,78.3]

surgery would be safe for them. The majority of 72 (52.2%) participants said they were willing to undergo cataract surgery in any season.

More than half i.e., 81 (58.7%) participants stated that one month was the post cataract surgery recovery period. About the restrictions to be followed after cataract surgery, 67 (48.6%) participants said until 1 month, which goes to 3 and 6 months for 46 (33.3%) and 15 (10.9%) of participants; only a handful 10 (7.2%) like it to be followed till 1 whole year.

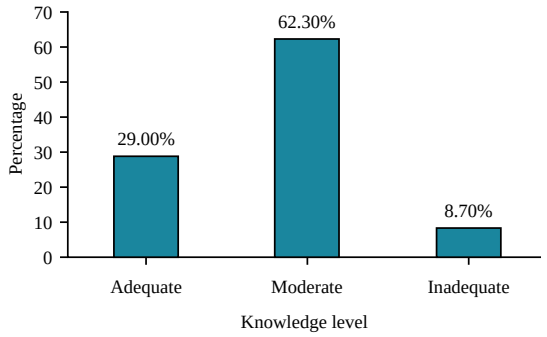

Fig. 1: Knowledge of patients

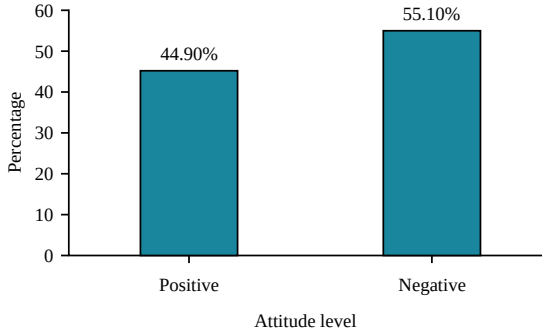

Fig. 2: Attitude of patients towards cataract treatment

Table 3: Correlation between knowledge and attitude

Correlations	Knowledge	Attitude
Knowledge		
Pearson correlation (r)	1	0.333
p-value		0.001
Attitude		
Pearson correlation (r)	0.333	1
p-value	0.001	

p<0.005: Highly significant

A vast majority 98 (71.0% of participants emphasized a healthy diet in order to reduce the risk of cataract in the future.

The frequencies and percentage of knowledge are calculated and it is found that 29% of respondents have adequate knowledge, 62.3% moderate and 8.7% have inadequate knowledge respectively. Similarly, the frequencies and percentage for attitude level are calculated, it is found that 44.90% of respondents have positive attitude towards cataract (Fig. 1 and 2).

Here, the correlation between knowledge level and attitude level is 0.333 (p<0.001). Therefore they are positively correlated and their correlation is highly significant. So, we can conclude that as the knowledge level increases the attitude level also increases (Table 3).

DISCUSSIONS

It is possible to lose your vision permanently after the age of 60 due to a number of eye diseases. Cataracts is one of the most common diseases among the elderly and they pose a significant burden to their lives. In addition to its physical consequences, cataract has psychosocial and economic effects as well. It is more likely that you will be able to retain your vision if you detect and treat these problems early[8,9].

Regarding knowledge: This study showed that 70.3% participants were aware about cataract. The findings are lower than the studies done in North Karnataka (94.33), Haryana (90.1%) where literacy rate is around 55% and Pakistan (75.2%)[7,9,10]. But the findings are higher than studies done in Sourthern Ethiopia (54.9%) and Northwest Ethiopia[11,12].

More than half of the 73 (52.9%) participants reported that increasing age was the likely reason for their cataract, there also were 34 (24.6%) such participants who did not know the reason for their acquisition of cataract. Similar studies done among senile cataract patients attending camps in North Karnataka 72.3% cases did not know the reason for it[7]. Moreover, 82.6% participants agreed that cataract was treatable which is quite lower than studies done by Radhika *et al.*[7] 65.2% of participants agreed that cataract could eventually lead to blindness of their eyes whereas in Jinnah hospital Lahore it 91.5% agreed to it[10].

A large proportion 60 (43.5%) of participants stated the use of protective measures as a post-surgery modification in their routine activities, 42 (30.4%) participants mentioned diet-related changes, while 36 (26.1%) participants said they would limit their outdoor work similar to findings of Bhagde *et al.*[13].

In our studies correlation between the level of knowledge of cataract and attitude towards its treatment is highly significant with a p value of 0.01. This is similar to study done in PHC hospital of Surabaya[14].

Regarding attitude: This study showed that the overall attitude of the participants towards cataract was 44.90% which is higher than studies done by Samuel *et al.*[11] in Arba Minch town and Fikre *et al.*[15] in Yirgalem town.

Regarding treatment 108 (78.3%) of participants stated surgery to be the rightful treatment for cataract which is found lower than studies done by Radhika *et al.*[7] but higher than that of Bhagwan and Rastogi[9]. 96(69.6%) participants believed that cataract surgery was affordable, while others did not.

72 (52.2%) participants said they were willing to undergo cataract surgery in any season which is contradictory to study done at Barsana eye camp where majority of participants said they would like to get operated in winter[13].

LIMITATIONS

This study is limited by the fact that it was conducted in one single hospital, cross sectional in the design which did not establish a temporal relationship between cause and effect.

CONCLUSION

Majority of the participants had moderate knowledge about cataract but negative attitude towards its treatment. In the public's perception, cataract surgery and its procedures are often misunderstood. So, it is recommended to apply efforts on creating awareness about disease, its cause and treatment. It can be done by doing mass campaigns, mass media, social media awareness, community sensitization and mobilization.

Implications: To bring about awareness about cataract which is a reversible cause of blindness so that blindness could be prevented and vision could be regained. To know about misconceptions and myths about cataract.

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