

KNOWLEDGE, ATTITUDE AND PRACTICE ON CATARACT AMONG ELDERLY PATIENTS AND ITS ASSOCIATED FACTORS IN MANIPUR, NORTH-EAST INDIA: A CROSS-SECTIONAL STUDY

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Received : 16/05/2026
Received in revised form : 28/06/2026
Accepted : 12/07/2026

Keywords:

Barriers in healthcare seeking, Cataract, Elderly, KAP, Socio-demographic variables.

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DOI: 10.47009/jamp.2026.8.4.285

Source of Support: Nil,
Conflict of Interest: None declared

Int J Acad Med Pharm
2026; 8 (4); 1683-1687



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ABSTRACT

Background: Cataract is the major cause for visual impairment among individuals of developing and poor countries. It is the most common cause of avoidable blindness. As per National Programme for Control of Blindness and Visual Impairment, cataract is the primary cause of blindness in India, with estimates showing that around 62.6% of blindness in the country is attributed to cataracts, representing a significant portion of the global burden of cataract blindness; this translates to a large number of people suffering from cataract-related blindness due to India's large population. It is a condition which can be easily treated by surgery in the most basic eye operation theatre. However, due to difficulty in accessibility, or misconceptions regarding cataract surgery, a major portion of the cataract patients remain untreated. This study has been aimed to detect the problems which prevent people with cataract from getting the required treatment. The objective is to assess the knowledge, attitude and practice of regarding cataract among elderly patients, to determine its association with important socio-demographic variables and to explore barriers in healthcare seeking regarding cataract. **Materials and Methods:** A cross-sectional observational study was done among patients aged 40 years or more visiting District Hospital, Thoubal. Data on their knowledge, attitude and practices were collected by using a semi-open interview schedule. **Results:** Data were collected from 302 eligible study-participants. A majority of them (269; 90%) had moderate to high knowledge on cataract while the remaining 11.0% had low knowledge. More than half of the (164; 54.3) had neutral attitude on cataract while the remaining 45.7% had positive attitude. Nearly half of them (143; 47.4%) had moderate practice level whereas, 123 (40.7%) had poor practice regarding cataract. Age was the only factor significantly associated with knowledge level on cataract ($p=0.002$). People from APL group had better attitude towards cataract compared to other SES groups ($p=0.015$). No statistically significant association could be found between practice level and education. The important barriers in healthcare seeking for cataract, were non-affordability for surgery (47%), preferring traditional medicine over surgery (45%), unaware of governmental eyecare programs (60%), preferring non-surgical options over surgery (65%) and had never gone for screening by half of them. **Conclusion:** The study found that, most of the respondents had moderate to high knowledge of cataracts. Age, education, and yearly income showed statistically significant correlations with knowledge level, indicating that younger individuals, those with higher educational qualifications, and those in higher income brackets had higher knowledge levels. The data indicated a generally favourable attitude towards cataract.

INTRODUCTION

Globally, there are an estimated 2.2 billion people with near or distance visual impairment or blindness, of which nearly half is avoidable.^[1] Cataract is defined by WHO as the opacification or cloudiness of the crystalline lens. It is one of the leading causes of blindness worldwide, causing 94 million people to have preventable moderate or severe distance vision impairment or blindness.^[2] Cataract is responsible for 15.2 million (45%) people suffering from blindness and another 78.8 million (39%) with moderate to severe visual impairment (MSVI) among people aged 50 years and above. The impact is even higher (63.1% of blindness, 41.3% of MSVI) in Southeast Asia region.^[2] In India, cataract remains the most common cause of blindness and MSVI contributing 66.2% and 48.0%.^[3] Age-related cataract can impede the capacity of older persons to lead an independent life, consequently severely altering their lifestyle. A relationship exists between the loss of vision and loss of overall function. The majority of people over the age of 65 who are at high risk of developing dementia suffer from cataracts. In terms of the link between cataract removal and cognitive decline or dementia, however, there are inconsistent data. Knowledge of cataract, its causes, treatment and outcome of treatment affect management of this enormous global burden of blindness. Attitude is a relatively persistent structure of beliefs, attitudes, and behavioural tendencies towards socially relevant things, people, events or symbols which also strongly impacts the patient's outlook and desire to get treated. Insufficient knowledge (about the risk factors, nature of the disease, and treatment alternatives) was shown by several studies to be a major factor in patients delaying prompt treatment. Other factors included poor financial standing, immobility, incorrect perception, residual vision, and erroneous perception.

Therefore, despite significant advancements in surgical methods, such as small-incision cataract surgery (SICS) and ultrasonic-phacoemulsification (US-PKE), the burden of cataract-related visual impairment persists. A higher prevalence has also been observed in rural and peripheral regions where access to quality eye care is very less. Consequently, medical service availability alone is not enough to reduce this global burden. It also depends on various factors related to individual and the community they live in, primarily knowledge, attitude, and practice (KAP).

Also, the demographic data for rural and semi-urban parts of India reveal that knowledge of Cataract and its treatment remain inadequate.^[5-8] A significant number of persons with visually significant cataract are unable to appropriately diagnose the problem or recognise surgery as the ultimate solution. These results demand the need for area-specific data to enable targeted eye health initiatives to improve

quality of life by reducing cataract-related visual impairment and blindness. Manipur, situated in North-East India, offers distinct geographic, demographic and socio-cultural features, ethnic diversity and ongoing political scenario that may affect cataract awareness and utilisation of eye care services. Within this landscape, Thoubal District, which is a densely populated area with a mix of urban and rural settlements, serves as a vital representation for studying healthcare utilization patterns. As per the National Blindness and /visual Impairment Survey, the prevalence of cataract associated Visual impairment in Thoubal District is 8.2%.^[4]

We also require area-specific information from Manipur especially regarding community awareness, attitudes, and behaviours related to cataract. Understanding the KAP of cataract in Manipur is vital to bridge the gap between treatment availability and service usage. Identifying gaps in understanding, unfavourable attitudes, and incorrect behaviours might influence locally suitable health education methods and augment current blindness control programs. Moreover, examining KAP patterns in connection to socio-demographic characteristics might assist policymakers and public health practitioners in prioritising vulnerable populations and enhancing cataract intervention efforts in the North- East Indian environment.

Aim & Objectives

The present research aimed to investigate the knowledge, attitudes and practices related to cataract among people in Manipur, providing data to support targeted health education, eye care, and help reduce avoidable blindness in the area. The objectives were made as to assess the KAP on cataract among elderly cataract patients, to determine the factors associated with it and also to explore the barriers in seeking healthcare regarding cataract treatment.

MATERIALS AND METHODS

A hospital-based cross-sectional observational study was done among elderly patients presenting to eye OPD of District Hospital, Thoubal during the period of April - October 2025. A sample size of 292 was scientifically calculated by using a 25.5% prevalence of elderly patients having cataract (Census of India grouped Demographic Report) with 95% significance level and an absolute precision of 5%. This was approximated to 302 considering probable non-response from a few study-participants. All adults aged 40 years or more, coming for the first time to the study center were recruited consecutively with the exception of those who refused to give valid informed consent.

A pre-tested semi-open interview schedule which had sections on socio-demography, domains on knowledge, attitude and practice, and probable barriers on seeking healthcare was used to collect data.

The knowledge section had a maximum score of 20. It focussed on their awareness, understanding, symptoms, cause and common age associated with cataract. A score of <10, 11-15 and ≥ 16 was classified as low, moderate and high knowledge, respectively. A Likert scale was used to assess attitude, which had a maximum score of 15. It focussed on their attitude about perceived seriousness about cataract, willingness to seek treatment, opinion on surgical treatment and affordability for it. A score of ≤ 7 , 8-11 and ≥ 12 was grouped as negative, neutral and positive attitude, respectively. The maximum practice score was 18 with ≤ 9 , 10-13 and ≥ 14 classified as poor, moderate and good practice, respectively. This domain considered about having screened for cataract, treatment sought, awareness about existing health programs related with eye care services and preventive measures.

Collected data were entered in Ms Excel which were later transferred to SPSSv23.0 for statistical analysis. Proportions were used for descriptive analysis whereas as chi-square test was used to

determine associations between KAP and socio-demographic variables. P-value <0.05 was considered as statistically significant.

Ethical clearance of the study was obtained from the Institutional Ethics Committee of Churachandpur Medical College.

RESULTS

Completed data sets could be collected from 302 study-participants. Females outnumbered males (57:43). A majority (108; 35.76%) belonged to the age-group of 41-50 years. Nearly two-thirds (220; 72.85%) were from urban and semi-urban areas. One-third (94; 31.13%) were illiterates while another one-third (91; 30.13%) have studied up-to higher secondary. By profession, a majority (96; 31.79) were farmers. Most of them (116; 38.41%) belonged to above poverty line while another one-third (105; 34.77%) belonged to below poverty line. [Table 1]

Table 1: Socio-demographic profile of the study-participants (n=302)

Variable	Type	Frequency (%)
Residency	Semi-urban	220 (72.85%)
	Rural	82 (27.15%)
Gender	Female	171 (56.62%)
	Male	131 (43.38%)
Age in years	41-50	108 (35.76%)
	51-60	78 (25.83%)
	61-70	68 (22.52%)
	Above 71	48 (15.89%)
Education	Illiterate	94 (31.13%)
	Primary	43 (14.24%)
	Higher Secondary	91 (30.13%)
	Graduate and above	74 (24.50%)
Profession	Self Employed	110 (36.42%)
	Farmer	96 (31.79%)
	Govt. Employee	44 (14.57%)
	Business	52 (17.22%)
Annual Income	Antyodaya Anna Yojana	55 (18.21%)
	Below Poverty Line	105 (34.77%)
	Above Poverty Line	116 (38.41%)
	Higher Income group	26 (8.61%)

Table 2: KAP of the study-participants on cataract (n=302)

Domain	Frequency (%)
Knowledge	
Low	33 (11.0)
Moderate	149 (49.3)
High	120(9.7)
Attitude	
Negative	-
Neutral	164 (54.3)
Positive	138 (5.7)
Practice	
Poor	123 (40.7)
Moderate	143 (47.4)
Good	36 (11.9)

A majority of them (269; 90%) had moderate to high knowledge on cataract while the remaining 11.0% had low knowledge. More than half of the (164; 54.3) had neutral attitude on cataract while the remaining 45.7% had positive attitude. Nearly half

of them (143; 47.4%) had moderate practice whereas, 123 (40.7%) had poor practice regarding cataract. [Table 2]

A majority of the study-participants (252; 83.44%) had heard about cataract, whereas 50 (16.56%) had

not. More than half (156; 51.66%), understood that cataract causes impaired vision, only 41 (13.58%) correctly recognized cataracts as a condition in which the lens becomes opaque. A majority of the (187; 61.92%) recognized common symptoms of cataract. More than of them (172; 56.95%) recognized ageing as the culprit. Long-term drug-use (24; 7.95%), diabetes (15; 4.97%), sun exposure (13; 4.30%), and eye damage (6; 1.99%) were among the other identified risk. The study suggests that participants typically relate cataracts to ageing. Nearly half of the (145; 48.01%) believed that cataract develops above 60 years and another 103 (34.11%) believed 51–60 years. Two-thirds (232; 77.33%) of respondents opined that cataract is a serious eye ailment which require treatment. The idea that untreated cataracts may result in lifelong blindness was in 79.8% (241). Regarding Attitude, 60.93% (184) responded they would seek treatment if they had cataract, while 36.42% (110) felt they were likely to do so. Only 08 (2.65%) of respondents stated they would not seek management. While 42.05% (127) were neutral, 46.69% (141), reported having a positive perspective regarding surgery. A small proportion of them (34; 11.26%), had a negative opinion of surgery, which may imply anxiety, scepticism, or fear of complications. Lastly, cost perceptions revealed a large potential obstacle. Cataract surgery was judged certainly cheap by just 40.07% (121), somewhat affordable by 42.72% (129), and not inexpensive by 17.22% (52).

While examining the practices related to cataract among the responses, nearly half of the respondents (150, 49.67%) indicated that they had never been examined for cataract. 65 (21.52%) had been tested within the past year, 46 (15.23%) within 1–3 years, and 33 (10.93%) between 3–5 years, while only 08 (2.65%), reported screening more than five years earlier. Overall, this means a major portion remains unreached by routine screening, which could delay diagnosis and treatment.

Regarding perceived treatment alternatives, 167 (55.30%) participants responded surgery as the treatment for cataract while, 132 (43.71%) believed that cataract could be treated with medical therapies such as eye drops or vitamin supplements. Only 03 (0.99%) identified traditional or home remedies as the management. 138 (45.70%) did not believe in conventional or alternative management, while 112 (37.09%) absolutely believed in such strategies.

Based on their response, 188 (62.25%) respondents reported no awareness of eye health programs, while only 73 (24.17%) were highly acquainted. Another 41(13.58%) respondents were uncertain ("likely") about such programs.

Finally, 180 (59.60%) participants reported no specific preventive techniques, 84 (28.48%) respondents reported maintaining a balanced diet, while 30 (9.93%) acknowledged wearing sunglasses to protect against sunlight and only 06 (1.99%) highlighted avoiding smoking.

Table 3: Association between knowledge and socio-demographic variables (n=302)

Variables	Knowledge level			P value
	Low (%)	Moderate (%)	High (%)	
Age (in years)				0.002
41-50	7 (21.2)	59 (39.6)	42 (35.0)	
51-60	5 (15.2)	31 (20.8)	78 (25.8)	
61-70	10 (30.3)	39 (26.2)	68 (22.5)	
>70	11 (33.3)	20 (13.4)	48 (15.9)	
Education				0.206
Illiterate	20 (60.6)	48 (32.2)	26 (21.7)	
Primary	7 (21.2)	16 (10.7)	20 (16.7)	
Higher Secondary	4 (12.1)	47 (31.5)	40 (33.3)	
Graduate & above	2 (6.1)	38 (25.5)	34 (28.3)	
Socio-economic status				0.210
AAY	13 (39.4)	19 (12.8)	23 (19.2)	
BPL	16 (48.5)	63 (42.3)	26 (21.7)	
APL	2 (6.1)	57 (38.3)	57 (47.5)	
Higher income grp	2 (6.1)	10 (6.7)	14 (11.7)	

Age was the only factor significantly associated with knowledge level on cataract ($p=0.002$). The younger the age, the better knowledge. Education and socio-economic status were not to be significantly associated with the knowledge level. [Table 3]

[Table 4] shows the association between (i) attitude and socio-economic status (SES) and (ii) practice with education. People from APL group had better attitude towards cataract compared to other SES groups ($p=0.015$). No statistically significant association could be found between practice level and education.

Table 4: Association between (i) Attitude & SES and (ii) Practice & Education

Variables	Attitude level			P value
	Negative (%)	Neutral (%)	Positive (%)	
SES				0.015
AAY	-	20 (12.2)	35 (25.4)	
BPL	-	63 (38.4)	42 (30.4)	

APL	-	69 (42.1)	47 (34.1)	
Higher income grp	-	12 (7.3)	14 (10.1)	
	Practice level			
	Poor (%)	Moderate (%)	Good (%)	
Education				0.121
Illiterate	49 (39.8)	29 (20.3)	16 (44.4)	
Primary	20 (16.3)	20 (14.0)	2 (8.3)	
Higher Secondary	33 (26.8)	46 (32.2)	12 (33.3)	
Graduate & above	21 (17.1)	48 (33.6)	5 (13.9)	

The important barriers in healthcare seeking for cataract, were non-affordability for surgery (47%), preferring traditional medicine over surgery (45%), unaware of governmental eyecare programs (60%), preferring non-surgical options over surgery (65%) and had never gone for screening by half of them.

DISCUSSION

Our study shows that, 83.44% are aware of cataract compared to 90.08% reported by Bhagwan J et al, 54.9% reported by Samuel et al and 56% by Ahmad et al.^[7, 9,10] While Sumavani et al reported that, only 11% were aware about cataract^[5], according to our study, 56.95% believed ageing is a causative factor which is comparable to other studies like 47.8% by Sanwar Hossain et al, 63.5% by Ahmad et al and 57.58% cases by J. Bhagwan et al.^[7,8,10] Sumavani et al reported 81.7% were not aware of the etiology of cataract.^[5]

Our study showed 46.69% of the participants had positive attitude to seek treatment while Samuel et al reported 37.9%, 57.1% by J Bhagwan et al and only 5% by Sumavani et al.^[5,7,9] Regarding practices, 50.33% had got themselves screened for cataract in the last 1-5 years while the rest never had a comprehensive eye examination. More than half of the study-participants (55.29%) of our study participants would choose cataract surgery for treatment compared findings made by Bhagwan J et al (65.64%) and Ahmad et al which shows a little higher percentage of 60.5%.^[7,10]

CONCLUSION

The study found that, the most respondents had moderate to high knowledge of cataracts with a generally positive attitude towards cataract. However, these findings demonstrate a conspicuous knowledge-practice gap, where awareness and willingness to seek care may not necessarily translate into fast screening or effective treatment. Sociodemographic factors, such as age, education, place of residence, and financial status, significantly influence knowledge, attitudes, behaviours, and access to cataract care. Cataract blindness in Manipur is still mostly avoidable but inadequately treated, as shown by the prevalence of

misconceptions, low use of eye care facilities, and low knowledge of government initiatives. Without focused efforts to increase health education, improving the affordability and accessibility of services, especially for older, rural, and economically disadvantaged people, reducing preventable blindness and improving visual health outcomes may not be fully achieved.

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