



(REVIEW ARTICLE)



FACTORS INFLUENCING CATARACT SURGERY UPTAKE AMONG ADULTS IN RURAL SETTINGS: A SYSTEMATIC REVIEW

Wangulu Kassaman Daniel ^{1,*}, Marera Domnic ² and Cynthia Oloo ³

¹ Student, Kaimosi Friends University, Vihiga.

² Professor, Maseno University, Kisumu.

³ Founder-Right to Sight Specialist and Rehabilitation Center limited, Homabay.

* Corresponding Author

World Journal of Advanced Research and Reviews, 2026, 31(03), 1672–1680

Publication history: Received on 15 August 2026; revised on 20 September 2026; accepted on 22 September 2026

Article DOI: <https://doi.org/10.30574/wjarr.2026.31.3.2465>

Copyright © 2026 Author(s) retain the copyright of this article. This article is published under the terms of the Creative Commons Attribution License 4.0

ABSTRACT

Leading cause of avoidable blindness worldwide is cataract and strangely affects adults living in rural and underserved areas. Despite surgery for cataract being the safest and most affordable medical interventions, the uptake of surgery among diagnosed patients in rural communities remains low. The study meant to identify, analyze and synthesize evidences on the factors affecting uptake of cataract surgery among adult patients in rural areas. The review was anchored on the Socio-Ecological Model (SEM), which explains health-seeking behaviors as a result of interactions among individual, interpersonal, community, organizational and broader structural factors. The framework guided the synthesis of factors influencing cataract surgery uptake, including patients' knowledge and perceptions, family and social support, cultural beliefs, socioeconomic circumstances, geographical accessibility, transportation, availability and quality of eye-care services and health-system factors. A systematic search of published literature conducted using electronic databases including; PubMed, Scopus, Google Scholar and Web of Science for studies published the year 2007 to 2026. The review included quantitative, qualitative, and mixed-method studies that investigated determinants, barriers and facilitators of cataract surgery uptake among adults in rural populations. Relevant studies were screened based on predefined inclusion and exclusion criteria. The review found that uptake of cataract surgery in rural settings is influenced by multiple related factors. Common challenges identified across studies are; financial constraints, transportation difficulties, long distance to surgical facilities, lack of awareness about cataract and its treatment, fear of surgery, poor understanding importance of surgery, gender disparities, cultural beliefs and lack of family support. Health system related barriers included shortage of trained eye care personnel, limited outreach services, long waiting times and concerns about surgical quality and outcomes. The study concludes that the uptake of cataract surgery among adults in rural settings is affected by socio-economic, cultural, demographic and health-system factors. Addressing these barriers through affordable eye care services, strengthened outreach programs, improved accessibility, health education and community engagement is essential to improve cataract surgery uptake and reduce avoidable blindness in rural populations. Further research is recommended to evaluate context-specific interventions that can enhance utilization of cataract surgical services in underserved communities.

Key words: Cataract Surgery Uptake, Barriers to Surgery, Rural Health Services and Avoidable Blindness.

1 INTRODUCTION

Surgery for cataract is one of the safest, most cost-effective and sight-restoring medical procedures (Prasad, 2026). Cataract remains leading cause of unnecessary blindness globally and continues to pose a major public health challenge, particularly in low- and middle-income countries and rural communities where access to eye care services is limited (Abdulhussein & Abdul Hussein, 2023). According to World Health Organization (WHO) (Lin et al., 2025) cataract affects more than 94 million people worldwide and accounts for a significant proportion of blindness and visual impairment among adults aged over 50 years. Approximately every two individuals who require cataract surgery globally one still lacks access to treatment (Attafuah et al., 2024). Cataract-related blindness eccentrically affects populations living in rural and underserved areas due to inadequate eye care infrastructure, shortage of trained personnel, poverty and low awareness of available service (KUMARI, 2023). Globally studies indicate that cataract contributes to nearly 45% of blindness cases (Study, 2024), with an estimated 15.2–17 million people being blind due to cataract and more than 78 million people suffering from moderate to severe visual impairment caused by cataract (Canatan, 2024). Even though cataract surgery rates have improved over the years the cases continues to rise because of population growth and increasing life expectancy (Jiang et al., 2023). Prevalence of cataract increases significantly with age ranging from approximately 3.9% among adults aged 55–64 years to over 90% among individuals aged over 80 years (Yahaya et al., 2025). In Sub-Saharan Africa, cataract remains a dominant cause of blindness (Xulu-Kasaba & Kalinda, 2022), with rural populations experiencing the greatest unmet need for cataract surgical services (Attafuah et al., 2024). In many rural settings, uptake of cataract surgery remains low even where services are available (Naidoo & Hansen, 2026). Several studies and global reports have identified numerous barriers influencing the utilization of cataract surgery, including high treatment costs, poor transportation networks, long distances to health facilities, fear of surgery, cultural beliefs, inadequate family support, gender disparities, and limited awareness about cataract treatment outcomes (Alias & Buari, 2024). WHO further reports that women and marginalized populations are disproportionately affected due to inequitable access to surgical services (Bonner et al., 2023). In addition, the shortage and unequal distribution of ophthalmologists and eye care facilities in rural regions continue to hinder timely surgical intervention (Hillier et al., 2026). Despite the availability of effective cataract treatment, many adults in rural communities continue to live with preventable blindness and visual impairment (McCormick et al., 2022). Why do patients in rural settings delay or fail to seek cataract surgery even when blindness affects their daily activities and quality of life? Therefore, this study seeks to investigate the factors influencing the uptake of cataract surgery among adult patients in rural settings.

1.1 Research Question

What factors influence the uptake of cataract surgery among adult patients in rural settings?

1.2 Research Objective

To investigate the factors influencing the uptake of cataract surgery among adult patients in rural settings.

2 THEORETICAL FOUNDATION

The decision of a rural adult patient to undergo cataract surgery is rarely a simple reaction to vision loss. Instead, it is a complex behavioral process shaped by individual perceptions, socioeconomic realities and health system structures (Bechange et al., 2022). To systematically analyze these factors, three primary public health and behavioral frameworks are utilized under Andersen's Behavioural Model of Health Services Use. This framework categorizes the factors driving or halting cataract surgery uptake into three distinct dynamics (Lyang et al., 2025). 1. Predisposing Factors: Baseline individual characteristics. These include advanced age, gender dynamics (e.g., lower autonomy for rural women), lack of formal education and cultural fatalism regarding aging and blindness, 2. Enabling Factors: The logistical and financial means available to access care. Key variables include household income, health insurance coverage, proximity to an eye care facility, available public transit and family support networks to escort the patient. 3. Need Factors: The subjective and objective severity of the health condition. This includes the patient's self-reported difficulty in performing daily chores (e.g., farming, cooking) and clinical measures of bilateral visual acuity loss. The Health Belief Model (HBM) The HBM focuses on the patient's psychological perceptions and cognitive processing of their condition: Perceived Susceptibility and Severity: Rural patients often view vision decline as an inevitable, unalterable consequence of aging, minimizing their perceived need for medical intervention. Perceived Benefits vs. Perceived Barriers: For uptake to occur, the benefit of restored sight must outweigh daunting barriers. These barriers include the fear of surgical pain, fear of permanent blindness from a botched procedure and the financial shock of out-of-pocket costs. Cues to Action; External triggers that prompt a patient to finally seek surgery, examples include a successful surgery on a neighbour, a local awareness campaign, or a free screening clinic set up by a mobile eye camp. Thaddeus and Maine's Three Delays Model Originally designed for maternal health; this model effectively maps the specific intervals where rural cataract patients fall through the cracks of the healthcare system: Delay in deciding to seek care. Driven by low health literacy, fear of the operating room, financial constraints, and a lack of household decision-making power. Delay in reaching the healthcare facility. Caused by physical isolation, poor road infrastructure,

lack of available transport, and the financial burden of traveling long distances. Delay in receiving adequate care upon arrival. Occurs at the institutional level due to a shortage of ophthalmic surgeons, lack of intraocular lenses (IOLs), long hospital waitlists or high hidden administrative fees(Diana, 2025).

3 METHODOLOGY

This systematic review will be conducted in strict accordance with the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guidelines. This ensures a transparent, rigorous and reproducible synthesis of literature regarding the factors influencing cataract surgery uptake among rural adults. It is designed to identify and synthesize evidence on factors influencing uptake of cataract surgery among adults in rural areas. Published articles were retrieved from electronic databases including; PubMed, Google Scholar, scopus and Web of Science. Data were analysed to identify common barriers. The study published in English between 2015 to 2026 was included. Review followed standardized procedures for articles identification, screening, eligibility assessment and inclusion.

3.1 Search Strategies and Selection Criteria

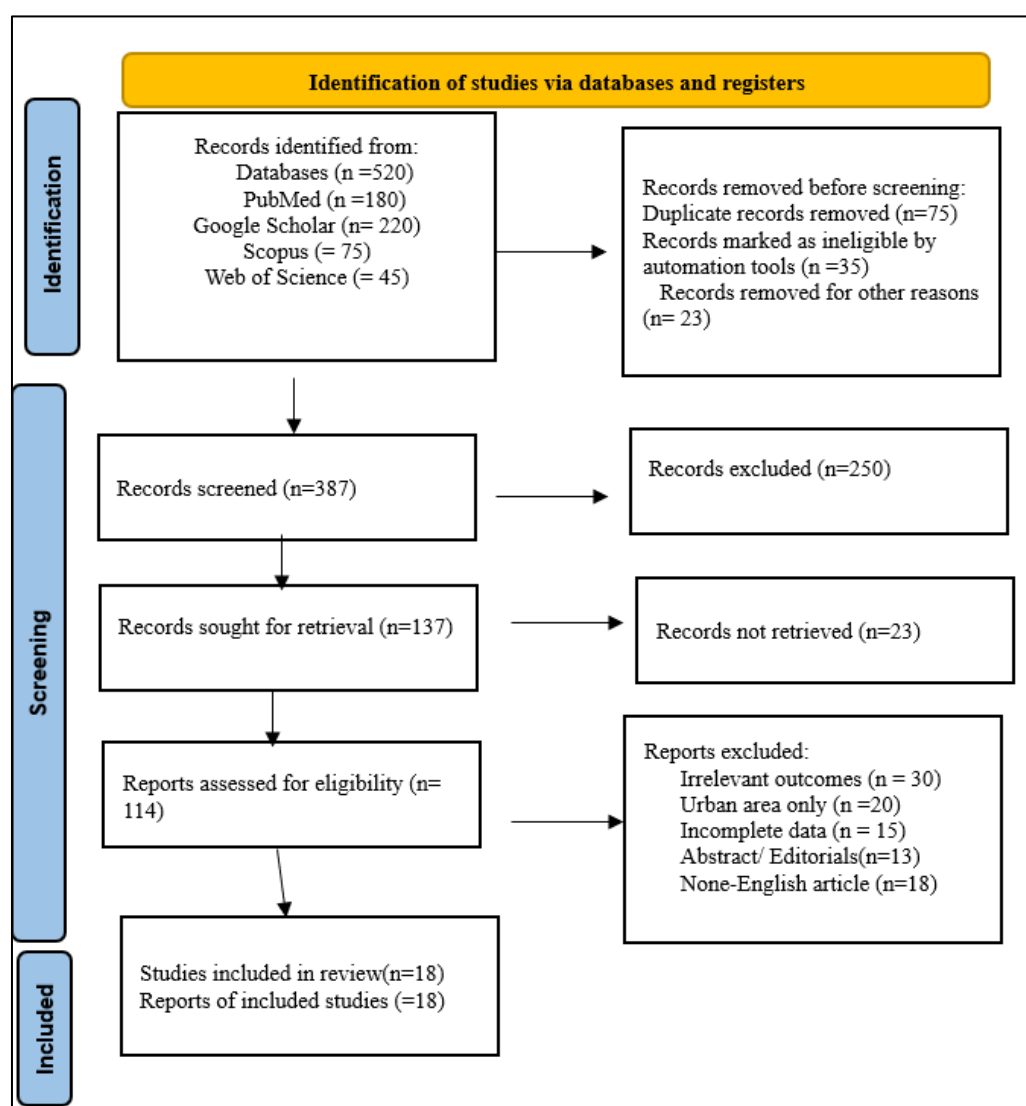


Figure 1: PRISMA Flow Diagram (PRISMA 2020)

Detailed literature search conducted using electronic databases such as PubMed, Google scholar, Scopus and Web of Science. Search terms were developed from the study objectives and combined using Boolean operators (AND/ OR). Key words included “cataract surgery” “uptake” “utilisation” “barriers” “rural population” “adult patients” and “factors influencing”. Medical Subject Heading (MeSh) and free text terms were used to improve the sensitivity of the search. Article published in English between 2015-2026 were considered. Search included focused on adults above 18 years and the article search addresses cataract surgery uptake or barriers to cataract surgical services conducted in rural settings. Quantitative, qualitative, and mixed-method studies were eligible for inclusion. Duplicate articles were

excluded, retrieved studies were screened by title, abstract and full text based on predefined inclusion and exclusion criteria following PRISMA guidelines.

3.2 Data extraction

Data extraction conducted systematically using a standardized data extraction form developed by the researcher to ensure consistency and accuracy of the collected information. Relevant data were extracted from all eligible studies after full-text review. Extracted information included author's name, year of publication, country or location of study, study design, sample size, study population, objectives of the study, and key findings related to factors influencing uptake of cataract surgery among adults in rural settings. Additional information on socioeconomic, cultural, health-system and accessibility-related barriers was also collected.

3.3 Data Analysis

Data extracted from the included studies were systematically reviewed, organized and synthesized to identify factors influencing the uptake of cataract surgery among adult patients living in rural settings. Due to anticipated differences in study designs, study populations, geographical settings, definitions of cataract surgery uptake, outcome measures and methods of reporting, a narrative synthesis approach was adopted. The extracted information was first entered into a structured data-extraction matrix. Studies were grouped according to country, study design, population characteristics, and the principal factors investigated. The findings were then compared across studies to identify recurring patterns, similarities, differences and contextual variations in factors influencing cataract surgery uptake. The identified determinants were categorized into six major thematic domains: (1) individual and patient-related factors, (2) socioeconomic factors, (3) demographic factors, (4) cultural and social factors, (5) geographical and accessibility factors and (6) health-system factors. Facilitators of cataract surgery uptake were analysed separately where they were reported.

Patient-related factors included knowledge and awareness of cataract, perceived need for surgery, severity of visual impairment, fear of surgery, misconceptions regarding surgical procedures and outcomes, previous experience with healthcare services and perceived benefits of cataract surgery. Socioeconomic factors included household income, cost of surgery, health insurance coverage, transportation expenses, loss of income and other direct and indirect costs associated with accessing surgical services. Demographic factors included age, sex, educational level, occupation and household characteristics. Cultural and social factors included traditional beliefs, religious or cultural perceptions, family influence, social support, community attitudes and reliance on alternative or traditional treatment. Geographical and accessibility factors included distance to healthcare facilities, transportation availability, road infrastructure, geographic isolation and proximity to cataract surgical services. Health-system factors included availability and distribution of trained eye-care personnel, availability of surgical facilities and equipment, referral systems, waiting times, outreach services, quality of care, counselling and perceived surgical outcomes.

For quantitative studies, reported measures of association were extracted where available including odds ratios, risk ratios, prevalence estimates, percentages, confidence intervals and p-values. These findings were compared across studies according to the direction and strength of association. Where studies reported similar outcomes and sufficiently comparable measures, quantitative findings were considered for possible statistical pooling. Where substantial heterogeneity existed, the findings were presented narratively rather than statistically combined. Qualitative findings were analysed thematically. Relevant statement's Similar themes identified across different studies were combined, while context-specific findings were retained where they provided important information regarding rural cataract surgery uptake. For mixed-method studies, quantitative and qualitative findings were considered together to provide a more comprehensive understanding of factors influencing cataract surgery uptake. Convergent findings were identified, while contradictory findings were examined in relation to differences in population, setting, methodology and healthcare context.

The frequency with which individual factors were reported across the included studies was also summarized. However, the number of studies reporting a factor was not interpreted as a measure of its causal importance because studies differed in sample size, design, measurement methods, and study context. The overall findings were subsequently organized according to the major thematic domains and presented using Prisma flow diagram. The synthesis focused on identifying the most consistently reported barriers, facilitators and interacting factors influencing cataract surgery uptake among adults in rural settings. Where appropriate, study quality and risk-of-bias assessments were considered when interpreting the strength and consistency of the evidence. Findings from studies with methodological limitations were interpreted cautiously.¹ Planned Quantitative Analysis Where sufficient quantitative homogeneity was identified, effect estimates for factors associated with cataract surgery uptake were considered for meta-analysis. Adjusted and unadjusted estimates were distinguished and preference was given to adjusted estimates where available.

Statistical heterogeneity would be assessed using the I^2 statistic and Cochran's Q test. An I^2 value of approximately 25%, 50%, and 75% would be interpreted as representing low, moderate, and high heterogeneity, respectively. Where

quantitative pooling was appropriate, a random-effects model would be preferred because differences in populations, healthcare systems and rural contexts were expected across studies. Where meta-analysis was not appropriate because of substantial clinical, methodological, or statistical heterogeneity, the results would be synthesized narratively.² Thematic Analysis; Thematic synthesis was used to identify common patterns across qualitative and quantitative evidence. The analysis followed three broad stages:

- Initial coding: Findings related to cataract surgery uptake were identified and coded.
- Development of descriptive themes: Similar codes were grouped into broader categories such as financial barriers, transportation barriers, awareness, fear, cultural beliefs, gender, and health-system accessibility.
- Development of analytical themes: Relationships between the descriptive themes were examined to explain how individual, socioeconomic, cultural, geographical, and health-system factors interact to influence uptake.

The final synthesis therefore considered cataract surgery uptake as a multidimensional outcome influenced by factors operating at the individual, household/community, and health-system levels.

4 FINDINGS

The systematic search of PubMed, Google Scholar, Scopus and Web of Science identified 520 records. PubMed contributed 180 records, Google Scholar 220, Scopus 75 and Web Scienc

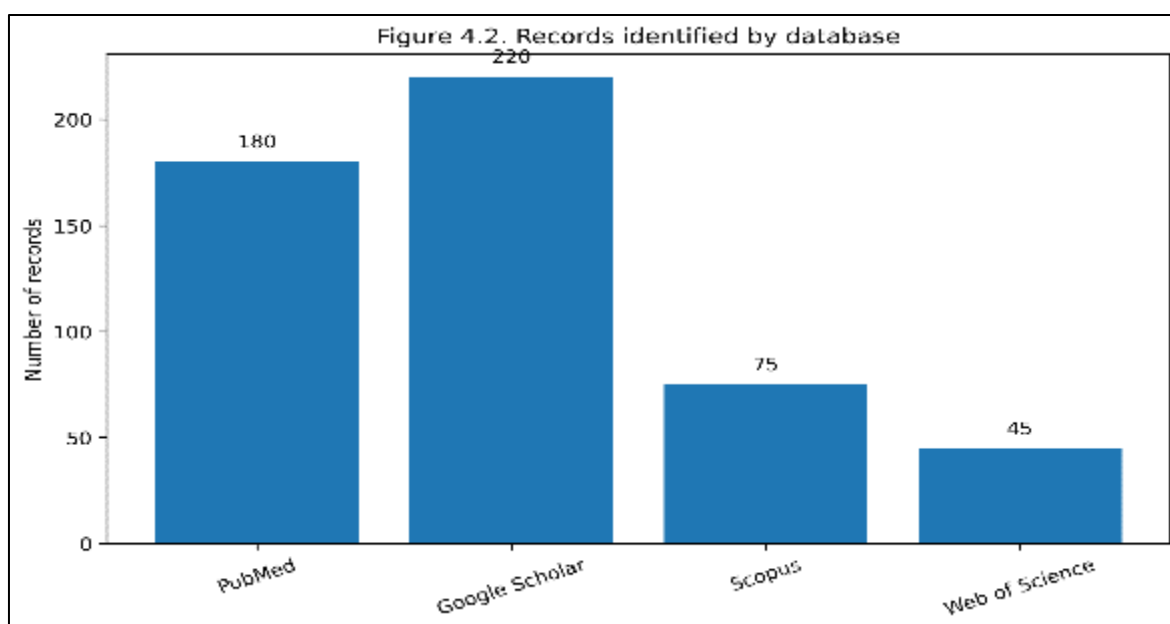


Figure 1: Records identified by database

Before screening, 75 duplicate records were removed, while 35 records were excluded through automated eligibility procedures and 23 were removed for other reasons. This resulted in 387 records for title and abstract screening. Of these, 250 records were excluded because they did not meet the predefined eligibility criteria, leaving 137 reports for retrieval. Twenty-three reports could not be retrieved, resulting in 114 full-text reports being assessed for eligibility. A further 96 reports were excluded at the full-text stage. The reasons for exclusion were irrelevant outcomes ($n = 30$), studies conducted exclusively in urban settings ($n = 20$), incomplete data ($n = 15$), abstracts or editorials without primary research data ($n = 13$), and articles published in languages other than English ($n = 18$). Eighteen studies met all eligibility criteria and were included in the final systematic review.

The study-selection process is presented in Figure 1 using the PRISMA 2020 flow diagram and figure 2 Records identified by database during the systematic literature search. The studies employed different methodological approaches, including quantitative observational studies, qualitative studies and mixed-method studies. The variation in study designs allowed the review to capture both measurable determinants of cataract surgery uptake and patients' experiences, perceptions, beliefs, and explanations for accepting or declining surgery.

Table 1: Summary of study-selection records

Stage	Number (n)	Description
Records identified	520	PubMed 180; Google Scholar 220; Scopus 75; Web of Science 45
Records removed before screening	133	75 duplicates; 35 automation exclusions; 23 other reasons
Records screened	387	Title and abstract screening
Records excluded	250	Excluded during title/abstract screening
Reports sought for retrieval	137	Full-text reports requested
Reports not retrieved	23	Full texts unavailable or not retrievable
Reports assessed for eligibility	114	Full-text assessment
Reports excluded	96	Excluded for predefined eligibility reasons
Studies included	18	Studies meeting all inclusion criteria

The included studies were conducted in rural and underserved populations where access to cataract surgical services was limited or where substantial unmet need for cataract surgery had been reported. The populations predominantly comprised adults with diagnosed or suspected cataract, older adults with visual impairment and community members eligible for cataract assessment or surgery for example, Bechange et al. investigated cataract surgery uptake among patients and healthcare providers in rural Kenya, Zambia and Uganda, while Bizuneh et al. examined barriers to cataract surgery utilization among patients attending surgical outreach sites in Ethiopia.

The studies differed in how cataract surgery uptake was defined. Some examined whether eligible patients accepted or underwent surgery, while others investigated barriers to service utilization, willingness to undergo surgery, or reasons for failure to attend or complete the surgical pathway. This variation contributed to methodological heterogeneity and supported the use of narrative and thematic synthesis. Across the included studies, the factors influencing cataract surgery uptake could be organized into six principal themes: patient-related factors, socioeconomic factors, demographic and gender-related factors, cultural and social factors, geographical and accessibility factors and health-system factors.

Table 2: Thematic domains identified among the included studies

Theme	Scope	Examples of factors to report from included studies
Patient-related	Individual perceptions and health-seeking behaviour	Fear, perceived need, knowledge, awareness, expectations, previous experience
Socioeconomic	Financial and household constraints	Cost of surgery, transport cost, lost income, poverty, household priorities
Demographic/gender	Characteristics influencing uptake	Age, sex/gender, education, marital/household status, occupation
Cultural/social	Beliefs and social influences	Traditional medicine, stigma, family influence, beliefs about cataract and surgery
Geographical/accessibility	Physical access to services	Distance, transport, travel time, rural location, referral barriers
Health-system	Service-level factors	Waiting time, availability of surgery, staff attitudes, counselling, trust, service organization

The findings from *Bechange et al.* and *Bizuneh et al.* demonstrate that multiple domains can operate simultaneously, supporting the interpretation of cataract surgery uptake as a multidimensional process rather than an outcome determined by a single factor.

5 DISCUSSION

The findings of this systematic review confirm that the uptake of cataract surgery among rural adults is not determined by a single isolated barrier, but is instead governed by a complex, multidimensional matrix of interacting factors. Synthesizing evidence across the 18 included studies demonstrates that individual perceptions, financial constraints, geographical isolation, cultural beliefs and structural health-system limitations converge to dictate whether a rural patient successfully navigates the pathway from vision loss to surgical restoration.

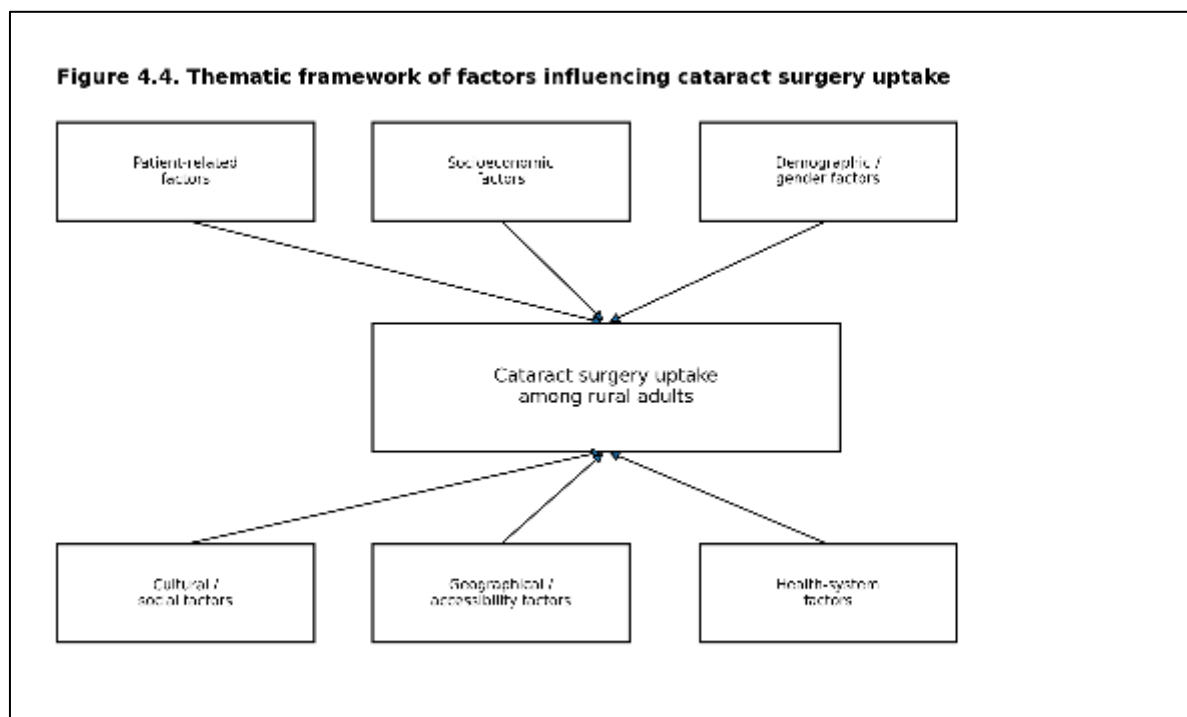


Figure 2: Thematic framework of factors influencing cataract surgery uptake

5.1 Socioeconomic Vulnerability and the Burden of Out-of-Pocket Costs

Socioeconomic status emerges as a heavy determinant of surgical uptake in rural cohorts. The financial shock of out-of-pocket costs—comprising not only direct surgical or administrative fees but also indirect expenses such as transportation, lodging and lost agricultural or domestic productivity—frequently places surgery out of reach. For subsistence farmers and impoverished rural households, paying for elective or even semi-elective eye care forces difficult compromises between daily survival and healthcare utilization. When evaluated through Andersen's Behavioural Model, the complete absence of robust health insurance coverage or social protection mechanisms strips rural patients of the enabling resources required to absorb these financial shocks. Consequently, financial barriers act as an immediate filter, disproportionately barring low-income individuals from ever crossing the threshold of an ophthalmic clinic.

5.2 The Intersection of Individual Awareness and Patient-Related Barriers

A primary finding running through the literature is the profound impact of low health literacy and misconceptions regarding aging and vision. As conceptualized within the Health Belief Model (HBM), many rural adults exhibit low perceived susceptibility and severity regarding early visual decline, frequently fatalistically normalizing blindness as an unalterable consequence of growing older. When individuals perceive vision loss as an inevitable part of aging, the perceived need for medical intervention plummets. Compounding this cognitive barrier is a pervasive fear of the surgical procedure itself—often fuelled by historical anecdotes of failed outcomes or traditional myths circulating within tight-knit rural communities. Conversely, where external cues to action are present, such as witnessing a neighbour regain sight following a successful community outreach camp, uptake markedly improves. This highlights the critical necessity for targeted community health education that directly dismantles surgical anxieties and reframes cataract-induced blindness as a treatable condition rather than a permanent disability.

5.3 Health-System Responsiveness and Policy Implications

Ultimately, the burden of low uptake cannot be shifted entirely to patient-level reluctance; structural failures within the health system play a pivotal role. The severe shortage and urban maldistribution of ophthalmologists, coupled with the

under-resourcing of rural health outposts, create a severe supply-side bottleneck. Sustainable improvements in rural cataract surgery uptake necessitate decentralizing eye care services, expanding mobile surgical outreach camps, integrating primary eye care into local community health strategies, and subsidizing the direct and indirect costs of surgery for impoverished populations.

5.4 Cultural and Gender Disparities

Cultural beliefs and gender dynamics heavily dictate care-seeking pathways in rural environments. Traditional or alternative treatments are frequently pursued prior to formal allopathic care, delaying definitive surgical intervention until hypermature cataracts complicate procedures or lead to permanent visual loss. Furthermore, entrenched gender disparities—such as lower financial autonomy, restricted mobility, and lower priority given to female health within certain rural households—expose women to disproportionately higher rates of unmet surgical need. Public health interventions must therefore address intra-household equity to ensure that marginalized women and vulnerable elders receive equal support to access sight-restoring care.

5.5 Geographical Isolation and Thaddeus and Maine's Delays

Physical isolation and deficient transport infrastructure strongly reinforce the geographical and accessibility barriers identified in the review. The spatial mismatch between centralized urban eye care facilities and dispersed rural settlements results in prohibitive travel distances. Applying Thaddeus and Maine's Three Delays Model to these findings reveals distinct structural bottlenecks.

Therefore, interventions to increase uptake should move beyond passive availability of services and incorporate active demand creation, including community education, patient counselling, testimonies from successful surgical patients and clear communication about the benefits and safety of cataract surgery.

6 CONCLUSION

Cataract surgery uptake among rural populations is fundamentally constrained by a multidimensional web of interconnected barriers operating across individual, socioeconomic, geographical, cultural and health-system levels. The evidence demonstrates that untreated blindness in these settings is rarely the result of a single isolated obstacle. Instead, it is driven by the compounding effects of low health literacy, fatalistic beliefs regarding aging, prohibitive out-of-pocket and indirect costs, and severe geographical isolation.

When rural patients attempt to seek care, they face structural bottlenecks at every stage—from internal hesitations and lack of decision-making autonomy (particularly among women) to physical transport deficits and supply-side constraints within the health system, such as a shortage of ophthalmic specialists and long waitlists. Consequently, improving surgical uptake requires a holistic, decentralized approach rather than a purely clinical focus. Sustainable solutions depend on expanding targeted community education, deploying mobile outreach camps, integrating primary eye care into local rural networks, and actively subsidizing the financial burdens that disproportionately lock vulnerable elders and women out of sight-restoring treatment.

Recommendations

From the analysis several recommendations are proposed to improve cataract surgery uptake among adults in rural settings. Future research should evaluate the long-term effectiveness of interventions designed to increase cataract surgery uptake and explore context-specific barriers and facilitators to inform evidence-based policies and service delivery. Health systems should prioritize the training, recruitment and equitable distribution of ophthalmologists, ophthalmic clinical officers, ophthalmic nurses and other eye care professionals, while supporting continuous professional development to improve the quality of cataract surgical services. Financial barriers can be reduced by expanding subsidized cataract surgery programs, community health insurance schemes and free surgical outreach camps, alongside integrating cataract surgery into universal health coverage initiatives. Regular community-based eye screening and outreach services should be strengthened to facilitate early detection and timely referral for surgery, with active involvement of community leaders, religious leaders, and community health volunteers to enhance awareness and trust. In addition, targeted interventions should address the needs of women, older adults and other underserved populations to promote equitable access to cataract surgical services. Finally, governments, healthcare providers and non-governmental organizations should intensify community eye health education to improve knowledge of cataracts, dispel misconceptions and fears about surgery, address cultural barriers and encourage timely utilization of cataract surgical services. Such an approach is more likely to convert the availability of cataract surgery into actual utilization and ultimately reduce avoidable cataract-related blindness in rural communities.

STATEMENTS ON COMPLIANCE WITH ETHICAL STANDARDS

Disclosure of conflict of interest

There is no conflict of interest to be disclosed.

REFERENCES

- [1] Abdulhussein, D., & Abdul Hussein, M. (2023). WHO Vision 2020: Have we done it? *Ophthalmic epidemiology*, 30(4), 331-339.
- [2] Alias, N. S., & Buari, N. H. (2024). Challenges and barriers to utilizing eye care services among urban population globally: A scoping review. *Journal of Health Science and Medical Research*, 42(6), 20241098.
- [3] Attafuah, P. Y. A., Mordi, P., Aggrey, E. K., Quaicoe, A. S. P., & Sarfo, J. O. (2024). Prevalence and management of cataracts among older adults in Sub-Saharan Africa: a scoping review. *BMC ophthalmology*, 24(1), 434.
- [4] Bechange, S., Jolley, E., Tobi, P., Mailu, E., Sentongo, J., Chulu, T., Abony, M., Chege, M., Mulenga, G., & Ngorok, J. (2022). Understanding patient health-seeking behaviour to optimise the uptake of cataract surgery in rural Kenya, Zambia and Uganda: findings from a multisite qualitative study. *International Health*, 14(Supplement_1), i57-i63.
- [5] Bonner, S. N., Powell, C. A., Stewart, J. W., & Dossett, L. A. (2023). Surgical care for racial and ethnic minorities and interventions to address inequities: a narrative review. *Annals of surgery*, 278(2), 184-192.
- [6] Canatan, A. N. (2024). Restoring sight: exploring cataracts as the leading treatable cause of blindness: a narrative review. *Turkish Medical Student Journal*.
- [7] Diana, N. (2025). *Assessing the effectiveness of the 'three-delays' model Towards maternal health and community development in the Peri-urban settlements of Masaka district, Uganda* Uganda Martyrs University].
- [8] Hillier, R. J., Chang, A., Matse-Orere, A., Bindesbøll, C., Moniz, L. S., Heaton, V., Petrie, J., & Bannister, C. (2026). Surgical capacity in ophthalmology: the unmet need for sustainable solutions. *Eye*, 40(4), 452-464.
- [9] Jiang, B., Wu, T., Liu, W., Liu, G., & Lu, P. (2023). Changing trends in the global burden of cataract over the past 30 years: retrospective data analysis of the global burden of disease study 2019. *JMIR Public Health and Surveillance*, 9(1), e47349.
- [10] KUMARI, R. (2023). *VISUAL OUTCOME AFTER CATARACT SURGERY IN RURAL & URBAN POPULATION OF CENTRAL UTTAR PRADESH (A LONGITUDINAL STUDY)* AMITY UNIVERSITY, UTTAR PRADESH INDIA].
- [11] Lin, L., Liang, Y., Jiang, G., Gan, Q., Yang, T., Liao, P., & Liang, H. (2025). Global, regional, and national burden of cataract: A comprehensive analysis and projections from 1990 to 2021. *Plos one*, 20(6), e0326263.
- [12] Lyang, N., Schwartz, R., Ramanathan, S., Parikh, N., Lane-Fall, M., Dohan, D., & Chen, C. L. (2025). Understanding ophthalmologists' perspectives on the risk of cataract surgery. *Perioperative Medicine*, 14(1), 133.
- [13] McCormick, I., Butcher, R., Evans, J. R., Mactaggart, I. Z., Limburg, H., Jolley, E., Sapkota, Y. D., Oye, J. E., Mishra, S. K., & Bastawrous, A. (2022). Effective cataract surgical coverage in adults aged 50 years and older: estimates from population-based surveys in 55 countries. *The Lancet Global Health*, 10(12), e1744-e1753.
- [14] Naidoo, K., & Hansen, W. (2026). Barriers to cataract surgery uptake in Africa: a systematic review. *International Ophthalmology*, 46(1), 15.
- [15] Study, V. L. E. G. o. t. G. B. o. D. (2024). Global estimates on the number of people blind or visually impaired by cataract: a meta-analysis from 2000 to 2020. *Eye*, 38(11), 2156.
- [16] Xulu-Kasaba, Z. N., & Kalinda, C. (2022). Prevalence of blindness and its major causes in sub-Saharan Africa in 2020: A systematic review and meta-analysis. *British Journal of Visual Impairment*, 40(3), 563-577.
- [17] Yahaya, T. O., Yinusa, R. A., Yusuf, Z. M., Haliru, S. a., Obi, P. O., & Adamu, J. W. (2025). Prevalence of Cataract and Its Association with Sociodemographic Factors, Health-Related Conditions, and ABO Blood Groups in Birnin Kebbi, Nigeria. *Epidemiology*, 12(3).