

Understanding Eye Care Seeking Behaviour and Barriers to Accessing Eye Services: Findings from a Community Survey

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Abstract

Understanding patterns of eye care-seeking behaviour and the barriers that constrain access to eye health services has emerged as a critical domain within public health research. Visual impairment and preventable blindness continue to impose a substantial global burden, disproportionately affecting populations in low- and middle-income countries. The study aimed to understand how individuals recognize visual impairment, evaluate prior utilisation of eye care services, and identify social, economic, and accessibility factors contributing to delayed eye care. A questionnaire was validated and administered. Barriers to accessing eye care were categorized into four broad domains Economic barriers, Geographical barriers, Social barriers and Perceptual barriers. The study identified multiple barriers that hinder timely access to eye care services, with financial constraints emerging as the most significant factor. Fear of surgical procedures, Geographical and structural barriers were few among them. A substantial majority of participants (68.1%, n = 98) reported that they had never visited any eye care facility thus making utilization of eye care services very low.

Introduction

Understanding patterns of eye care seeking behavior and the barriers that constrain access to eye health services has emerged as a critical domain within public health research. Visual impairment and preventable blindness continue to impose a substantial global burden, disproportionately affecting populations in low- and middle-income countries. Recent estimates suggest that at least 2.2 billion individuals live with some form of visual impairment, nearly half of which could have been prevented or remains unaddressed [1]. Despite technological advancements and expanded service delivery frameworks, disparities in access and utilization persist, highlighting the need for a nuanced understanding of behavioral and structural determinants.

Eye care seeking behavior encompasses the processes through which individuals recognize ocular symptoms, interpret their significance, and decide whether and where to seek professional care. This behavior is inherently complex and shaped by a constellation of factors, including awareness, cultural norms, perceived severity, and economic capacity. Evidence suggests that in many communities, particularly rural settings, visual impairment is often normalized as an inevitable consequence of aging, leading to delays in seeking intervention [2]. Such delays are especially problematic in conditions like cataract, glaucoma, and refractive errors, where early diagnosis significantly improves prognosis.

Theoretical frameworks such as the Health Belief Model and Andersen's Behavioral Model of Health Services Use provide critical insights into these dynamics. The Health Belief Model posits that individuals' engagement with healthcare services is influenced by perceived susceptibility, perceived severity, perceived benefits, and perceived barriers [3]. Andersen's model further expands this perspective by incorporating predisposing characteristics, enabling resources, and need-based factors [4]. Together, these frameworks underscore that healthcare utilization is not merely a function of clinical necessity but is embedded within broader socio-economic and cultural contexts.

A recurring theme in the literature is the pervasive lack of awareness regarding eye health. Studies across South Asia and Sub-Saharan Africa reveal that a significant proportion of individuals with visual impairment are unaware that their conditions are treatable [5]. This knowledge deficit is often compounded by low health literacy and limited exposure to structured health education initiatives. In some instances, misconceptions about surgical outcomes or reliance on traditional remedies further delay engagement with formal eye care services.

Economic barriers represent another critical determinant. Even when services are available, both direct and indirect costs can significantly deter utilization. Consultation fees, cost of spectacles, surgical expenses, transportation, and opportunity costs such as lost wages collectively contribute to financial inaccessibility [6]. This issue is particularly pronounced in settings where out-of-pocket expenditure dominates healthcare financing. Interestingly, relatively low-cost interventions such as corrective lenses remain underutilized, revealing a disconnect between affordability in theory and accessibility in practice.

Geographical accessibility also plays a decisive role in shaping eye care seeking behavior. Rural populations frequently encounter challenges related to distance, transportation, and limited availability of specialized providers. The uneven distribution of ophthalmologists and optometrists, heavily concentrated in urban centers, exacerbates these disparities [7]. While outreach initiatives such as mobile eye camps have attempted to mitigate these challenges, their episodic nature raises concerns regarding sustainability and continuity of care.

Sociocultural factors further complicate the utilization landscape. Gender disparities are particularly notable, with women often exhibiting lower rates of service uptake despite experiencing a higher burden of visual impairment [8]. This disparity is frequently linked to limited autonomy, sociocultural norms, and competing domestic responsibilities. Additionally, fear of surgical procedures and stigma associated with visual impairment can act as significant deterrents, reinforcing delays in seeking care.

Health system related factors, including perceived quality of care, provider attitudes, and institutional trust, also influence utilization patterns. Negative prior experiences or perceptions of inadequate care can discourage individuals from seeking services, even when they are accessible. Conversely, community-based approaches that emphasize culturally sensitive communication and local engagement have demonstrated improved uptake of services [9]. This suggests that strengthening eye care systems requires not only infrastructural expansion but also a focus on patient-centered and culturally competent care delivery.

Community based surveys serve as an essential methodological approach in understanding these multifaceted issues. Unlike facility-based studies, which inherently capture only service users, community surveys include both users and non-users, thereby providing a more comprehensive understanding of unmet needs and barriers. They allow for the identification of marginalized populations who may remain invisible within formal healthcare systems and enable a deeper exploration of contextual influences on health behavior.

The present study, “Understanding Eye Care Seeking Behavior and Barriers to Accessing Eye Services: Findings from a Community Survey,” is positioned within this broader discourse. It aims to systematically examine patterns of eye care utilization and identify key barriers within a defined population. By adopting a community-based approach, the study seeks to bridge the gap between epidemiological burden and service uptake, offering insights that are critical for designing targeted interventions. It attempts to assess awareness regarding vision problems, health-seeking behavior, and barriers to accessing eye care services among community members in Hubballi–Dharwad. It further aims to understand how individuals recognize visual impairment, evaluate prior utilization of eye care services, and identify social, economic, and accessibility factors contributing to delayed eye care. The findings intend to support planning of targeted interventions to improve early detection, timely treatment, and utilization of available eye health services.

Methods

Study Design and Setting

A community-based cross-sectional study design was employed to investigate awareness of vision problems and eye care-seeking behavior among residents of Huballi and Dharwad, two prominent urban centers in the state of Karnataka. These twin cities present a heterogeneous population structure characterized by varying socioeconomic backgrounds, educational levels, and access to healthcare services, making them suitable for examining disparities in eye care utilization. The cross-sectional design was considered appropriate as it allows for the assessment of both exposure (awareness and perceptions) and outcomes (health-seeking behavior) at a single point in time, thereby providing a snapshot of prevailing conditions within the community.

Study Population and Sampling

The study population comprised adult individuals aged 18 years and above residing in selected localities of Hubballi–Dharwad. A total of 144 participants were included in the study. A non-probability convenience sampling method was adopted due to logistical feasibility and accessibility constraints. While probability sampling techniques may offer greater generalizability, the chosen approach enabled efficient data collection within the available timeframe and resources.

Participants were recruited through community outreach in residential areas, public spaces, and local gathering points. Inclusion criteria encompassed individuals who were permanent residents of the study area and willing to provide informed consent. Individuals with severe cognitive impairment or those unable to respond to the questionnaire were excluded to ensure reliability of responses. Although the sample size is modest, it is adequate for exploratory analysis and identification of prevailing trends in awareness and behavior.

Data Collection Instrument

After a thorough analysis of the pertinent literature and consultation with subject matter experts, a structured questionnaire was created especially for the current study. A panel of subject-matter experts assessed the content validity of the first draft, which included items intended to evaluate the research goals. The required changes were made in response to their comments on comprehensiveness, relevancy, and clarity. In order to evaluate the questionnaire's practicality, administration time, and comprehensibility, it was then pilot tested with a sample of the target demographic. Data were collected using this structured questionnaire. The questions captured information from three primary domains: (1) awareness and recognition of vision problems, (2) patterns of eye care-seeking behaviour, and (3) perceived barriers to accessing eye care services. (Annexure 1)

The awareness section included questions related to common symptoms such as blurred vision, difficulty in reading, eye strain, headaches, and night vision problems. Participants were asked whether they recognized these symptoms as indicative of potential eye conditions. The second section focused on behavioral aspects, including previous visits to eye care providers, frequency of eye examinations, type of healthcare facility utilized (government, private, or informal providers), and triggers for seeking care.

The third section explored barriers to accessing eye care services, categorized into economic (e.g., cost of consultation or treatment), geographical (e.g., distance to facilities), social (e.g., family responsibilities, gender norms), and perceptual barriers (e.g., fear of surgery, lack of perceived need). The questionnaire primarily consisted of closed-ended questions with predefined response options, supplemented by a few open-ended questions to capture nuanced perspectives.

Prior to the main data collection, the questionnaire was pre-tested on a small subset of individuals ($n = 10$) to assess clarity, relevance, and comprehensibility. Necessary modifications were made to improve wording and ensure cultural appropriateness. This step enhanced the content validity of the instrument.

Data Collection Procedure

Before initiating the interview, participants were briefed about the purpose of the study, and informed consent was obtained. Confidentiality and anonymity were assured, and participants were informed that their responses would be used solely for research purposes. Interviews were conducted in local languages, primarily Kannada, to facilitate better understanding and accurate responses.

The standardized approach to data collection ensured uniformity across interviews. Investigators followed a consistent protocol, avoiding leading questions or prompts that could bias responses. Responses were recorded manually and later transferred into a digital database for analysis.

Variables and Measures

The primary outcome variables included awareness of vision problems and eye care-seeking behavior. Awareness was operationalized as the ability to correctly identify symptoms associated with visual impairment. Eye care-seeking behavior was measured through indicators such as history of eye examination, frequency of visits, and type of healthcare provider consulted.

Independent variables included demographic characteristics (age, gender, education level, occupation), socioeconomic status, and accessibility factors. Barriers to accessing eye care were categorized into four broad domains:

1. **Economic barriers** – cost-related constraints
2. **Geographical barriers** – distance and transportation issues
3. **Social barriers** – cultural norms and family responsibilities
4. **Perceptual barriers** – beliefs, attitudes, and fears

This categorization enabled a multidimensional analysis of factors influencing health-seeking behavior.

Data Management and Analysis

Data were systematically coded and entered into a statistical software package for analysis. Descriptive statistics were used to summarize demographic characteristics, levels of awareness, and patterns of eye care utilization. Frequencies and percentages were calculated for categorical variables, while means and standard deviations were used for continuous variables where applicable.

Cross-tabulation analysis was performed to explore associations between awareness levels and health-seeking behavior. For instance, the relationship between educational status and frequency of eye examinations was examined to identify potential disparities. Similarly, barriers to access were analyzed to determine the most commonly reported constraints.

Although inferential statistical tests were limited due to the sample size, the analysis provided meaningful insights into prevailing trends and patterns. The findings were interpreted within the broader socio-economic and cultural context of the study area.

Ethical Considerations

The study adhered to fundamental ethical principles of research involving human participants. Informed consent was obtained from all participants before data collection. Participation was voluntary, and individuals had the right to withdraw at any stage without any consequences. Confidentiality of participant information was strictly maintained, and no personally identifiable data were disclosed in the analysis or reporting.

Results

A total of 144 participants were included in the analysis to assess awareness of vision problems, patterns of eye care utilization, and barriers influencing access to services. The findings reveal important disparities between recognition of symptoms and actual healthcare-seeking behavior, alongside significant socio-economic and perceptual constraints.

Awareness and Recognition of Vision Problems

The majority of participants (68.1%, n = 98) reported recognizing vision problems primarily through difficulty in seeing objects clearly. This indicates that overt and functionally limiting symptoms serve as the principal trigger for problem recognition. In contrast, more subtle or indirect symptoms were less frequently identified. Approximately 12.5% (n = 18) of respondents associated frequent headaches or eye strain with vision problems, while 9.0% (n = 13) reported difficulty in reading or focusing. Only a small proportion identified more specific visual impairments, such as difficulty recognizing people or distant objects (2.8%, n = 4).

Notably, formal diagnosis played a minimal role in awareness. Only 4.2% (n = 6) of participants reported that their condition was identified by a doctor or health worker, while 2.8% (n = 4) became aware through information provided by others. This suggests that awareness is largely self-driven rather than mediated by professional screening or community health systems. The limited role of healthcare providers in early detection reflects potential gaps in outreach and preventive eye care services.

Graph 1: A graphical representation of symptom recognition patterns

Eye Care Utilization Patterns

Despite a relatively high level of symptom recognition, utilization of eye care services remained notably low. A substantial majority of participants (68.1%, n = 98) reported that they had never visited any eye care facility. This finding underscores a critical gap between awareness and action, suggesting that recognition of symptoms does not necessarily translate into healthcare-seeking behavior.

Among those who had accessed services, 18.8% (n = 27) reported visiting a local health worker, while only 12.5% (n = 18) had sought care at a hospital. The preference for local health workers over formal hospital-based services may reflect issues related to accessibility, affordability, and perceived convenience. However, it may also indicate potential compromises in the quality or comprehensiveness of care received.

Graph 2: Graph on Utilization trends

Barriers to Accessing Eye Care Services

The study identified multiple barriers that hinder timely access to eye care services, with financial constraints emerging as the most significant factor. Approximately 35.4% (n = 51) of participants cited lack of money for treatment as the primary reason for delaying or avoiding care. This finding reinforces the role of economic limitations as a dominant determinant of healthcare access.

Fear of surgical procedures was the second most commonly reported barrier, affecting 22.2% (n = 32) of respondents. This reflects the influence of psychological and perceptual factors, including anxiety, misconceptions, and lack of trust in medical interventions. Additionally, 15.3% (n = 22) of participants believed that treatment was unnecessary, indicating a gap in perceived need or health literacy.

Geographical and structural barriers were also evident. Another 15.3% (n = 22) reported lack of nearby facilities, while 13.9% (n = 20) indicated inability to take time off work. These findings suggest that even when individuals recognize the need for care, logistical challenges may prevent them from accessing services. A smaller proportion of participants cited lack of transport (2.8%, n = 4) and unawareness of available services (0.7%, n = 1), indicating that while informational barriers exist, they are less prominent compared to financial and accessibility issues.

Graph 3: Distribution of reported barriers

Discussion

The present study evaluated awareness of vision problems, utilization of eye care services, and barriers affecting access to ophthalmic care among 144 participants. The findings demonstrate a considerable discrepancy between recognition of visual symptoms and actual utilization of eye care services, highlighting persistent socioeconomic, structural, and perceptual challenges that continue to influence healthcare-seeking behavior in eye care settings. A major finding of the study was that awareness of vision problems was primarily symptom-driven. Most participants recognized visual impairment only when they experienced difficulty seeing objects clearly (68.1%). This suggests that individuals tend to seek recognition of eye problems only after visual disturbances become functionally significant. Similar findings have been reported in previous community-based ophthalmic studies, where awareness was strongly associated with noticeable impairment rather than preventive screening or routine examinations [2], [10]. In contrast, symptoms such as headaches, eye strain, and difficulty focusing were less frequently recognized, indicating limited understanding of early manifestations of ocular disorders. This reflects insufficient eye health literacy within the community and emphasizes the need for educational interventions focusing on early symptom recognition. An important observation was the minimal contribution of healthcare professionals to early detection. Only 4.2% of participants became aware of their condition through doctors or health workers. This finding suggests inadequate outreach, limited community screening programs, and insufficient integration of primary eye care into routine healthcare services. Previous studies conducted in low- and middle-income countries similarly reported that professional diagnosis contributes minimally to early detection because eye care services are often concentrated in tertiary centers rather than community settings [11], [12]. Strengthening community-level screening and expanding the role of primary healthcare workers could therefore facilitate earlier identification and referral of patients with visual impairment. Despite relatively high awareness of symptoms, utilization of eye care services remained remarkably poor. More than two-thirds of participants (68.1%) had never visited an eye care facility. This substantial gap between awareness and healthcare-seeking behavior has also been documented in several international studies investigating

cataract and refractive care utilization [1], [9]. The findings indicate that symptom recognition alone is insufficient to motivate healthcare utilization, particularly in populations facing economic and logistical barriers. Among those who sought care, local health workers were preferred over hospital services, possibly due to affordability, proximity, and familiarity. However, reliance on informal or primary-level providers may delay specialist evaluation and definitive treatment. Financial difficulty emerged as the most significant barrier to accessing eye care services, affecting 35.4% of respondents. Economic barriers remain one of the most consistently reported determinants of poor ophthalmic service utilization worldwide [13], [14]. The cost of consultation, surgery, transport, medications, and loss of daily wages collectively contribute to delayed treatment-seeking behavior. In resource-constrained populations, healthcare expenditure is often deprioritized until vision loss severely interferes with daily functioning. Fear of surgery was identified as the second most common barrier. Similar observations have been described in cataract uptake studies, where anxiety regarding surgical complications, fear of blindness, and mistrust in medical procedures significantly reduced willingness to seek treatment [15]. Misinformation, cultural beliefs, and inadequate patient counseling often reinforce such perceptions. This finding highlights the importance of targeted counseling and community awareness campaigns to improve confidence in modern ophthalmic procedures. Geographical and occupational barriers also influenced service utilization. The lack of nearby facilities and the inability to take time off work indicate that accessibility challenges continue to affect healthcare delivery. Comparable studies have demonstrated that distance to healthcare facilities and loss of income during treatment are major contributors to delayed eye care utilization, especially among rural populations [9], [16]. The major barriers that impede the utilization of eye care services among populations, particularly in underserved and rural settings, are represented in Fig. 1. Geographical, economic, social, and perceptual constraints are the four primary areas that are emphasized. Geographical limitations include restricted access to eye care facilities because of distance, poor transportation, and a lack of services in rural regions. Financial limitations that deter people from obtaining therapy include treatment charges, travel expenditures, and lost daily pay. Stigma, a lack of family support, and a lack of knowledge about eye conditions and accessible treatments are examples of social hurdles. Misconceptions, fear of surgery, low perceived need for treatment, and cultural attitudes that affect healthcare-seeking behavior are examples of perceptual obstacles. These interrelated elements work together to cause avoidable visual impairment, underutilization of eye care services, and delayed presentation.

Overall, the findings reveal that while symptom recognition is relatively common, timely utilization of eye care services remains inadequate due to financial, psychological, and structural barriers. The study underscores the importance of community-based awareness programs, affordable outreach services, early screening initiatives, and strengthened primary eye care systems to promote timely intervention and reduce avoidable visual impairment.

Conclusion

The study highlights low awareness and poor utilization of eye care services despite the presence of vision-related symptoms among participants. Financial constraints, fear of surgery, limited access to

nearby facilities, and lack of time were major barriers contributing to delayed eye care. A large proportion of individuals had never undergone an eye examination, indicating the need for strengthened community awareness and accessible services. Targeted health education, community-based screening, and affordable eye care interventions are essential to promote early diagnosis and timely treatment, thereby reducing avoidable visual impairment and improving overall eye health outcomes.

Declarations

Ethical Approval: This study involving human participants was reviewed and approved by the Institutional Ethics Committee (IEC) of Karnataka Medical College and Research Institute (Previously KIMS Hubli) Hubballi Ethics committee (Approval No.: ECR/486/Inst/KA/2013/RR-16, 864, Date: 30/03/2023). The research was conducted in accordance with the ethical principles outlined in the Declaration of Helsinki (2013 revision) and applicable national ethical guidelines for biomedical and health research involving human participants. Written informed consent was obtained from all participants prior to enrollment. Participant confidentiality and anonymity were maintained throughout the study, and all data were de-identified before analysis.

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Graphs

Graphs are available in the Supplementary Files section.

Figures

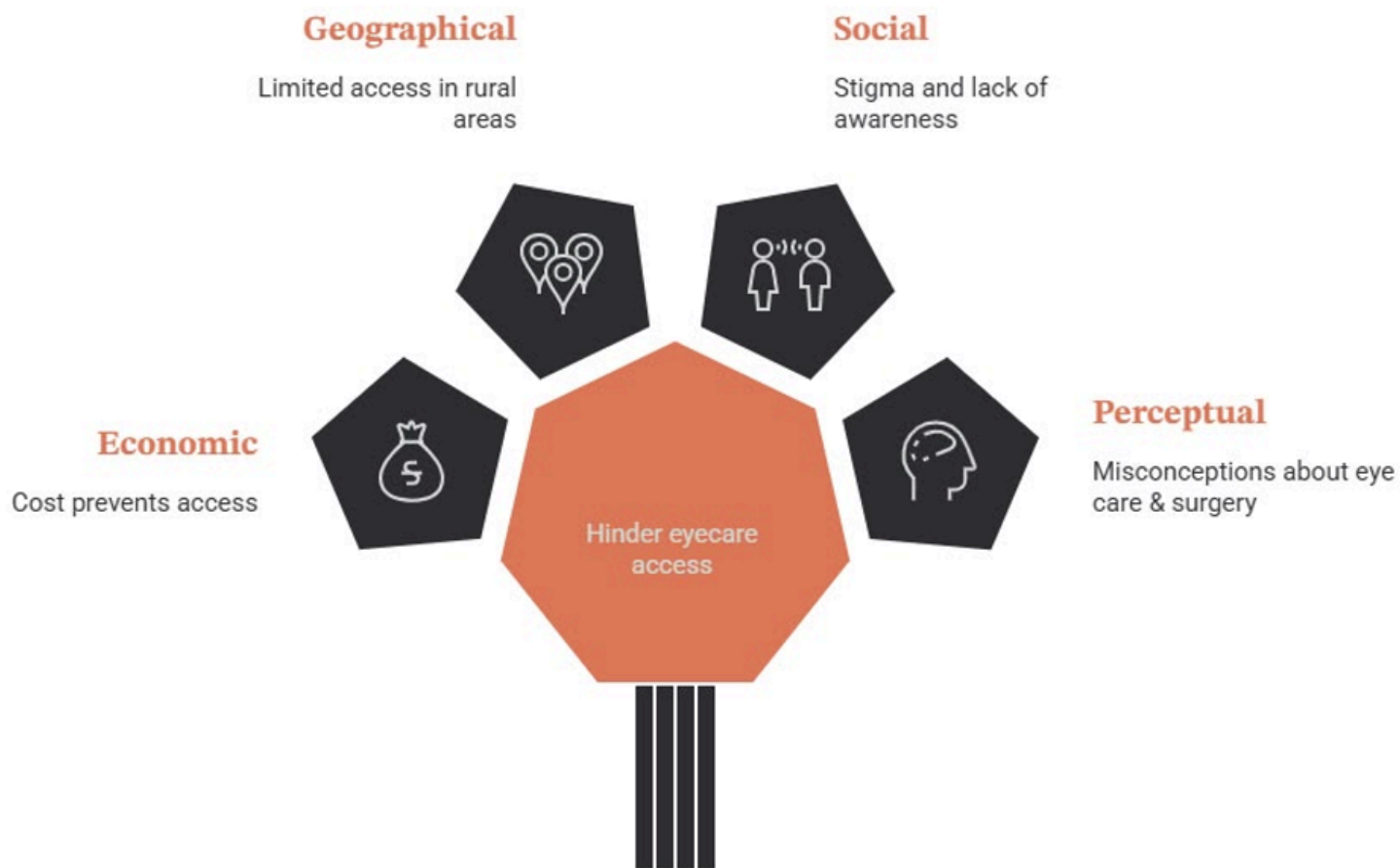


Figure 1

Multiple barriers affecting eye care utilization, primarily categorized as geographical, economic, social, and perceptual factors.

Supplementary Files

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