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Research Article

Determinants of Access and Utilization of Eye Care Services in the Abura Asebu Kwamankese District, Ghana

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Abstract

This study examined the determinants of eye care service utilization in the Abura Asebu–Kwamankese District. A descriptive cross-sectional survey design was employed to assess access to and use of eye care services among residents. Using simple random sampling, 701 respondents were selected from a population of 117,185 across all communities in the district. Data were collected through a structured, self-designed questionnaire measured on a five-point Likert scale and analyzed using descriptive statistics, including frequencies, percentages, means, and standard deviations. The findings revealed a significant lack of essential eye care services, including those provided by ophthalmologists, optometrists, ophthalmic nurses, opticians, and general practitioners. In addition, several barriers to service utilization were identified, including limited awareness of eye health, inadequate understanding of the impact of visual impairment on daily functioning, low educational levels, and delayed health-seeking behaviour. These factors contributed to underutilization of eye care services and poor management of eye conditions. The study concludes that strengthening eye care utilization requires targeted investment in infrastructure, workforce development, and community-based health education. It recommends that the Ministry of Health and Ghana Health Service enhance the availability, accessibility, and quality of eye care services to improve visual health outcomes in the district.

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Introduction

Visual impairment and blindness remain major global public health challenges, with far-reaching consequences for individuals, communities, and health systems. These conditions significantly reduce quality of life, limit functional independence, and contribute to social isolation, reduced productivity, and increased economic burden (Chinawa & Chime, 2017). Beyond individual effects, visual impairment places considerable strain on families, healthcare systems, and national economies, particularly in low- and middle-income countries where access to eye care services is often limited. The World Health Organization (WHO) estimates that approximately 285 million people worldwide are visually impaired, including 39 million who are blind and 246 million living with low vision (WHO, 2013). Importantly, a large proportion of these cases are preventable or treatable, highlighting the need for effective and accessible eye care services.

In response to the global burden of avoidable blindness, the WHO, in collaboration with the International Agency for the Prevention of Blindness and other partners, launched the Vision 2020: The Right to Sight initiative. This global strategy aims to eliminate avoidable blindness through targeted disease control, human resource development, and improved infrastructure and technology for eye care delivery (WHO, 2000). Central to achieving these objectives is the availability, accessibility, and utilization of comprehensive eye care services. Previous research has emphasized that the effectiveness of eye health programs depends not only on service availability but also on the extent to which individuals utilize these services (Fotouhi, Hashemi, & Mohammad, 2006). However, disparities in access and utilization persist, particularly in underserved districts where shortages of trained personnel, limited infrastructure, low awareness, and socioeconomic barriers hinder effective service delivery.

Despite ongoing efforts to improve eye care systems, many communities continue to face challenges in accessing and utilizing available services. Understanding the contextual factors influencing eye care utilization is essential for developing targeted interventions and strengthening healthcare delivery. Therefore, this study aims to examine the factors affecting the utilization of eye care services in the Abura Asebu–Kwamankese District. By identifying key barriers and determinants, the study seeks to contribute to evidence-based strategies that enhance access, improve service delivery, and support the prevention and management of visual impairment at the district level.

Background to the Study

Visual impairment and blindness represent major global public health challenges with profound consequences for individuals, health systems, and socioeconomic development. Visual impairment can significantly limit functional independence, reduce quality of life, and impair participation in educational, occupational, and social activities. Despite advances in prevention and treatment, millions of people worldwide continue to live with avoidable visual impairment and blindness. In response to this growing burden, the World Health Organization (WHO), in collaboration with the International Agency for the Prevention of Blindness (IAPB), non-governmental organizations, professional associations, and eye care institutions, launched the global initiative *Vision 2020: The Right to Sight*. This initiative aims to eliminate avoidable blindness through three key strategies: targeted disease control, human resource development, and strengthening of infrastructure and appropriate technologies for eye care delivery (Fotouhi, Hashemi, & Mohammad, 2006). Achieving these objectives requires not only the availability of trained personnel and infrastructure but also effective community programs that promote the utilization of eye care services (Lewallen & Courtright, 2001).

Globally, a substantial proportion of visual impairment is preventable or treatable through interventions such as refractive error correction, cataract surgery, and early management of ocular diseases. However, access to these services remains uneven, particularly in low- and middle-income countries where shortages of trained eye care professionals, inadequate infrastructure, and urban concentration of services limit accessibility for rural populations (Onyeluche, 1993; Oduntan et al., 2003). Common causes of visual impairment include uncorrected refractive errors, cataract, glaucoma, diabetic retinopathy, and other chronic eye conditions (Oduntan, 2003). Evidence from several countries indicates that uncorrected refractive error is a leading cause of visual impairment, often due to lack of awareness, limited access to services, and financial barriers (Silva, Bateman, & Contreras, 2002). Even in settings where services are available, utilization remains suboptimal due to factors such as cost, limited awareness, cultural beliefs, and low perceived need for care (Oduntan & Raliavhegwa, 2001).

Health workforce capacity plays a critical role in the delivery and utilization of eye care services. Health workers, defined as individuals whose primary role is to promote or improve health, are essential for providing preventive, curative, and rehabilitative services (Mohr, 2006). However, shortages and unequal distribution of eye care personnel continue to limit service delivery in many developing countries. In addition, disparities may arise between service availability and service utilization due to differences in patient perceptions, awareness, and access barriers. Patients' decisions to seek care are influenced by

multiple factors, including convenience, cost, perceived quality of care, provider attitudes, and health literacy (Prakash et al., 2015). Inequitable access to eye care services may result in delayed diagnosis and treatment, increasing the risk of irreversible vision loss (Fletcher et al., 1999).

The global burden of visual impairment remains substantial, with an estimated 285 million people affected worldwide, including 39 million who are blind and 246 million with low vision (WHO, 2010). Approximately 80% of these cases occur in developing countries and are largely preventable or treatable (Pascolini, 2010). The implementation of Vision 2020 relies heavily on national governments, supported by international organizations, to strengthen eye care systems and improve access to services (WHO, 2010). However, many developing countries, including those in sub-Saharan Africa, face persistent challenges related to limited human resources, inadequate infrastructure, and unequal distribution of eye care services (Melese et al., 2004).

In Ghana, eye care services are delivered through both public and private health systems, including government hospitals, mission facilities, and private clinics. Despite these efforts, the number of trained eye care professionals remains insufficient to meet the needs of the population. As of 2005, Ghana had approximately 300 eye care professionals, including ophthalmologists, optometrists, ophthalmic nurses, and optical technicians (Ghana National Eye Care Secretariat, 2005). This workforce shortage, coupled with limited infrastructure and geographic disparities, contributes to reduced access and utilization of eye care services. Furthermore, limited research has been conducted to examine the factors influencing eye care service utilization at the district level, particularly in the Abura Asebu–Kwamankese District.

Understanding the determinants of eye care service utilization is essential for developing effective strategies to improve access, reduce preventable visual impairment, and strengthen eye health systems. Therefore, this study seeks to investigate the factors affecting access to and utilization of eye care services in the Abura Asebu–Kwamankese District. The findings are expected to provide evidence to inform policy, guide resource allocation, and support interventions aimed at improving eye care delivery and visual health outcomes in the district.

Statement of the Problem

Access to and utilization of eye care services remain significant challenges in many developing countries, including Ghana. Despite the growing burden of visual impairment, the availability and accessibility of essential eye care services are constrained by shortages of trained personnel, inadequate infrastructure, and unequal distribution of services. These limitations hinder the effective prevention, early detection, and management of eye conditions, thereby increasing the risk of avoidable visual impairment and blindness. Furthermore, there is limited national data on the prevalence of eye conditions and patterns of eye care utilization in Ghana and other developing countries, making it difficult to design evidence-based policies and achieve the objectives of global initiatives such as Vision 2020: The Right to Sight (Resnikoff et al., 2004).

Although several studies have examined eye care utilization in different contexts, most research has focused on specific population groups or rural settings, with limited attention to broader population-level determinants. For example, studies conducted in Ghana and other countries have identified barriers such as limited awareness, financial constraints, and inadequate service availability as factors affecting eye care utilization (Gyasi, Amoaku, & Asamany, 2007; Nirmalan et al., 2004). Similarly, research among civil servants in Accra highlighted the need for workplace-based eye health education and improved access to services (Apio-Adih, 2014). Other studies have emphasized that understanding the factors influencing service utilization is essential for improving access and reducing preventable visual impairment (Ntsoane & Oduntan, 2010). Evidence from Ghana also suggests that a substantial proportion of individuals, particularly older adults, who require eye care services do not utilize them, thereby increasing their risk of avoidable vision loss (Kumi-Kyereme et al., 2013).

Despite these findings, there remains a critical gap in empirical research examining the determinants of access to and utilization of eye care services at the district level in Ghana. There is limited evidence regarding the factors influencing eye care utilization in the Abura Asebu–Kwamankese District. Without such context-specific evidence, it is difficult for policymakers, health planners, and service providers to design targeted interventions to improve access and reduce inequities in eye care delivery. Therefore, this study seeks to investigate the factors affecting access to and utilization of eye care services in the Abura Asebu–Kwamankese District. The findings are expected to provide valuable insights to inform policy, improve service delivery, and support efforts to reduce preventable visual impairment in the district and similar settings.

Purpose of the Study

The primary purpose of this study is to examine the factors influencing access to and utilization of eye care services in the Abura Asebu–Kwamankese District. Specifically, the study aims to:

1. Identify the types of eye care services available in the Abura Asebu–Kwamankese District.
2. Examine the eye health–seeking behaviours of residents in the district.
3. Assess residents' level of awareness of common eye conditions.
4. Evaluate residents' awareness of available eye care services within the district.
5. Identify the factors influencing residents' choice of eye care services.
6. Examine the perceived benefits of utilizing eye care services among residents.
7. Determine the challenges and barriers residents face in accessing eye care services.

Research Questions

The study is guided by the following research questions:

1. What types of eye care services are available in the Abura Asebu–Kwamankese District?
2. What is the eye health–seeking behaviours of residents in the district?
3. What is the level of awareness among residents regarding common eye conditions?
4. What is the level of awareness among residents regarding available eye care services?
5. What factors influence residents' choice of eye care services?
6. What are the perceived benefits of utilizing eye care services among residents?
7. What challenges do residents face in accessing eye care services in the district?

Significance of the Study

This study makes an important contribution to public health knowledge by providing empirical evidence on the factors influencing access to and utilization of eye care services in the Abura Asebu–Kwamankese District. Understanding these determinants is critical for addressing preventable visual impairment and improving eye health outcomes. The findings will be valuable to policymakers, health planners, and the Ministry of Health by informing the design and implementation of targeted interventions aimed at improving the accessibility, availability, and utilization of eye care services. In particular, the study will support evidence-based planning, resource allocation, and workforce development within the national eye care program.

The study also has important implications for healthcare providers and public health practitioners. By identifying barriers such as low awareness, limited-service availability, and health-seeking behaviours, the findings will guide the development of effective community-based education programs and outreach initiatives to promote timely utilization of eye care services. Improved awareness and utilization are essential for early detection and management of eye conditions, thereby reducing the risk of preventable blindness and improving quality of life.

Furthermore, the findings will support advocacy efforts at district, regional, and national levels by providing reliable data to strengthen eye health programs and promote equitable access to care. The study will also serve as a baseline for monitoring and evaluating eye care service utilization and the effectiveness of future interventions. Importantly, this research contributes to the limited body of literature on eye care utilization in Ghana, particularly at the district level. By filling this critical knowledge gap, the study provides a foundation for future research and supports ongoing efforts to strengthen eye care systems and achieve national and global eye health goals.

Conceptual Framework

This study is guided by the **Andersen and Newman Framework of Health Services Utilization** (hereafter, the Andersen–Newman model), a widely applied behavioural model for explaining why individuals do or do not use health services.

The framework is designed to identify the conditions that **facilitate or constrain service utilization** and, by extension, provides a structured way to conceptualize "access" as more than service availability alone (Apio-Adih, 2014). In the Andersen–Newman model, utilization is not viewed as a purely clinical decision but as an outcome of interacting individual and contextual determinants operating before and during the experience of illness.

Consistent with the model, **eye care utilization** in this study is conceptualized as a function of three interrelated domains: **predisposing factors**, **enabling factors**, and **need factors** (Andersen, 1995). These domains jointly shape the likelihood that an individual will recognize a problem, decide to seek care, and successfully obtain appropriate services.

Predisposing Factors

Predisposing factors refer to characteristics that exist prior to illness and influence an individual's propensity to use services. In this study, they include:

1. **Social structure**, such as education, occupation, ethnicity, social networks, and cultural norms, which shape health literacy and help-seeking pathways.

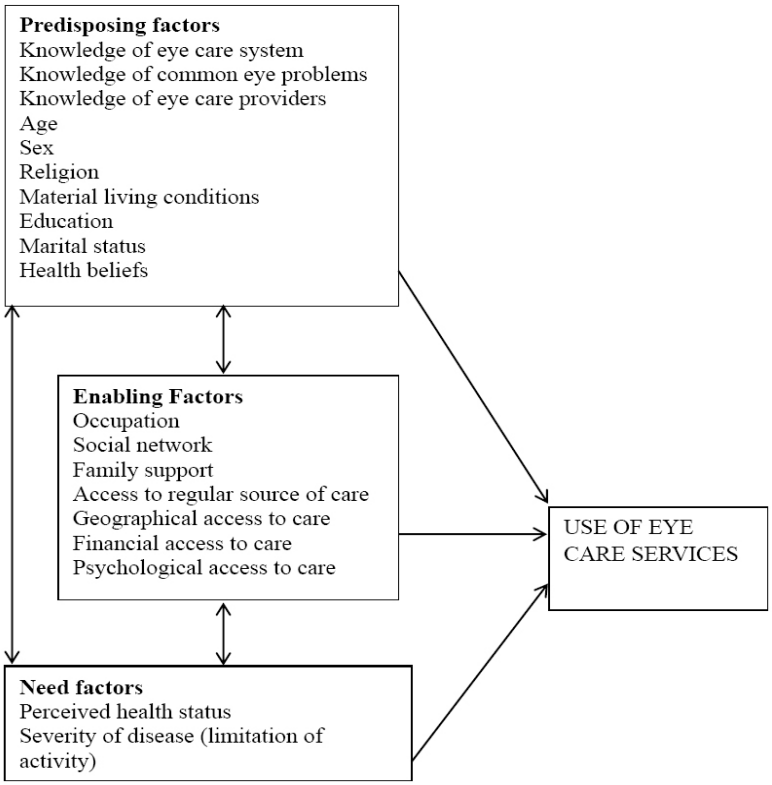

Figure 1. *The Andersen and Newman Framework*

2. **Health beliefs**, including attitudes, values, and knowledge about eye health and the healthcare system; and
3. **Demographic characteristics**, particularly age and gender, which influence risk exposure, health priorities, and service-seeking tendencies.

Enabling Factors

Enabling factors represent the practical resources and logistical conditions that make service use possible. These include **individual- and household-level resources** such as income, health insurance, knowledge of available services, having a regular source of care, distance to the nearest facility, and social support. The model also emphasizes **community-level resources**, including the availability of eye care personnel, facility capacity, and waiting time, which shape real-world access and convenience. Together, these factors determine whether a person who is willing to seek care can obtain it.

Need Factors

Need factors are the most immediate drivers of service utilization and reflect the presence and perceived seriousness of health problems. The Andersen–Newman model distinguishes between:

- **Perceived need**, which captures how individuals assess their own visual function, symptoms, pain, and concern, and whether they consider these issues serious enough to warrant professional care; and
- **Evaluated need**, which reflects clinical assessment and professional judgment regarding health status and the level of care required (Andersen, 1995).

This distinction is crucial because perceived need typically triggers initial care-seeking, whereas evaluated need is more closely linked to treatment decisions and intensity once patients enter the health system (Andersen, 1995).

Application to this study

Within this framework, the **utilization of eye care services** is expected to increase when individuals have favourable predisposing characteristics (e.g., stronger eye health knowledge), adequate enabling resources (e.g., affordability and proximity of services), and higher perceived or clinically evaluated need. Conversely, utilization may be constrained when individuals face weak health beliefs, limited social support, low financial capacity, long travel distances, or low perceived severity of symptoms—even when services are available. Thus, the Andersen–Newman model provides a robust conceptual basis for examining how individual, household, and community determinants interact to shape eye care use.

Eye Health-Seeking Behaviour and Awareness of Eye Conditions

Health-seeking behaviour refers to the actions individuals undertake to prevent disease, detect health problems early,

and seek appropriate treatment when symptoms arise. Contemporary research emphasizes that health-seeking behaviour is influenced not only by individual knowledge but also by broader social, cultural, and systemic factors (Apio-Adih, 2014). Increasing evidence suggests that improving knowledge alone is insufficient to promote sustained behavioural change, and that social support, health system responsiveness, and community engagement play critical roles in facilitating timely utilization of healthcare services (McKain, 2009).

In the context of eye health, attitudes, beliefs, and knowledge significantly influence preventive and curative care utilization. Limited awareness of eye diseases and inadequate dissemination of eye health information contribute to delayed care-seeking and underutilization of available services (Alexander et al., 2008). Demographic factors, particularly age and education, have been consistently associated with increased use of eye care services, as older and more educated individuals tend to have higher awareness of visual health risks and the benefits of regular eye examinations (Robin et al., 2004; Nirmalan et al., 2004; Kovai et al., 2007; Tajunisah et al., 2011). However, despite the increased prevalence of visual impairment among older adults, many individuals—especially in resource-limited settings—do not undergo routine eye examinations or access appropriate rehabilitative services (Laitinen et al., 2008).

Lack of awareness regarding the severity and consequences of eye diseases remains a major barrier to eye care utilization. Individuals often underestimate the impact of visual impairment on daily functioning, leading to delayed diagnosis and treatment (Cano, 2007; Frazier & Kleinstein, 2009). Furthermore, studies have shown that awareness of eye diseases does not necessarily translate into care-seeking behaviour. For instance, increased awareness of glaucoma in some populations did not significantly improve service utilization, largely due to low perceived risk and absence of perceived need (Baker & Murdoch, 2008). Similarly, delayed presentation of treatable conditions such as congenital cataracts has been reported in several settings, highlighting the importance of early detection and timely referral (Leite & Zin, 2011).

Awareness of systemic diseases with ocular complications, such as diabetes and hypertension, also plays a critical role in promoting preventive eye care. Individuals with knowledge of these conditions are more likely to seek eye examinations, as they recognize the risk of vision-threatening complications such as diabetic retinopathy and hypertensive retinopathy (Cano, 2007; Kadri, 2011; Tajunisah et al., 2011). However, evidence suggests that even among patients with diagnosed chronic diseases, compliance with recommended eye screening remains suboptimal, indicating gaps in health education and behavioural adherence (Muecke et al., 2008). Early detection through regular eye examinations is essential for preventing irreversible visual impairment associated with chronic systemic conditions (DellaCroce & Vitale, 2008).

Knowledge and awareness of common eye conditions, including glaucoma, cataracts, and refractive errors, are essential determinants of care-seeking behaviour. Studies have consistently reported low awareness of these conditions, particularly in low- and middle-income countries, where limited access to health information and screening programs contributes to delayed diagnosis (Dandona et al., 2001; Huang et al., 2013). Awareness levels are positively associated with higher education, family history of eye disease, and previous exposure to eye examinations (Cross et al., 2007; Gyawali & Sarkar, 2013). However, misconceptions about eye diseases and financial barriers often prevent individuals from seeking timely treatment, even when symptoms are recognized (Zhouhou et al., 2008; Thapa et al., 2011).

Refractive errors remain a leading cause of visual impairment globally, particularly in developing countries where screening programs and access to corrective services are limited (WHO, 2010). In contrast, developed countries benefit from systematic vision screening programs, especially among school-aged populations, which facilitate early detection and intervention (Aldebasi, 2011). Public health interventions, including community-based screening programs, mass media campaigns, and subsidized eye care services, have been shown to improve awareness and increase utilization of eye care services (Rosman et al., 2009; Marmamula et al., 2011).

Overall, the literature demonstrates that eye health-seeking behaviour is shaped by a complex interplay of individual knowledge, demographic characteristics, disease awareness, and health system factors. Improving eye care utilization requires comprehensive strategies that address knowledge gaps, strengthen health education, improve accessibility, and enhance community engagement. Public health interventions targeting awareness, early detection, and timely referral are essential to reduce preventable visual impairment and promote equitable access to eye care services.

Awareness of Eye Care Services

Awareness of the availability and location of eye care services is a critical determinant of healthcare utilization, as individuals are more likely to seek care when they know where and how to access appropriate services. Knowledge of available services facilitates timely diagnosis, prevention, and treatment of vision-related conditions,

thereby reducing the risk of avoidable visual impairment. However, evidence suggests that awareness alone does not always translate into service utilization, highlighting the presence of additional barriers that influence healthcare-seeking behaviour (Dandona et al., 2001; Baker & Murdoch, 2008).

Several studies have shown that even when individuals are aware of eye care services, utilization rates remain suboptimal. For example, research conducted in Fiji reported that although most respondents were aware of at least one eye care provider, only about half of those with eye problems had accessed services, with even lower utilization observed among older adults (Du Toit et al., 2006). Similarly, studies in Nigeria found that while awareness of eye care services was generally high, misconceptions and incomplete understanding of service availability and provider roles limited effective utilization (Ayanniyi et al., 2010). These findings suggest that awareness must be accompanied by accurate knowledge and understanding of service pathways to influence care-seeking behaviour effectively.

Limited understanding of eye care procedures and services also contributes to underutilization. For instance, in Tanzania, although many individuals were aware that cataract surgery was available, negative perceptions and misunderstandings about the procedure discouraged service uptake (Banzi, 2007). Linguistic and cultural interpretations of medical terminology can significantly influence perceptions of treatment and willingness to seek care. Such misconceptions may reinforce fear and delay treatment, even when services are available.

Geographical and logistical barriers further complicate the relationship between awareness and utilization. Studies have shown that individuals may be aware of modern eye care services but choose alternative treatments due to travel difficulties, transportation costs, or inconvenience associated with accessing formal healthcare facilities (Ogwurike & Pam, 2004; Robin et al., 2004). In addition, lack of proximity to eye care facilities remains a major barrier, particularly in rural and underserved communities.

Social and cultural influences also play a significant role in shaping healthcare decisions. In Kenya, research found that many individuals were unaware of local eye care services, and family members often influenced decisions regarding whether and where to seek treatment (Mwaura, 2009). In such contexts, reliance on informal care, including over-the-counter medications and traditional remedies, may substitute for professional eye care services, further contributing to delayed diagnosis and treatment.

Overall, the literature indicates that while awareness of eye care services is necessary, it is not sufficient to ensure utilization. Effective utilization requires not only knowledge of service availability but also clear understanding of service benefits, accessibility, affordability, and trust in healthcare providers. Public health interventions that improve health literacy, strengthen community outreach, and enhance service accessibility are essential to bridge the gap between awareness and utilization and promote timely access to eye care services.

Factors Influencing the Choice and Utilization of Eye Care Services

Access to eye care services remains a critical global public health challenge, particularly in low- and middle-income countries, where preventable and treatable visual impairments continue to impose significant health and socioeconomic burdens. Access to timely and appropriate eye care enables individuals to maintain functional independence, participate in social and economic activities, and improve overall quality of life (Frazier & Kleinstein, 2009). Conversely, limited access to eye care services contributes to delayed diagnosis, progression of preventable eye conditions, and increased risk of visual impairment and blindness. Socioeconomic inequalities, demographic changes, and health system limitations continue to shape disparities in access to and utilization of eye care services worldwide (Russell, 2008; Shen et al., 2013).

Demographic transitions, including increased life expectancy, have led to a higher prevalence of age-related eye conditions such as cataracts, glaucoma, and presbyopia, thereby increasing the demand for eye care services (Frazier & Kleinstein, 2009). However, despite increased need, utilization remains uneven due to structural, socioeconomic, and behavioural barriers. Numerous studies have documented that barriers to eye care utilization are complex and multifactorial, often involving overlapping social, economic, cultural, and health system determinants (Nirmalan et al., 2004; Bekibele & Murthy, 2012; Shen et al., 2013). These barriers vary across populations and settings, necessitating context-specific interventions to improve access and utilization.

Economic factors, particularly affordability, represent one of the most significant determinants of eye care utilization. Financial constraints, including the cost of consultations, treatment, and transportation, frequently limit access to eye care services, especially among low-income populations (Schaumberg et al., 2000; Marmamula et al., 2011). Studies have consistently shown that individuals with higher income levels are more likely to seek preventive eye examinations and treatment, whereas financial hardship discourages timely care-seeking, even when

services are available (Owsley et al., 2006). In addition, indirect costs such as loss of income, travel expenses, and caregiving responsibilities further compound access barriers, particularly for vulnerable populations.

Geographical accessibility also plays a critical role in shaping healthcare-seeking behaviour. Distance to health facilities, transportation challenges, and uneven distribution of eye care providers significantly influence individuals' decisions to seek care (Ogwurike & Pam, 2004). Individuals residing in rural and underserved areas often face substantial logistical challenges, which contribute to delays in diagnosis and treatment. Similarly, environmental and social responsibilities, such as caregiving and occupational demands, may delay or prevent individuals from accessing eye care services (Kovai et al., 2007).

Health system factors, including availability of specialized services, referral pathways, and service quality, further influence service utilization. Evidence suggests that many individuals initially seek care at general health facilities and may only access specialized eye care services following referral, which can delay diagnosis and treatment (Nirmalan et al., 2004; Tajunisah et al., 2011). Furthermore, fragmented healthcare delivery systems and insufficient integration of preventive eye care into primary healthcare limit early detection and intervention (Frazier & Kleinstein, 2009).

Knowledge and awareness also play a critical role in influencing service utilization. Limited awareness of eye diseases, available services, and treatment options contributes to underutilization of eye care services, even when services are accessible (Alexander et al., 2008). Misconceptions regarding the severity of eye conditions and lack of perceived need for treatment often discourage individuals from seeking timely care. For example, lack of awareness and financial barriers have been identified as major contributors to low uptake of cataract surgery, even in settings where services are available (Odugbo et al., 2012; Bekibele & Murthy, 2012).

Socio-cultural factors, including age, gender, education, and health beliefs, further influence eye care utilization. Individuals with higher levels of education and health literacy are more likely to recognize symptoms and seek appropriate care, whereas those with limited education may delay treatment due to lack of awareness or misconceptions about eye diseases (Ntsoane et al., 2012). Additionally, perceived severity of symptoms, personal health priorities, and satisfaction with previous healthcare experiences influence care-seeking decisions (Owsley et al., 2006).

Overall, the literature demonstrates that the choice and utilization of eye care services are influenced by a complex interplay of socioeconomic, geographic, health system, and individual-level factors. Addressing these barriers requires comprehensive strategies that improve affordability, accessibility, awareness, and quality of eye care services. Strengthening health systems, enhancing public health education, and expanding access to affordable eye care services are essential to improving utilization and reducing preventable visual impairment globally.

Factors Influencing Utilization of Eye Care Services

The utilization of eye care services is a critical determinant in the prevention, early detection, and management of visual impairment. Despite advancements in eye care delivery, utilization remains uneven across populations, largely due to structural, socioeconomic, and individual-level barriers. The availability, accessibility, and affordability of eye care services constitute the primary determinants influencing utilization, while demographic, socioeconomic, and behavioural factors further shape individuals' capacity and willingness to seek care (Ntsoane & Oduntan, 2010). These interrelated determinants influence whether individuals recognize their need for care and can access and utilize available services.

The Andersen behavioural model of health service utilization provides a comprehensive framework for understanding these dynamics. According to Andersen (1995) and Bradley (2008), health service utilization is influenced by a combination of societal factors, health system characteristics, and individual determinants, which include predisposing, enabling, and need factors. Predisposing factors, such as age, gender, education, occupation, and health beliefs, influence an individual's propensity to seek care. Enabling factors, including income, health insurance coverage, proximity to healthcare facilities, and availability of services, determine whether individuals have the resources and opportunity to access care. Need factors, both perceived and clinically evaluated, represent the most immediate drivers of utilization, as individuals experiencing symptoms or diagnosed with ocular or systemic conditions are more likely to seek care (Keeffe et al., 2002).

Availability of eye care services is a fundamental prerequisite for utilization. Without sufficient infrastructure, trained personnel, and diagnostic equipment, individuals cannot access appropriate care regardless of need (Fotouhi et al., 2006). However, availability alone does not guarantee utilization. Accessibility, which encompasses geographic proximity, transportation options, and service convenience, plays a crucial role in determining whether individuals can physically reach eye care facilities (Ntsoane & Oduntan,

2010). Individuals residing in rural or underserved areas often experience significant geographic barriers, resulting in delayed diagnosis and treatment.

Affordability represents another critical determinant of eye care utilization. The direct costs of consultations, treatments, and corrective devices, as well as indirect costs such as transportation and lost income, can significantly limit access, particularly among low-income populations (Barraza, 1998). Even when services are available and accessible, financial constraints may prevent individuals from utilizing them, contributing to disparities in eye health outcomes.

Individual health needs also strongly influence utilization patterns. Individuals with diagnosed eye conditions or systemic diseases associated with ocular complications, such as diabetes and hypertension, demonstrate higher rates of eye care utilization due to increased perceived and evaluated need (Keeffe et al., 2002). Similarly, enabling factors such as health insurance coverage, urban residence, and social support facilitate access to services, while predisposing characteristics such as education, health literacy, and health beliefs influence care-seeking behaviour (Ntsoane & Oduntan, 2010).

Understanding the complex interplay between these determinants is essential for improving eye care utilization. Identifying and addressing barriers related to availability, accessibility, affordability, and individual-level factors can inform targeted interventions aimed at improving service uptake and reducing preventable visual impairment. Strengthening health system capacity, expanding equitable access, and improving public awareness are critical strategies for enhancing eye care utilization and improving population eye health outcomes.

Availability, Accessibility, and Affordability of Eye Care Services

Availability of Eye Care Services

The availability of eye care services varies considerably across and within countries, contributing significantly to disparities in eye health outcomes. Globally, high-income countries have substantially higher densities of eye care professionals compared to low- and middle-income countries, with some estimates indicating up to a ninefold difference in provider-to-population ratios (Silva, Bateman, & Contreras, 2002). Within countries, disparities in service distribution are also evident, with urban areas typically having greater access to ophthalmologists, optometrists, and specialized eye care facilities than rural regions (Ntsoane & Oduntan, 2010). This uneven distribution of human resources and infrastructure has been identified as a major contributor to preventable visual impairment, particularly in sub-Saharan Africa and other resource-constrained settings.

Shortages of trained personnel, inadequate infrastructure, and insufficient government investment continue to limit the availability of essential eye care services. For example, limited ophthalmologist-to-population ratios in several regions have resulted in delayed diagnosis and management of common vision-threatening conditions such as cataracts, glaucoma, and diabetic retinopathy (Ntsoane & Oduntan, 2010). Similarly, studies conducted in India, Jamaica, Afghanistan, and Nigeria have reported insufficient availability of trained eye care providers, low vision services, and diagnostic equipment, contributing to low utilization rates and increased prevalence of untreated visual impairment (Dandona et al., 2000; Buchanan & Horwitz, 2000; Husainzada, 2007; Okoye et al., 2007). In addition, inadequate availability of optometric services within public healthcare systems limits access to refractive error correction, resulting in avoidable vision loss (Khan, 2004).

However, the availability of services alone does not guarantee utilization. Evidence indicates that even in settings where services exist, barriers such as lack of awareness, affordability, and accessibility continue to limit service uptake (Lewallen & Courtright, 2000). These findings highlight the need for comprehensive strategies that address both service availability and the broader structural and behavioural determinants of utilization.

Accessibility of Eye Care Services

Geographic accessibility is a key determinant of eye care utilization, particularly in rural and underserved populations. Accessibility refers to the ease with which individuals can physically reach eye care services, which is influenced by factors such as distance to healthcare facilities, transportation availability, travel time, and infrastructure quality (Silva et al., 2002). Limited accessibility has been identified as a major barrier to the effective prevention and management of visual impairment, particularly in low-resource settings (Di Stefano, 2002).

In many developing countries, eye care services are disproportionately concentrated in urban areas, leaving rural populations underserved and reliant on informal or alternative healthcare providers (Fafowora, 1996). Transportation challenges, poor road infrastructure, and long travel distances have been consistently identified as major barriers to accessing eye care services (Cochrane, 1995; Dhaliwal & Gupta, 2007). For example, studies in Tanzania, Malawi, and India have demonstrated that individuals living closer to healthcare facilities are significantly more likely to utilize eye care services compared to those residing in remote areas (Courtright

et al., 1995; Chandrashekhar et al., 2007; Odedra et al., 2008).

Accessibility challenges are not limited to developing countries. Even in high-income settings, barriers such as transportation limitations, lack of mobility, and dependence on caregivers have been shown to restrict access to eye care services, particularly among older adults and vulnerable populations (O'Connor et al., 2008; Owsley et al., 2006). These findings underscore the importance of improving geographic and logistical access to eye care services to enhance utilization and reduce disparities.

Affordability of Eye Care Services

Affordability represents one of the most significant barriers to eye care utilization globally. The direct costs of eye care services, including consultations, diagnostic tests, surgical procedures, and corrective devices, as well as indirect costs such as transportation, lost income, and caregiving expenses, can limit access to care, particularly among low-income populations (Lewallen & Courtright, 2000; Naidoo et al., 2006). Financial barriers are especially pronounced in low-resource settings, where poverty and lack of insurance coverage restrict individuals' ability to seek timely care (Oduntan, 2005).

Numerous studies have identified cost as a primary barrier to cataract surgery and other eye care interventions. Research conducted in Nigeria, Ethiopia, Kenya, Nepal, and Pakistan has consistently shown that financial constraints prevent individuals from accessing essential eye care services, even when such services are available (Rabiu, 2001; Melese et al., 2004; Nedgwa et al., 2005; Sapkota et al., 2003; Jadoon et al., 2007). Similarly, studies in high-income countries have reported that lack of insurance coverage and high out-of-pocket costs contribute to disparities in eye care utilization (Zhang et al., 2008; Elliot et al., 2008).

Indirect costs also represent a substantial barrier to utilization. Expenses related to transportation, accommodation, and loss of income during treatment can significantly increase the overall financial burden, particularly for rural and economically disadvantaged populations (Lewallen & Courtright, 2000). Even when services such as spectacles are provided at no direct cost, associated logistical and opportunity costs may still limit access (Naidoo et al., 2006).

Overall, affordability remains a critical determinant of eye care utilization, and reducing financial barriers through subsidized services, insurance coverage, and public health interventions is essential to improving access and reducing preventable visual impairment.

Eye Health-Seeking Behaviour

Eye health-seeking behaviour encompasses the actions individuals undertake to maintain visual health, prevent eye diseases, and seek professional care when symptoms arise or risks are perceived. It is a critical determinant of timely diagnosis, treatment, and prevention of avoidable visual impairment. Contemporary public health research emphasizes that health-seeking behaviour is influenced not only by individual knowledge but also by broader social, cultural, and health system factors, including social support, health literacy, and access to services (McKain, 2009). Increasingly, evidence suggests that health education alone is insufficient to promote sustained behavioural change, and that effective interventions must address structural, behavioural, and social determinants simultaneously.

Individual attitudes, beliefs, and perceptions regarding eye health significantly influence the utilization of preventive and curative eye care services. Limited awareness of eye diseases, coupled with inadequate communication between healthcare providers and patients, contributes to delayed care-seeking and underutilization of services (Alexander et al., 2008). Demographic factors, particularly age and educational attainment, have been consistently associated with increased utilization of eye care services. Older individuals and those with higher levels of education are more likely to recognize the importance of routine eye examinations and seek preventive care, reflecting greater health literacy and perceived vulnerability to eye diseases (Robin et al., 2004; Nirmalan et al., 2004; Kovai et al., 2007; Tajunisah et al., 2011).

Despite the increased prevalence of visual impairment among aging populations, many individuals, particularly older adults, do not undergo regular eye examinations or receive appropriate rehabilitative services (Laitinen et al., 2008). Several barriers contribute to this gap, including limited awareness of disease severity, inadequate understanding of the functional consequences of visual impairment, and insufficient access to specialized eye care services (Cano, 2007; Frazier & Kleinstein, 2009). These barriers often result in delayed diagnosis and treatment, increasing the risk of preventable vision loss.

Importantly, awareness of eye diseases does not necessarily translate into appropriate care-seeking behaviour. Studies have shown that individuals may be aware of eye conditions such as glaucoma but may not seek professional care due to low perceived susceptibility, absence of symptoms, or lack of perceived urgency (Baker & Murdoch, 2008). This disconnects between knowledge and behaviour highlights the importance of addressing psychological and behavioural factors, including risk perception and health

beliefs, in eye health promotion strategies.

Early detection and timely treatment are essential for preventing irreversible vision loss, particularly for conditions such as congenital cataracts and glaucoma. Delays in seeking care have been reported in various settings, often due to limited awareness, inadequate referral systems, and health system barriers (Leite & Zin, 2011). These findings underscore the importance of strengthening public health interventions that promote early recognition of symptoms, improve awareness of available services, and enhance access to eye care.

Overall, eye health-seeking behaviour is shaped by a complex interaction of individual, social, and health system factors. Improving utilization of eye care services requires comprehensive strategies that address knowledge gaps, improve access to services, and promote positive health behaviours. Strengthening public health education, improving service accessibility, and enhancing health system responsiveness are essential to reducing delays in care-seeking and preventing avoidable visual impairment.

Factors Influencing Utilization of Available, Accessible, and Affordable Eye Care Services

The availability, accessibility, and affordability of eye care services are essential prerequisites for utilization; however, their presence alone does not guarantee uptake. Evidence from multiple global settings indicates persistent underutilization of eye care services even where services are physically accessible and financially subsidized. For instance, population-based studies in Iran reported that over one-third of individuals had never undergone an eye examination, and a substantial proportion of visually impaired individuals had not accessed available services (Fotouhi et al., 2006). Similarly, in India, utilization rates remained low despite expanded cataract surgical programs and the provision of outreach services, highlighting the influence of additional demographic, socioeconomic, behavioural, and psychosocial determinants (Robin et al., 2004; Bhagwan et al., 2006).

Demographic Factors

Demographic characteristics, including age, gender, race, and education, significantly influence eye care utilization. Age has been consistently identified as a strong predictor of service utilization, largely due to the increasing prevalence of age-related eye conditions such as cataract, glaucoma, and age-related macular degeneration among older populations (Schaumberg et al., 2000; Kovai et al., 2007). Older adults are more likely to seek eye care due to increased symptom severity and perceived vulnerability to vision loss (Morales et al., 2010). Gender differences in utilization have also been documented, with women generally demonstrating higher rates of eye care use, possibly due to greater health awareness and preventive health behaviours (Fotouhi et al., 2006; Palagyi et al., 2008). In contrast, racial and ethnic disparities in utilization have been linked to socioeconomic inequalities, access barriers, and health system inequities (Orr et al., 1999; Zhang et al., 2008).

Education plays a critical role in influencing health-seeking behaviour and service utilization. Higher educational attainment is associated with greater health literacy, improved awareness of eye conditions, and increased likelihood of accessing preventive and curative services (Barraza, 1998; Schaumberg et al., 2000). Educated individuals are also more likely to belong to higher socioeconomic groups, enabling them to overcome financial and logistical barriers to care (Morales et al., 2010).

Socioeconomic status further influences access to and utilization of eye care services. Higher income levels and access to health insurance have been associated with increased utilization, while financial constraints remain a major barrier among low-income populations (Zhang et al., 2008; Chandrashekar et al., 2007). Individuals with greater economic resources are better positioned to afford consultation fees, treatment costs, and associated indirect expenses such as transportation and lost income.

Knowledge and Awareness

Knowledge and awareness of eye diseases and available services are essential determinants of utilization. Lack of awareness has been consistently identified as a major barrier to accessing eye care services, even when services are free or subsidized (Oduntan, 2001; Chandrashekar et al., 2007). Studies have shown that individuals who are unaware of available services or the importance of preventive eye examinations are less likely to seek care (Farmer et al., 2006; Palagyi et al., 2008). Public health education campaigns and targeted awareness interventions have been shown to improve utilization rates, particularly among high-risk populations such as individuals with diabetes (Muller et al., 2007).

Knowledge of eye diseases and understanding their potential consequences significantly influence care-seeking behaviour. Individuals who recognize the symptoms and risks associated with eye conditions are more likely to seek timely treatment (Courtright et al., 1995). Educational interventions, including school-based screening programs and community outreach initiatives, have been identified as effective strategies for improving awareness and increasing utilization (He et al., 2005).

Perceived and Evaluated Need

Perceived and clinically evaluated need for eye care services is a primary determinant of utilization. Individuals experiencing symptoms such as vision loss, eye pain, or functional limitations are more likely to seek care compared to those with asymptomatic conditions (Keeffe et al., 2002). Similarly, individuals with chronic systemic conditions such as diabetes and hypertension demonstrate higher utilization rates due to increased risk of ocular complications (Gold et al., 2006). However, individuals with gradual or asymptomatic vision loss may delay seeking care, resulting in delayed diagnosis and treatment (Palagyi et al., 2008).

Psychological and Cultural Factors

Psychological and cultural factors significantly influence health-seeking behaviour and eye care utilization. Fear of surgery, misconceptions about treatment outcomes, and cultural beliefs about eye diseases have been identified as major barriers to seeking care (Dhaliwal & Gupta, 2007; Patel et al., 2006). In some settings, individuals may delay treatment due to fear of surgical complications, perceived lack of need, or reliance on alternative forms of care (Johnson et al., 1998). Cultural attitudes and social norms may also shape perceptions of eye health and influence decisions regarding care-seeking (Ashaye et al., 2006).

Perceptions of Service Quality and Satisfaction

Perceived quality of care and patient satisfaction are important determinants of continued utilization. Negative experiences with healthcare providers, poor service quality, and dissatisfaction with treatment outcomes may discourage individuals from seeking future care (Palagyi et al., 2008). Conversely, positive patient-provider interactions and high-quality services can enhance trust and promote continued engagement with healthcare systems (Ashaye et al., 2006).

Social and Structural Factors

Social support and structural barriers also influence utilization. Lack of family support, caregiving responsibilities, and logistical challenges such as transportation difficulties can limit access to care (Habte et al., 2008). Language barriers, poor general health, and competing life priorities may further delay care-seeking (Gold et al., 2006). These findings highlight the importance of addressing social determinants alongside structural barriers to improve access and utilization.

Summary

Table 1. *Population Distribution of Residents in Abura Asebu - Kwamankese*

Communities (Settlement)	Population
Abakrampa	5,268
Aboenu	3,223
Abura – Dunkwa	11,345
Akonoma	4,421
Amosima	4,326
Asebu	8,653
Asebu Ekroful	6,891
Asuansi	4,112
Ayeldu	5,523
Batanyaa	5,654
Brafoyaw	5,432
Edumfa	5,321
Katayiase	4,886
Obohen	5,461
Obokor	4,021
New Ebu	8,023
New Odonase	4,343
Nyanfeku- Ekrofur	5,741
Nyamedom	6,776
Moree	7,765
Total	117,185

Source: Source: Fieldwork, 2018 (2010, Census).

The literature demonstrates that utilization of eye care services is influenced by a complex interaction of demographic, socioeconomic, behavioural, psychological, and structural factors. Even when services are available, accessible, and affordable, barriers such as limited awareness, low perceived need, financial constraints,

and cultural beliefs can restrict utilization. Addressing these multifaceted barriers requires integrated strategies that improve health literacy, strengthen health systems, enhance service quality, and reduce socioeconomic and structural inequalities. Such efforts are essential to improving eye care utilization and reducing the global burden of preventable visual impairment.

Study Design

This study employed a community-based cross-sectional quantitative research design to examine determinants of access and utilization of eye care services in the Abura Asebu Kwamankese District, Ghana. A cross-sectional approach was selected because it allows for the systematic collection of data from a defined population at a single point in time to identify patterns, associations, and determinants of health-seeking behaviour (Creswell & Creswell, 2018). This design is widely used in public health research to assess service utilization and identify barriers to healthcare access within specific populations (Setia, 2016). The study aimed to evaluate how demographic, socioeconomic, accessibility, affordability, and awareness factors influence eye care service utilization.

Study Setting

The study was conducted in the Abura-Asebu-Kwamankese District, located in the Central Region of Ghana. The district comprises both urban and rural communities with diverse socioeconomic and demographic characteristics. Health services in the district are provided through government health facilities, private clinics, and community-based health planning and services (CHPS) compounds. However, access to specialized eye care services remains limited, particularly in rural communities. The district's population structure, geographic distribution, and healthcare infrastructure make it an appropriate setting for examining determinants of eye care service utilization.

Study Population

The target population consisted of adults aged 18 years and above residing in the Abura-Asebu-Kwamankese District. Adults were selected because they are more likely to make independent healthcare decisions and have greater exposure to factors influencing health service utilization.

Individuals who had resided in the district for at least six months were eligible for inclusion to ensure familiarity with local healthcare services. Individuals who were critically ill or unable to provide informed consent were excluded from the study.

Sample Size Determination

The sample size was determined using Cochran's formula for cross-sectional studies, which is appropriate for estimating population proportions in large populations (Cochran, 1977). The formula is expressed as:

$$n = \frac{Z^2 p(1-p)}{d^2}$$

Where:

- n = required sample size
- Z = standard normal deviation at 95% confidence level (1.96)
- p = estimated prevalence of eye care utilization (assumed to be 50% due to lack of local estimates)
- d = margin of error (0.05)

This approach ensures adequate statistical power and precision in estimating determinants of eye care utilization.

Sampling Procedure

A multistage sampling technique was used to select participants. First, communities within the district were stratified into urban and rural categories to ensure representation. Second, communities were randomly selected using simple random sampling. Third, households within selected communities were selected using systematic sampling. Finally, one eligible respondent per household was selected using simple random sampling. This approach minimized sampling bias and ensured representativeness of the study population (Kumar, 2019).

Data were collected using a structured questionnaire developed based on existing literature and the Andersen behavioural model of health service utilization (Andersen, 1995). The questionnaire was pretested in a similar population to ensure clarity, validity, and reliability.

Data were analyzed using Statistical Package for the Social Sciences (SPSS), version 21. Descriptive statistics, including frequencies, percentages, means, and standard deviations, were used to summarize participant characteristics.

These analytical methods are appropriate for identifying relationships and predictors in cross-sectional health research (Field, 2018).

Content validity was ensured through expert review by public health and eye care professionals. The questionnaire was pretested to ensure clarity and relevance. Reliability was assessed using internal consistency measures. After the data collection and analysis, an overall reliability coefficient of .862 was obtained for the questionnaires using the Cronbach alpha. Standardized data collection procedures were followed to ensure accuracy and reproducibility.

Table 2. *Sample Size Distribution of Residents in Abura Asebu - Kwamankese*

Communities (Settlement)	Population	Sample Size
Abakrampa	5,268	31
Aboenu	3,223	19
Abura – Dunkwa	11,345	68
Akonoma	4,421	25
Amosima	4,326	25
Asebu	8,653	53
Asebu Ekroful	6,891	42
Asuansi	4,112	24
Ayeldu	5,523	34
Batanyaa	5654	34
Brafoyaw	5432	34
Edumfa	5,321	33
Katayiase	4,886	28
Obohen	5,461	33
Obokor	4,021	24
New Ebu	8,023	48
New Odonase	4,343	26
Nyanfeku- Ekrofur	5,741	34
Nyamedom	6,776	40
Moree	7,765	46
Total	117,185	701

Ethical Considerations

Ethical approval was obtained from the appropriate institutional review board. Permission was also obtained from district health authorities and community leaders. Participants were informed about the purpose of the study, and written informed consent was obtained before participation. Confidentiality and anonymity were maintained by using unique identification codes instead of personal identifiers. Participation was voluntary, and respondents were free to withdraw at any time.

Results and Discussion

Table 3. *Demography of Respondents*

Variable	Subscale	No	%
Sex	Male	333	47.5
	Female	368	52.5
Age	18 – 25 years	27	3.9
	26 – 35 years	101	14.4
	36 – 45 years	298	42.5
	46 – 55 years	176	25.1
	56 years and above	99	14.1
Occupation	Artisans / craftsmen	48	6.8
	Civil Servants	33	4.7
	Traders	99	14.1
	Entrepreneurs	44	6.3
	Government workers	157	22.4
	Small and Medium Scale Enterprises	65	9.3
	Self-employed	66	9.4
	Farmers	189	27.0
Communities	Abakrampa	31	4.4
	Aboenu	19	2.7
	Abura –Dunkwa	68	9.7
	Akonoma	25	3.6
	Amosima	25	3.6
	Asebu	53	7.6
	Asebu – Ekroful	42	6.0

	Asuansi	24	3.4
	Ayeldu	34	4.9
	Batanyaa	34	4.9
	Brafoyaw	34	4.9
	Edumfa	33	4.7
	Katayiase	28	4.0
	Obohen	33	4.7
	Obokor	24	3.4

Source: Field data, 2019.

Demographic Characteristics of Respondents: Occupation and Community Distribution

Table 3 shows the occupational distribution of respondents, revealing that farming was the predominant occupation, accounting for 189 (27.0%) of participants. This was followed by government workers, 157 (22.4%), traders, 99 (14.1%), self-employed individuals, 66 (9.4%), small and medium-scale entrepreneurs, 65 (9.3%), artisans/craftsmen, 48 (6.8%), entrepreneurs, 44 (6.3%), and civil servants, 33 (4.7%). The dominance of farming reflects the agrarian nature of the Abura-Asebu-Kwamankese District, where agriculture serves as the primary source of livelihood. This occupational pattern has important implications for eye care utilization, as individuals engaged in farming and informal employment often face barriers such as irregular income, limited health insurance coverage, and reduced access to health services (Ntsoane & Oduntan, 2010; Marmamula et al., 2011). Furthermore, rural and agricultural populations are more vulnerable to environmental and occupational eye hazards, increasing their risk of visual impairment while simultaneously experiencing lower access to preventive and curative eye care services (Courtright & Lewallen, 2009).

The community distribution of respondents indicates broad geographical representation across the district. The largest proportion of respondents was drawn from Abura-Dunkwa, 68 (9.7%), followed by Asebu, 53 (7.6%), and Asebu-Ekroful, 42 (6.0%). Smaller proportions were sampled from Batanyaa, Brafoyaw, and Ayeldu, each with 34 (4.9%), Obohen and Edumfa, 33 (4.7%), Abakrampa, 31 (4.4%), Katayiase, 28 (4.0%), Akonoma and Amosima, 25 (3.6%), Obokor and Asuansi, 24 (3.4%), and Aboenu, 19 (2.7%). The higher representation from Abura-Dunkwa is expected, as it is the administrative capital and the most densely populated area in the district. Urban and semi-urban centers typically have higher population densities and better access to health infrastructure, which may influence patterns of health service utilization (Fotouhi et al., 2006).

Overall, the occupational and community distribution highlights the predominantly rural and agrarian composition of the study population. These structural characteristics are critical determinants of health service utilization, as occupation, income stability, and geographical location influence awareness, accessibility, and affordability of eye care services. This underscores the need for targeted, community-based eye care interventions tailored to rural populations and agricultural workers to improve equitable access to essential eye health services.

Discussion and Analysis of Research Questions

This section presents a comprehensive analysis of the study findings, structured according to the research questions that guided the investigation. The results are organized thematically to address each research question and to provide a clear understanding of the factors influencing the utilization of eye care services in the study area. The analysis integrates descriptive statistical techniques to summarize respondents' perceptions and experiences, while the discussion interprets these findings within the broader context of existing literature and the study's conceptual framework.

Data collected from the field were analyzed using Likert-scale responses, which were coded numerically to facilitate quantitative interpretation. The response categories were assigned as follows: strongly disagree (1), disagree (2), undecided (3), agree (4), and strongly agree (5). Mean scores were computed to determine the overall direction of respondents' perceptions regarding each statement. For interpretive purposes, mean values ranging from 1.0 to 2.4 were considered indicative of disagreement, values between 2.5 and 3.4 reflected neutral or undecided responses, and mean scores from 3.5 to 5.0 represented agreement. This approach enabled the identification of dominant perceptions and trends related to eye care service utilization.

In addition, standard deviation values were examined to assess the degree of variability in respondents' responses. Lower standard deviation values (less than 1.0) indicated a high level of consensus or homogeneity among respondents, suggesting shared perceptions or experiences. Conversely, higher standard deviation values (greater than 1.0) reflected greater variability or heterogeneity, indicating differences in opinions across the study population. This measure provided important insights into the consistency and reliability of respondents' views.

Overall, this analytical approach ensures a systematic and rigorous examination of the research questions, enabling the identification of key determinants influencing eye care service utilization. The findings presented in this section provide empirical evidence to inform policy recommendations and interventions aimed at improving access to and utilization of eye care services in the district.

Eye Care Services are Available in the Abura Asebu–Kwamankese District

Table 4 . *Eye Care Services That Exist in Abura Asebu – Kwamankese District*

Statements	Mean	SD
Private eye care service providers	4.23	1.723
Government hospital eye care services	3.65	1.903
Ophthalmological services	2.54	0.561
Services of Optometrist	1.99	0.651
General Practitioner	3.91	1.912
Ophthalmic nurse	2.67	1.432
Traditional Eye Care Providers	4.12	1.067
Opticians	1.98	1.054
Eye Camps	3.91	1.077
Allopathic practitioners	2.67	0.761

Source: Field data, 2019.

Availability and Types of Eye Care Service Providers

The findings indicate that private eye care providers constitute the most prominent source of eye care services in the Abura–Asebu–Kwamankese District (M = 4.23, SD = 1.723). The high mean score suggests that respondents widely recognize private providers as key contributors to eye health service delivery. However, the relatively large standard deviation indicates variability in perceptions, which may reflect unequal geographic distribution or differences in service accessibility across communities. This finding aligns with existing evidence that private healthcare providers increasingly fill service delivery gaps in underserved and rural areas where public healthcare infrastructure is limited (Apio-Adih, 2014). The expanding role of private providers is particularly significant in developing regions, where public health systems often face resource constraints, workforce shortages, and infrastructure limitations. While private sector involvement enhances service availability, concerns remain regarding affordability and equitable access, especially among economically disadvantaged populations.

In addition to private providers, general practitioners were identified as important contributors to eye care service delivery (M = 3.91, SD = 1.912). This suggests that general medical practitioners serve as frontline healthcare providers for individuals with eye conditions, particularly in areas lacking specialized professionals. The observed variability in responses reflects differences in access to general practitioners across communities. This finding is consistent with prior research indicating that general practitioners play a crucial role in primary eye care through early detection, initial treatment, and referral to specialists when necessary (McKain, 2009). Their involvement is especially important in rural and resource-constrained settings, where specialist eye care services may be unavailable or difficult to access. However, reliance on general practitioners rather than specialized eye care professionals may limit the quality and comprehensiveness of eye care services, particularly for complex conditions requiring specialized expertise.

Traditional eye care providers were also widely recognized as existing sources of eye care services in the district (M = 4.12, SD = 1.067). This finding highlights the continued reliance on traditional medicine within rural communities, where cultural beliefs, accessibility, and affordability influence healthcare choices. The moderate variability in responses suggests that while traditional eye care practices are common, their use may vary depending on individual preferences, cultural beliefs, and access to formal healthcare services. This finding supports previous studies demonstrating that traditional healers remain important healthcare providers in many developing regions, particularly where formal healthcare systems are inadequate or inaccessible (Cano, 2007). Traditional medicine is often perceived as culturally acceptable, affordable, and geographically accessible, making it a preferred option for some individuals. However, reliance on traditional eye care may delay access to appropriate medical treatment and increase the risk of preventable visual impairment, highlighting the need for improved integration of traditional and formal healthcare systems.

In contrast, respondents generally disagreed that optometry services were available in the district (M = 1.99, SD = 0.651), indicating a significant shortage of specialized eye care professionals. The low standard deviation suggests consistency in respondents' perceptions regarding the

absence of optometrists. This finding reflects a critical gap in specialized eye care service provision and is consistent with global evidence demonstrating unequal distribution of eye care professionals, particularly in rural and underserved areas (Frazier & Kleinstein, 2009). The absence of optometrists' limits access to essential services such as vision screening, refractive error correction, and early detection of eye diseases. This shortage may contribute to delayed diagnosis, increased prevalence of untreated visual impairment, and reduced overall eye health outcomes. Addressing this gap requires targeted policy interventions, including workforce redistribution, incentives for rural practice, and investment in eye care infrastructure.

Implications for Eye Care Service Delivery

The findings collectively reveal a fragmented eye care delivery system characterized by reliance on private providers, general practitioners, and traditional healers, alongside a critical shortage of specialized eye care professionals. This pattern reflects broader structural challenges commonly observed in resource-limited settings, including workforce shortages, inadequate infrastructure, and unequal service distribution (World Health Organization, 2010). The coexistence of formal and informal healthcare providers underscores the importance of strengthening health system integration to ensure safe, accessible, and high-quality eye care services.

The prominent role of private providers highlights their importance in expanding service availability; however, their services may not be accessible to economically disadvantaged populations. Similarly, the reliance on general practitioners reflects adaptive responses to specialist shortages but may compromise the quality of specialized eye care. The continued use of traditional eye care providers further reflects gaps in formal healthcare access and the influence of cultural beliefs on healthcare utilization.

The absence of optometrists represents the most critical structural barrier, as optometrists play a key role in preventive care, early diagnosis, and management of visual impairments. Strengthening eye care systems requires targeted investments in workforce development, equitable distribution of specialized professionals, and improved integration of primary and specialized care services.

Overall Interpretation

Overall, the findings demonstrate that while multiple sources of eye care exist in the district, access to specialized eye care services remains limited. The dominance of private providers, reliance on general practitioners, and continued use of traditional medicine reflect adaptive responses to systemic healthcare limitations. These findings highlight the need for comprehensive health system strengthening, including workforce expansion, infrastructure development, and policy interventions aimed at improving accessibility, affordability, and quality of eye care services.

Eye Health Seeking-Behaviours of Residents in Abura Asebu – Kwamankese District

Table 5. *Eye Health Seeking Behaviours Among Residents in Abura Asebu – Kwamankese District*

Statements	Mean	SD
Knowledge of available services and the need for regular eye examinations	2.01	1.913
The need for eye health information	3.01	1.532
Eye screening, diagnosis, treatment and rehabilitation programs	1.09	1.261
Health seeking behavior could reduce delays to diagnosis, improve treatment compliance	2.01	1.710
Increasing age and education seems to influence the utilization of eye care services	2.91	0.221
Inadequate understanding about the impact of poor vision on activities of daily living	2.11	0.321
A lack of awareness of the severity of ocular conditions and difficulty coping with the diseases once diagnosed	2.22	0.121

Source: Field data, 2019.

Results and Discussion: Eye Health Information Needs and Awareness

The findings presented in Table 5 indicate that respondents moderately agreed that they require additional eye health information (M = 3.01, SD = 1.532). This result suggests a substantial unmet need for eye health education within the district, reflecting gaps in public awareness and preventive health-seeking behaviour. The relatively high standard deviation indicates considerable variability in responses, suggesting disparities in awareness levels across different population groups, possibly influenced by factors such as education, access to healthcare, and exposure to health promotion initiatives. The need for increased eye health information is particularly significant because knowledge plays a central role in shaping preventive health behaviour and promoting early utilization of healthcare services. Consistent with this finding, Baker and Murdoch (2008) reported that limited public engagement in seeking eye health information contributes to delayed diagnosis and reduced uptake of preventive eye care services. The lack

of proactive information-seeking behaviour may therefore contribute to increased vulnerability to preventable visual impairment.

Furthermore, respondents generally agreed that there is limited awareness of the severity and implications of ocular conditions (M = 2.22, SD = 0.121). The low standard deviation indicates strong consensus among respondents, highlighting widespread knowledge deficits regarding eye diseases and their management. This lack of awareness may result in delayed healthcare-seeking behaviour, as individuals may fail to recognize early symptoms or underestimate the seriousness of eye conditions. Such knowledge gaps are particularly concerning given that many eye diseases, including glaucoma and diabetic retinopathy, progress asymptomatically in their early stages but can lead to irreversible vision loss if untreated. This finding supports previous research demonstrating that insufficient understanding of eye diseases remains a major barrier to effective eye care utilization, particularly in rural and underserved populations (Baker & Murdoch, 2008). Improving public awareness is therefore critical for promoting early detection and timely intervention.

Similarly, respondents reported inadequate understanding of the impact of visual impairment on daily functioning (M = 2.11, SD = 0.321), with low variability indicating a shared perception across the population. This finding suggests that many individuals underestimate the functional, social, and economic consequences of visual impairment, which may reduce their motivation to seek preventive or corrective care. Poor awareness of the broader implications of vision loss may contribute to delayed healthcare utilization, reduced treatment adherence, and increased risk of avoidable blindness. Previous studies have shown that awareness of the functional consequences of visual impairment is a key determinant of health-seeking behaviour, influencing individuals' decisions to seek professional eye care services (Frazier & Kleinstein, 2009).

Collectively, these findings highlight significant gaps in eye health literacy within the district, which may contribute to suboptimal utilization of available eye care services. From a public health perspective, these results underscore the urgent need for targeted health education interventions aimed at improving awareness, promoting preventive health behaviours, and enhancing early detection of eye conditions. Strengthening community-based health promotion programs, integrating eye health education into primary healthcare services, and leveraging media platforms for public awareness campaigns may be effective strategies for improving eye health knowledge and service utilization. Improving eye health literacy is essential for reducing preventable visual impairment and achieving equitable access to eye care services.

Table 6. *Awareness of Residents in Abura Asebu – Kwamankese District on Available Eye Care Services*

Statements	Mean	SD
Residents are not aware of the presence of eye care services	2.02	1.451
Patients are in the habit of consulting members of the family before deciding on seeking medical help	1.09	1.913
Patients prefer to patronize other channels of treatment like using over the counter drugs and some traditional eye medicines	1.11	1.904
Residents are unaware of existing eye care services	2.19	1.876
Wrong perception about seeking eye care services	2.92	1.928
Patients know of such eye care services, but they do not access them	1.09	.009
Knowledge and locations of eye care services could enable individuals to access such facilities	2.80	1.653

Source: Field data, 2019.

Results and Discussion: Awareness and Perceptions of Eye Care Services

The findings presented in Table 6 indicate that respondents generally lacked knowledge regarding the availability and location of eye care services (M = 2.80, SD = 1.653). This result highlights a critical gap in health system awareness, which may significantly hinder access to essential eye care services. The relatively high standard deviation suggests substantial variability in awareness levels across respondents, likely reflecting disparities in education, access to health information, and proximity to healthcare facilities. Limited knowledge of service availability has been consistently identified as a key barrier to healthcare utilization, particularly in underserved and rural populations. When individuals are unaware of available services or do not know where to seek care, delays in diagnosis and treatment become more likely, increasing the risk of preventable visual impairment. This finding aligns with Leite and Zin (2011), who emphasized that awareness and understanding of eye health and available services are critical determinants of timely healthcare-seeking behaviour and early referral for treatment.

Similarly, respondents reported low awareness of existing eye care services within the Abura Asebu Kwamankese District (M = 2.19, SD = 1.876), indicating a widespread lack of familiarity with available healthcare infrastructure. The high variability in responses suggests unequal distribution of information, where some individuals may

have access to eye health information while others remain uninformed. Lack of awareness of available services represents a major structural barrier to healthcare utilization, as individuals cannot access services they do not know exist. This finding is consistent with Adriono (2011), who reported that inadequate awareness of eye care services significantly limits service utilization, even in settings where such services are available. The lack of awareness may also reflect insufficient public health education, weak community outreach, and limited integration of eye health into primary healthcare systems.

Furthermore, respondents demonstrated negative perceptions toward seeking eye care services (M = 2.92, SD = 1.928), indicating attitudinal barriers that may discourage healthcare utilization. Negative perceptions may stem from fear of treatment, cultural beliefs, perceived costs, or distrust in healthcare providers. The high standard deviation suggests diverse perceptions among respondents, highlighting the influence of socio-cultural and individual-level factors on healthcare-seeking behaviour. Negative attitudes toward eye care services have been widely recognized as significant barriers to utilization, particularly in developing regions where cultural beliefs and misconceptions about eye diseases persist. Adriono (2011) similarly found that negative perceptions and misconceptions about eye care services contribute to delayed healthcare utilization and poor eye health outcomes.

Collectively, these findings demonstrate that both informational and perceptual barriers significantly influence the utilization of eye care services in the district. Limited awareness, inadequate knowledge of service availability, and negative perceptions toward eye care services create substantial barriers to timely healthcare utilization. These results underscore the urgent need for targeted public health interventions aimed at improving community awareness, strengthening health education programs, and promoting positive attitudes toward preventive eye care. Enhancing community outreach, integrating eye health education into primary healthcare services, and implementing culturally appropriate awareness campaigns may improve knowledge, shift perceptions, and ultimately increase the utilization of eye care services. Addressing these barriers is essential for reducing preventable visual impairment and improving overall eye health outcomes.

Table 7. *Factors That Influence the Choice of Eye Care Services Among Residents in Abura Asebu – Kwamankese District*

Statements	Mean	SD
Availability of eye care services	3.98	0.098
Affordability of eye care services	4.21	1.982
Accessibility of eye care services	4.13	1.081
Personal age, gender, marital status, race/ethnicity, occupation, beliefs, knowledge about disease, and values	3.93	1.012
Socio-economic status of patients	3.54	1.810
Health insurance policies that support eye care services	3.61	0.021
Living close to eye care service centers	3.91	0.021
language barrier of patients and health care providers	3.65	1.091

Source: Field data, 2019

Results and Discussion: Availability, Affordability, and Accessibility of Eye Care Services

The results presented in Table 7 indicate that the availability of eye care services is a significant factor influencing eye care utilization in the Abura Asebu Kwamankese District (M = 3.98, SD = 0.098). The high mean score, coupled with a very low standard deviation, demonstrates strong consensus among respondents regarding the inadequate presence of eye care providers in the district. This finding suggests structural limitations in the healthcare system, particularly in terms of insufficient human resources and service infrastructure. Limited availability of trained eye care professionals restricts timely diagnosis, treatment, and preventive care, thereby increasing the risk of avoidable visual impairment. These findings are consistent with Habte et al. (2008), who emphasized that shortages of eye care personnel and inadequate service distribution significantly constrain access to essential eye health services, particularly in rural and underserved areas. The lack of sufficient eye care providers may also increase reliance on informal or traditional sources of care, potentially compromising the quality and effectiveness of treatment.

Affordability emerged as another major barrier to eye care utilization, with respondents strongly agreeing that eye care services are financially inaccessible (M = 4.21, SD = 1.982). The high mean score indicates that cost is a critical deterrent to accessing eye care services, while the large standard deviation reflects variations in financial capacity and socioeconomic status among respondents. The high cost of consultation, diagnostic procedures, corrective lenses, and treatment services may discourage individuals from seeking care, particularly among low-income populations. Financial constraints have been widely identified as a key determinant of healthcare utilization,

especially in developing regions where out-of-pocket payments remain a primary mode of healthcare financing. This finding aligns with Adriono (2011), who reported that high treatment costs significantly reduce the utilization of eye care services, even when such services are available. Economic barriers may also lead to delayed care-seeking behaviour, resulting in disease progression and increased risk of preventable blindness.

Accessibility of eye care services was also identified as a significant barrier, with respondents indicating that services are difficult to access geographically and logistically (M = 4.13, SD = 1.081). The high mean score reflects widespread agreement that physical access to eye care facilities is limited, while the relatively moderate standard deviation indicates consistent perceptions among respondents. Limited accessibility may result from factors such as long travel distances, inadequate transportation infrastructure, and uneven distribution of healthcare facilities. Geographic barriers disproportionately affect rural populations, who often face greater challenges in reaching specialized healthcare services. This finding supports the observations of Habte et al. (2008), who emphasized that improving geographic accessibility is essential for enhancing healthcare utilization and reducing disparities in eye health outcomes.

Collectively, these findings highlight the critical role of structural healthcare system factors—namely availability, affordability, and accessibility—in shaping eye care utilization. Even when awareness exists, inadequate service availability, financial barriers, and geographic inaccessibility significantly limit healthcare utilization. These structural barriers reflect broader health system inequities that disproportionately affect rural and underserved populations. Addressing these challenges requires comprehensive policy interventions, including increasing the distribution of trained eye care professionals, subsidizing eye care services, and improving healthcare infrastructure. Strengthening healthcare accessibility and affordability is essential for promoting equitable access to eye care services and reducing the burden of preventable visual impairment.

Table 8. *Benefits of Accessing Eye Care Services to Residents in The Abura Asebu – Kwamankese District*

Statements	Mean	SD
Early treatment and cure of various eye conditions	3.51	1.981
Avoidance of deteriorating eye conditions	3.60	1.651
Frequent and regular eye check-ups and examinations	3.64	1.290
Higher level of education proved to increase awareness of eye diseases	3.51	1.390
Necessitating a primary care referral	4.04	1.761
Improvement in health education to increase the level of awareness and knowledge of common eye diseases in the population	3.63	0.034

Source: Field data, 2019.

Results and Discussion: Perceived Benefits of Accessing Eye Care Services

The findings presented in Table 8 indicate that respondents recognized early detection and treatment as a major benefit of accessing eye care services (M = 3.51, SD = 1.981). This suggests moderate agreement among respondents that timely eye health assessment plays a critical role in identifying and managing ocular conditions before they progress into severe or irreversible visual impairment. Early diagnosis enables appropriate clinical intervention, reduces the risk of complications, and improves long-term visual outcomes. Although the relatively high standard deviation indicates variability in perceptions, the overall agreement reflects growing awareness of the preventive value of routine eye examinations. This finding aligns with Habte et al. (2008), who emphasized that early screening and timely treatment are essential strategies for preventing avoidable blindness and improving population-level eye health outcomes.

Respondents also acknowledged that accessing eye care services helps prevent the progression and deterioration of eye conditions (M = 3.60, SD = 1.651). This finding highlights an understanding of the protective role of preventive eye care in maintaining visual function and reducing disease severity. Regular eye examinations facilitate early identification of conditions such as glaucoma, cataracts, and refractive errors, which can be effectively managed when detected early. The observed variability in responses suggests differences in individual health awareness and prior experiences with eye care services. Nevertheless, the overall agreement supports existing literature indicating that preventive healthcare utilization significantly reduces disease burden and improves quality of life (Habte et al., 2008). Preventive eye care is particularly important in rural and underserved populations where delayed diagnosis often results in poor clinical outcomes.

Furthermore, respondents agreed that regular eye examinations constitute an essential benefit of accessing eye care services (M = 3.64, SD = 1.290). This reflects

recognition of routine eye check-ups as a key preventive health behaviour that supports continuous monitoring of visual health. Regular screening enables early detection of asymptomatic conditions and facilitates timely intervention, thereby reducing the risk of vision loss. The relatively lower variability in responses indicates stronger consensus regarding the importance of periodic eye examinations. This finding is consistent with Habte et al. (2008), who noted that routine eye screening is fundamental to effective eye health management and prevention of vision-related complications.

Overall, these findings suggest that respondents demonstrate a moderate level of awareness regarding the benefits of accessing eye care services, particularly in relation to early detection, disease prevention, and routine monitoring. However, given previously identified barriers related to availability, affordability, and accessibility, awareness alone may not translate into consistent utilization. This underscores the need for integrated public health interventions that not only improve access to services but also strengthen health education initiatives aimed at promoting preventive eye care behaviours.

Results and Discussion: Challenges Affecting Eye Care Delivery

The findings presented in Table 9 indicate that respondents identified poor practitioner-to-patient ratios as a significant barrier to effective eye care delivery (M = 3.61, SD = 1.071). This result reflects consensus among respondents that limited availability of trained eye care professionals constrains access to timely and quality services. Inadequate staffing often results in longer waiting times, delayed diagnosis, and reduced quality of care, particularly in underserved and rural settings. These findings are consistent with Habte et al. (2008), who reported that insufficient practitioner availability is a major structural barrier that limits service efficiency and contributes to preventable visual impairment. Poor practitioner-to-patient ratios can also reduce opportunities for preventive screening and early intervention, thereby increasing the burden of avoidable blindness.

Similarly, respondents agreed that the absence of specialized eye care personnel represents a major challenge affecting service delivery (M = 3.64, SD = 1.091). The lack of qualified professionals such as optometrists, ophthalmologists, and ophthalmic nurses significantly limits the availability of comprehensive eye care services. This shortage may force individuals to rely on general practitioners or alternative care providers who may lack specialized expertise in managing complex ocular conditions. The relatively low variability in responses indicates widespread recognition of this structural limitation. This finding aligns with Habte et al. (2008), who emphasized that the absence of trained eye care professionals remains a critical barrier to effective eye health systems, particularly in developing regions.

Furthermore, respondents identified inadequate numbers of eye care personnel as a key systemic challenge (M = 3.72), reinforcing concerns regarding human resource constraints within the eye health sector. Workforce shortages undermine the capacity of health systems to deliver preventive, diagnostic, and treatment services effectively. This limitation may contribute to reduced service coverage, delayed treatment, and increased reliance on non-specialized or informal care providers. The consistency of responses highlights the urgency of strengthening workforce capacity. These findings are supported by Habte et al. (2008), who noted that expanding the availability of trained eye care professionals is essential for improving service delivery, enhancing accessibility, and reducing the prevalence of preventable vision loss.

Collectively, these findings underscore the critical role of human resource capacity in determining the effectiveness of eye care systems. Addressing workforce shortages through targeted training, recruitment, and equitable distribution of eye care professionals is essential for improving service accessibility, enhancing quality of care, and promoting better visual health outcomes in underserved communities.

Findings

The findings reveal significant gaps in awareness, accessibility, and utilization of eye care services among residents of the Abura Asebu–Kwamankese District. First, the study found low levels of awareness regarding common eye conditions, including poor knowledge of symptoms, limited recognition of disease severity, and inadequate engagement in preventive behaviors such as routine eye examinations. These findings suggest weak eye health literacy within the population, which may contribute to delayed diagnosis and treatment. Similar patterns have been documented in low-resource settings, where inadequate health education and limited public awareness are strongly associated with reduced utilization of preventive eye care services (Dandona et al., 2001; Alexander et al., 2008). Additionally, competing socioeconomic pressures, including occupational and household responsibilities, were found to delay health-seeking behavior, further exacerbating the risk of avoidable visual impairment.

The study also identified limited awareness of available eye care services and their locations. Many respondents reported uncertainty regarding service availability, reliance on informal care pathways such as traditional medicine or over-the-counter treatments, and preference for consulting family members prior to seeking professional care. These

findings align with previous research indicating that lack of knowledge and cultural reliance on informal healthcare networks can significantly reduce the utilization of formal eye care services (Courtright et al., 1995; Palagyi et al., 2008). Furthermore, negative perceptions and misconceptions about formal eye care services were observed, highlighting the role of sociocultural beliefs and health system distrust in shaping healthcare utilization patterns.

Structural and systemic barriers were also identified as major determinants of eye care utilization. These included limited availability of services, high costs of care, geographic inaccessibility, lack of health insurance coverage, and inadequate infrastructure. These barriers are consistent with the Andersen and Newman Framework, which emphasizes the critical role of enabling factors such as affordability, accessibility, and availability in influencing healthcare utilization (Andersen, 1995; Ntsoane & Oduntan, 2010). The study further identified socioeconomic status, proximity to services, language barriers, and perceived severity of illness as important predictors of service utilization.

Despite these barriers, respondents recognized the benefits of accessing eye care services, including early detection and treatment of eye conditions, prevention of disease progression, and improved visual outcomes. These findings are consistent with evidence demonstrating that early diagnosis and intervention significantly reduce the burden of visual impairment and prevent avoidable blindness (WHO, 2010; Keeffe et al., 2002).

Finally, the study identified critical system-level challenges affecting eye care delivery, including poor practitioner-to-patient ratios, inadequate availability of trained personnel, limited infrastructure, insufficient government funding, and lack of public health education programs. These findings reflect broader systemic weaknesses commonly observed in developing healthcare systems and underscore the need for strengthening workforce capacity and health system infrastructure (Habte et al., 2008; Lewallen & Courtright, 2000).

Conclusions

This study provides important empirical evidence highlighting the multidimensional factors influencing eye care service utilization in the Abura Asebu–Kwamankese District. The findings demonstrate that low awareness of eye diseases, inadequate knowledge of available services, and negative perceptions toward formal healthcare significantly contribute to poor eye health-seeking behavior. These behavioral barriers are further compounded by structural constraints, including limited-service availability, high cost of care, workforce shortages, and inadequate infrastructure.

The study also confirms the applicability of the Andersen and Newman Health Services Utilization Framework, which emphasizes the role of predisposing, enabling, and need factors in shaping healthcare utilization patterns (Andersen, 1995). In this context, enabling factors such as accessibility, affordability, and availability were found to be the most influential determinants of eye care utilization.

Although eye care services are present in the district—including private providers, general practitioners, traditional healers, and government facilities—their utilization remains suboptimal due to systemic, socioeconomic, and behavioral barriers. The findings further highlight the importance of improving health literacy, strengthening healthcare infrastructure, and enhancing workforce capacity to promote equitable access to eye care services.

Overall, the study underscores the urgent need for integrated health system interventions that address both supply-side constraints and demand-side behavioral barriers to improve eye health outcomes and reduce the burden of avoidable visual impairment**.**

Recommendations

Based on the findings, several policy and practice recommendations are proposed to improve eye care service utilization and delivery.

Strengthening Eye Care Infrastructure and Workforce Capacity

The Ministry of Health and Ghana Health Service should prioritize investment in eye care infrastructure, including the establishment of adequately equipped eye care units at district-level facilities. Additionally, efforts should be made to recruit, train, and retain qualified eye care professionals, including ophthalmologists, optometrists, and ophthalmic nurses. Strengthening human resource capacity is essential for improving service availability and quality (WHO, 2010).

Enhancing Public Awareness and Health Education

Comprehensive eye health education and awareness campaigns should be implemented to improve health literacy and promote preventive health-seeking behavior. Public education programs should focus on early detection, disease prevention, and the importance of regular eye examinations. Community-based interventions and mass media campaigns have been shown to significantly improve healthcare utilization and health outcomes (Muller et al., 2007).

Improving Accessibility and Affordability of Eye Care Services

Policies aimed at reducing financial barriers, including

expanding health insurance coverage for eye care services, should be implemented. Additionally, decentralizing services and improving geographic distribution of eye care facilities will enhance accessibility, particularly for rural populations.

Strengthening Health System Communication and Information Dissemination

Health authorities should ensure that accurate information regarding available eye care services is widely disseminated through community outreach, health centers, and digital platforms. Improving provider-patient communication and strengthening referral systems will enhance service utilization.

Improving Service Quality and Patient Trust

Enhancing service quality through professional training, infrastructure development, and implementation of clinical standards will improve patient satisfaction and increase utilization of formal healthcare services.

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