Awareness and Attitude towards Eye Health at Juaben Municipality, Ashanti Region, Ghana

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DOI: https://doi.org/10.51244/IJRSI.2025.121500089P

Received: 14 October 2024; Accepted: 19 October 2024; Published: 07 July 2025

ABSTRACT

Visual impairment is a growing global concern, predicted to affect 587.6 million people by 2050. In Ghana, 5.5% of the population suffer from this concern, with challenges like limited resources and awareness exacerbating the problem. This study examines the eye health awareness and regular examination practices within Juaben Municipal Assembly in the Ashanti Region, Ghana, focusing on barriers and potential interventions. This research adopted a descriptive cross-sectional survey targeting adults (18 years and above) within the Juaben Municipal Assembly. Using Cochran's formula, an approximate sample size of 422 was derived. Data collection utilized a semi-structured questionnaire covering socio-demographic characteristics, awareness and attitude towards eye health, and barriers to eye health. Data was processed using IBM SPSS. Among other issues, the research sought to investigate: The attitude towards eye health and regular eye examination: The factors that influenced the level of awareness towards eye health and regular eye examination of respondents: The barriers to utilization of eye care services in the municipality. Of the 442 participants, most were married Akan Christians with primary education engaged in farming. While 87% found eye health crucial, only 27.7% knew of eye care services in the municipality. Main barriers to eye care access were the absence of facilities (69.7%) and costs (40.0%). The majority suggested establishing more facilities and providing free screenings to improve accessibility. The study identifies a gap between the perceived significance of eye health and its proactive care within the Juaben Municipality. Major barriers such as facility unavailability and costs were highlighted. Despite the understanding of eye health's importance, the actual care practice is minimal, emphasizing the necessity for community-focused strategies. There is a conspicuous need for robust education and awareness campaigns. Capitalizing on prevalent mediums like radio and local information centers, the municipal assembly should collaborate with eye care professionals to disseminate eye health education comprehensively. Emphasizing the risks of self-medication is pivotal. Infrastructure improvements, particularly in transportation and road networks, will facilitate easier access to eye care facilities for those in remote areas. Lastly, a continuous quality assurance mechanism is crucial to ensure top-notch eye care services, thereby bolstering community trust and participation.

Keywords: Attitude, Awareness, Barriers, Examination, Eye-care, Health, Information, Regular

INTRODUCTION

According to the World Health Organization, there are 253 million individuals living with visual impairment globally, including 217 million people with moderate to severe visual impairment, 80% of whom are aged 50 years and above (WHO, 2019). The number of people with visual impairment is predicted to more than double during the 2020-2050 time-frame to 587.6 million people (Bourne et al., 2017). This health concern is particularly serious in low- and middle-income nations, where the funding and resources required to identify and treat visual impairment are limited. Approximately 80% of the world's blind and visually impaired individuals live in low-income nations, and half of them dwell in Africa. In Ghana, an estimated 5.5% of the population has a vision impairment (WHO, 2019). Improving access to eye care services and boosting

understanding of eye health and regular eye exams are vital for minimizing the burden of vision loss in Ghana. The annual global productivity losses associated with unaddressed vision impairment are estimated to be US$ 410.7 billion, a figure that far outweighs the cost of addressing the unmet needs of those with vision impairment, estimated at US$ 24.8 billion (WHO 2023)

In Ghana, eye health is not given much emphasis, and the majority of the public is not aware of the significance of regular eye examinations. According to research by the World Health Organization, the prevalence of uncorrected refractive errors in Ghana is high, with an estimated 70% of the population in need of vision correction (WHO, 2019). Eye conditions, such as cataracts, glaucoma, and diabetic retinopathy, are also prevalent in Ghana, although they frequently go undetected and untreated owing to a lack of knowledge and access to eye care services (WHO, 2019). One of the challenges to reducing blindness in developing countries is the restricted availability of proficient eye care services (Ntim-Amponsah et al., 2005). Reports suggest that less than 10% of people in low-income countries obtain optimal eye care, mostly due to restricted access to appropriate eye care services (Holden, 2007). The situation is further complicated by additional constraints such as cost, fear of doctors, and transportation (Gyasi et al., 2007). Identifying barriers that restrict people's access to eye care is vital to alleviating the burden of preventable blindness (Omsby et al., 2012).

Eye health and vision are crucial components of general health and well-being. Regular eye examinations are vital to detecting and managing eye problems, maintaining excellent vision, and enhancing quality of life. Despite their significance, eye health and eye examination are routinely ignored, particularly among rural communities in developing countries such as Ghana (Kumah et al., 2015).

In the Juaben community of the Ashanti Region, there exists a gap in knowledge and understanding concerning eye health and the significance of consistent eye examinations. This deficit has implications, as it may lead to delays in pursuing timely treatment for ocular issues, subsequently elevating the risk of avoidable vision impairments and diseases. The Juaben municipal assembly notably lacks comprehensive data on the populace's awareness levels and their attitudes towards eye health and routine eye check-ups. This informational void presents challenges in pinpointing specific obstacles that deter residents from accessing eye care services, making it arduous to craft targeted initiatives to amplify eye health consciousness and spur the utilization of eye care facilities.

Previous studies, such as Gyasi et al. (2016), have pinpointed a prevailing unawareness and adverse sentiments regarding eye health and consistent examinations within rural Ghanaian communities as pivotal hindrances to eye care service access. Such barriers are further exacerbated by the municipality's scanty eye care professionals, insufficient infrastructure, and the substantial expenses linked with ocular assessments and treatments. National assessments, as highlighted by Ocansey et al. (2013), indicate that the quality, geographic accessibility, service delivery efficiency, and funding resources for Ghana's eye care services erect unnecessary access barriers. Consequently, this deficient system struggles to accommodate the nation's burgeoning population, propelling many to seek alternative avenues for eye care, as documented by Baidoo (2009) and Van den Boom et al. (2004).

This research seeks to illuminate the awareness levels, attitude of residents towards eye health, the underlying factors that influence those attitudes, motivation factors towards the use eye services within the Juaben community and unearth any inherent barriers inhibiting individuals from leveraging eye care services.

Eye health is a vital aspect of general health; however, it is frequently disregarded, especially in rural regions. In Ghana, the prevalence of visual impairments and eye disorders is high, especially among the rural population, owing to a lack of awareness and access to eye health services (Kostov and Dinev 2015). Therefore, it is crucial to assess the level of awareness and attitudes towards eye health in the rural population of Ghana, as this information can help inform the development of targeted interventions and enhance access to eye care services. This research will provide information on the level of awareness and attitudes towards eye health in Juaben municipal assembly in Ashanti region, Ghana. The findings will inform the development of interventions to increase awareness and access to eye care services in the municipality, ultimately leading to the development of eye health education and screening programs in the municipal assembly, which will help to improve access to eye care services and prevent vision loss.

LITERATURE REVIEW

Several studies have identified various factors that influence the level of awareness of eye health and regular eye examination across different populations. In a study conducted by Alwadani et al., (2018) in Saudi Arabia, it was found that age, education level, and income significantly influenced the level of awareness of eye health. Similarly, a study conducted by Lee et al. (2019) in South Korea indicated that age, education level, and income were significant predictors of regular eye examination. In Ghana, a study conducted by Ayisi Boateng et al. (2020) in the Eastern Region indicated that education level, occupation, and income were significant predictors of the level of awareness towards eye health. Another study by Ocansey et al. (2020) in the Greater Accra Region indicated age, education level, and income acted as significant determinants of utilization of eye care services. Furthermore, limited knowledge and awareness concerning eye health and the importance of regular eye examinations can lead to a delay in seeking treatment for eye problems (Owusu et al., 2019). However, the findings of the principal investigator have indicated that there is limited research data on the factors that influence the level of awareness of eye health and regular eye examination among the population in Juaben Municipal Assembly in Ghana's Ashanti Region. Therefore, the proposed study aims to fill this gap by studying factors that influence the level of awareness of eye health and regular eye examination among the population in Juaben Municipal Assembly.

There have been several studies conducted in different parts of the world that have assessed the awareness and attitudes towards eye health and regular eye examinations. These studies have shown that low levels of awareness and negative attitudes are major barriers to seeking eye care services. For example, a study conducted in India found that only 44.5% of the participants had ever had an eye examination, and that lack of knowledge about eye health and the need for regular eye examinations was a major reason for this low utilization of eye care services (Rath and Mohan (2010). In a study conducted by Rabiu et al. (2014) in Nigeria, it was found that the majority of the respondents when asked if eye health was essential for general well-being, towards eye health, 77.5% of the respondents indicated that eye care was essential for their general health, which indicated a positive attitude. In another study by Abah and Oladigbolu (2016) in Nigeria, when respondents were asked if eye health was essential to general health, it was revealed that 81.6% of the respondents had a positive attitude towards eye health. In Ghana, a study conducted by Kumah et al. (2015) among urban residents in Kumasi revealed that 93.4% of the respondents considered eye health to be essential to general health which indicated a positive attitude towards eye health. Similarly, a study by Khandekar et al. (2008) in Oman found that the majority of the respondents (68.5%) had a positive attitude towards eye care. However, the search by the principal investigator has indicated that there is limited research on the attitude towards eye health and regular eye examination specifically among the population of Juaben Municipal Assembly in Ghana's Ashanti Region. Therefore, the proposed study aims to fill this gap by investigating the attitudes towards eye health and regular eye examination among the population in Juaben Municipal Assembly.

Several studies have been carried out to investigate the barriers to the utilization of eye care services in different populations. In a study conducted by Chuka-Okosa et al. (2019) in Nigeria, it was found that the cost of eye care services was a substantial barrier to their utilization. Another study by Ngirawamungu et al. (2020) in Rwanda highlighted the lack of awareness regarding the availability of eye care services as a major barrier. In Ghana, a study done by Gyasi et al. (2016) in the Ashanti Region indicated that the lack of knowledge about eye diseases and their treatment was a significant barrier to the utilization of eye care services. Studies have shown that access to eye care services is limited in rural areas of developing countries, including Ghana (Balai, 2017; Owusu et al., 2019). This lack of access can result in a higher prevalence of preventable eye diseases and vision loss (Balai, 2017). Another study by Gyasi et al. (2017) in the Eastern Region identified the lack of financial resources and the distance to eye care facilities acting as major barriers to accessing eye care services. In addition, cultural and financial barriers can have a major impact on the utilization of eye care services (Ezou et al., 2016; Basu et al., 2019). However, the findings of the principal investigator have indicated that there is limited research data on the barriers to the utilization of eye care services, specifically in the Juaben Municipal Assembly in Ghana's Ashanti Region. Therefore, the proposed study aims to fill this gap by investigating the barriers to the utilization of eye care services in the Juaben Municipal Assembly. Further research in this area is needed in order to inform, improve, and expand eye health promotion initiatives among people in Ghana specifically the Juaben Municipal Assembly in the Ashanti Region.

ISSN No. 2321-2705 | DOI: 10.51244/IJRSI | Volume XII Issue XV June 2025 | Special Issue on Public Health

METHODOLOGY

Study area

The study was conducted in Juaben Municipality, Ashanti Region, Ghana. The Juaben Municipal Assembly is located in the Ashanti Region of Ghana. It shares boundaries with six different districts in the Region. They are Sekyere East and Afigya-Kwabre to the northeast and northwest, respectively; Ejisu to the west; Bosomtwi to the southwest; Asante Akim to the east; and the Kumasi Metropolitan to the north. The 2021 National Population Census puts the population of the municipality at 63,929. The municipality covers an area of approximately 246 square kilometers. (Ghana Statistical Service, 2021). The gender distribution of the population in Juaben Municipal Assembly is almost evenly split, with females comprising 51.2% of the population and males comprising 48.8% (Ghana Statistical Service, 2021). In terms of ethnicity, the Ashanti people are the dominant ethnic group in the Juaben Municipal Assembly, making up the majority of the population (Ghana Statistical Service, 2021). However, there are also other ethnic groups present in the municipality, such as the Ewe, Dagomba, etc. (Ghana Statistical Service, 2021). The predominant religion in the Juaben Municipal Assembly is Christianity, with 77.3% of the population being Christians (Ghana Statistical Service, 2021). Islam is the second-largest religion, with about 17.2% of the population identifying themselves as Muslims, and the remaining 5.5% of the population follow traditional African religions or have no religious affiliation (Ghana Statistical Service, 2021). The Juaben Municipal Assembly is primarily rural, with agriculture being the main economic activity (Ghana Statistical service, 2021.). The literacy rate in the Juaben Municipal Assembly is about 62.1%, with more males being literate than females (Ghana Statistical Service, 2021).

Study design

The proposed study used a descriptive cross-sectional survey design to investigate the awareness and attitude towards eye health in Juaben municipal assembly in Ashanti Region, Ghana. The study population consisted of residents selected communities in the district assembly. Data was collected through face-to-face interviews using a semi structured questionnaire. The cross-sectional survey design was appropriate for investigating the awareness and attitude towards eye health in the Juaben population because it allowed for the collection of data from a large sample of participants in a relatively short period. The use of a semi structured questionnaire ensured that the data collected was standardized and could be analyzed quantitatively. Additionally, a simple cluster sampling technique was used in the study to select communities and households within the community. In each household, one adult (18 years and above) was selected using a systematic sampling technique. A convenience sampling method was employed in collecting data from the populace. This means that the data of the individuals who were available at the time were considered for the study.

Validity and reliability

To ensure both validity and reliability of the research, biases were minimized by using the appropriate sampling technique, standardized procedures were used, research assistants were trained, consistent data collection tools were used, a pilot study was conducted, appropriate statistical analyses were used, and stability testing was performed. Researchers could generate reliable and consistent data that were generalizable to the population of interest by following these procedures.

Data collection

The questionnaire was administered in person and explained in local languages. The data was collected by trained final year optometry students who were available to assist participants with completing the questionnaire. The questionnaires were hand delivered and collected from the respondents on the same day. Data was collected using a semi-structured questionnaire that was pretested before the main study. The questionnaire consisted of both closed and open-ended questions and covered the following areas: Socio-Demographic characteristics of the participants; Awareness and attitude towards eye health; Awareness and attitudes towards regular eye examination; Perceptions and barriers towards eye health and regular eye examinations; Motivation factors towards the use of eye care services.

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Data analysis

The data collected was input into Microsoft Excel sheet. IBM Statistical Package for Social Scientist (SPSS) version 27.0.1 was used to analyze the data. Descriptive statistics such as, frequencies, proportions and percentages were performed on categorical variables and the results were presented in tables and charts whilst means and standard deviations were used on continuous variables.

Ethical consideration

The study was conducted in accordance with the Declaration of Helsinki and received ethical clearance from the Committee on Human Research, Publication, and Ethics (CHRPE/AP/424/23) at the School of Medical Sciences, KNUST. Permission from the Juaben Municipal Assembly was sought for. Written informed consent was obtained from all participants, and each procedure was thoroughly explained to them during the examinations. Participants' rights, privacy, and confidentiality were ensured. Participants also had the right to withdraw from the study at any time without any consequences. All information on study participants and survey data was stored in a secure database accessible only to the primary investigator and study supervisors through a password-protected computer.

Study benefit

The study has no direct benefits to the participants of the study. The study would however inform policy makers and eye care practitioners as well as promote the ocular health of the populace at large.

Study risk

There were no significant risks involved in the study to the participants.

Compensation

There was no material or monetary compensation available for participants; nonetheless, they were much appreciated and acknowledged for their input during the final write-up of the work.

Disclosure

This research did not receive any grant from funding agencies in the public, commercial, or not-for-profit organizations.

Declaration of interest

There was no competing interest whatsoever.

RESULTS

A total of four hundred and twenty-two people were interviewed to pursue this study.

Socio-demographic characteristics of respondents

From table 1.,

With regards to gender, two hundred and twenty-three (52.8%) respondents were males whiles 198 (46.9%) of the respondents were females, indicating that there were more males than females.

Sixty-seven (15.9%) of the respondents claimed they had no formal education; 189 (43.6%) respondents reported that they had primary education, one hundred and thirty (30.8%) of the respondents reported that they had senior secondary education, thirty-five (8.3%) of the respondents reported they had tertiary education and 6 (1.4%) respondents, post-graduate education.

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Two hundred and fifty-five (60.4%) respondents reported that they had a monthly income less than Ghc500. One hundred and thirty-seven (32.5%) respondents claimed a monthly income ranging from Ghc500 to Ghc1400, nineteen (4.5%) respondents claimed a monthly income ranging from Ghc1500 to Ghc2400, nine (2.1%) respondents reported a monthly income ranging from Ghc2500 to Ghc5000 and 2 (0.5%) respondents reported a monthly income above Ghc5000.

Table. 1. Socio-Demographics Characteristics of surveyed respondents (n=422)

		Respondents	
Demographic Characteristics		Number of Respondents	Percentage (%) of Participants
Age	18 – 24	63	14.9
	25 – 34	98	23.2
	35 – 44	115	27.3
	45 – 54	83	19.7
	55 and above	63	14.9
Gender	Male	223	52.8
	Female	198	47.2
Marital Status	Single	145	34.4
	Married	235	55.7
	Divorced	15	3.6
	Widowed	27	6.4
Education Level	None	67	15.9
	Primary	184	43.6
	SHS	130	30.8
	Tertiary	35	8.3
	Post Graduate	6	1.4
Occupation	Farmer	151	35.8
	Trader	90	21.3
	Self-employed	86	20.4
	Civil Employer	30	7.1
	Retired	4	0.9
	Unemployed	61	14.5
Monthly Income (cedis)	Less than 500	255	60.4
	500 – 1400	137	32.5
	1500 – 2400	19	4.5
	2500 – 5000	9	2.1
	Above 5000	2	0.5
Ethnicity	Akan	372	88.2
	Ewe	24	5.7
	Ga-Adagme	4	0.9
	Mole Dagbani	10	2.4
	Gurunshi	4	0.9
	Kusaasi	4	0.9
	Kanjaga	4	0.9
Religion	Christian	368	87.2
	Muslim	17	4.0
	Traditionalist	13	3.1
	Atheist	24	5.7

Source: Author's construct, 2023

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Awareness and attitude towards eye health and participants

Concern of Respondents Towards Eye health

According to figure 1.1., Seventy-nine (18.70%) respondents reported that they were almost always concern about their eye health, forty-three (10.20%) respondents claimed they were frequently concern about their eye health, one hundred and forty (33.20) participants reported that they were occasionally concern about their eye health and 160 (37.90%) of the respondents reported that that they were rarely concern about their eye health.

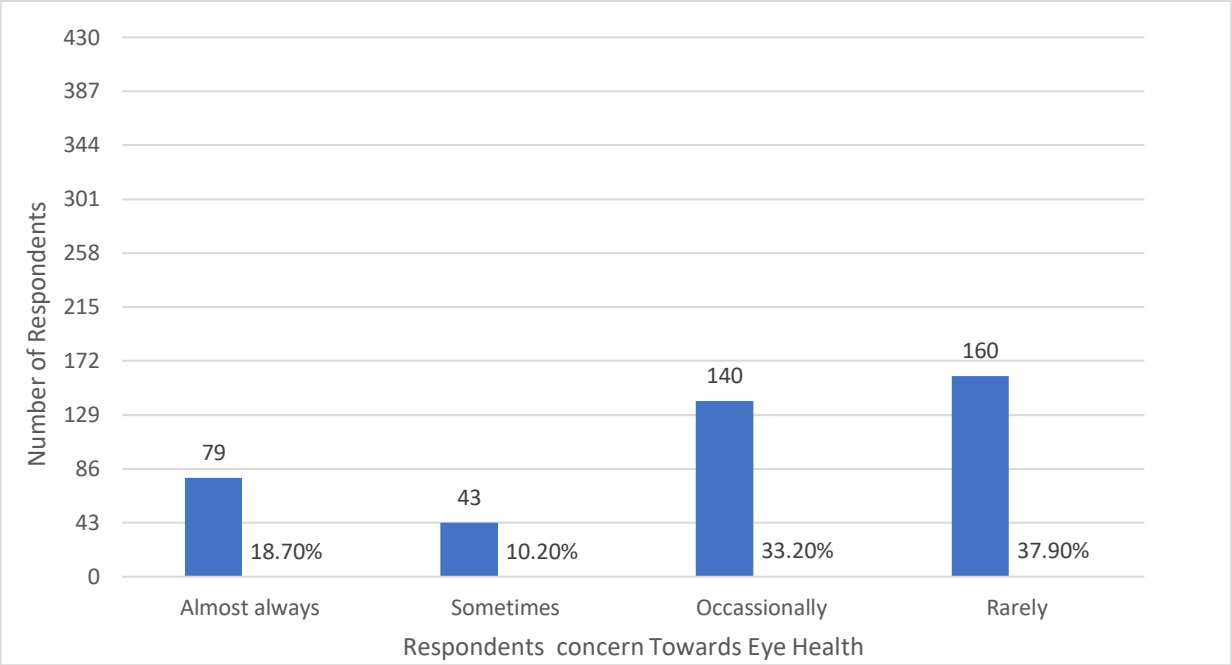

Figure 1.1. Respondents Concern Towards Eye Health

Accessibility to Ocular Health Education and Respondents

Two hundred and forty-four (57.80%) respondents reported to had received eye health education in their lifetime whiles 178 (42.20%) of the respondents claimed they had never received eye health education in their lifetime.

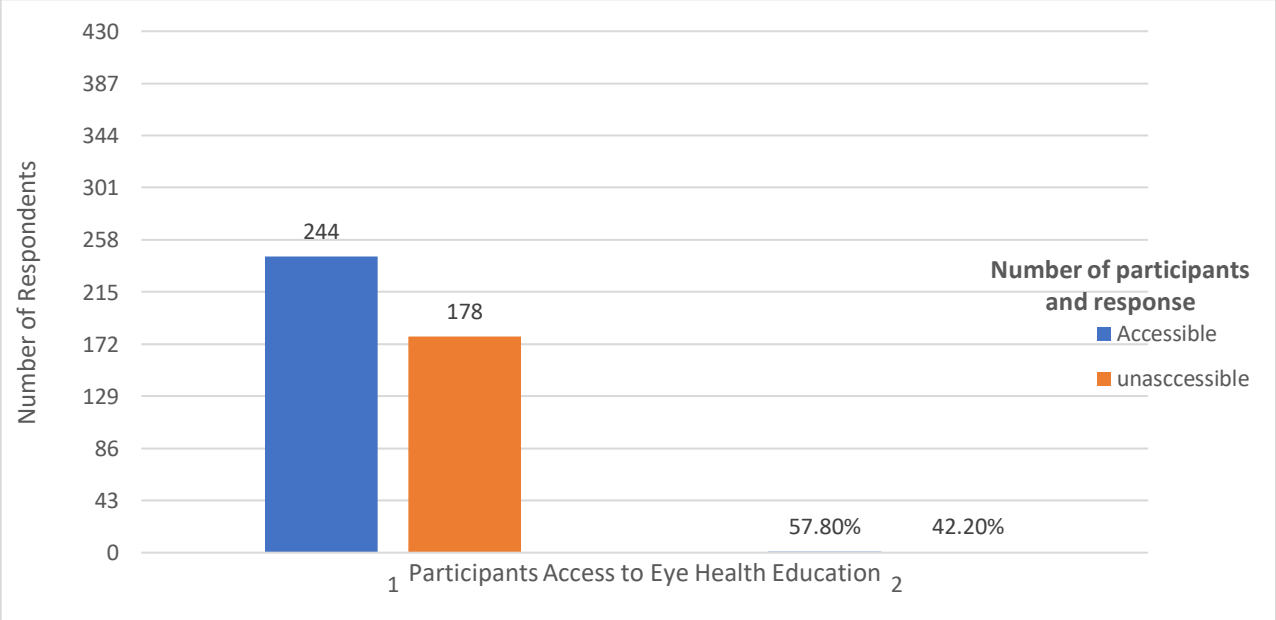

Figure 1.2. Participants Access to Eye Health Education or Information.

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Respondent's Source of Eye Health Education

On the source of eye health education, figure 1.3. reports that; two (0.50%) respondents reported that they got their education on eye health from the newspaper, one hundred and thirteen (26.80%) respondents claimed that they received eye health education from the radio, sixty five (15.40%) respondents reported to had received eye health education from a television broadcast, thirty three (7.80%) respondents reported to had received eye health education by word of mouth, thirty seven (8.80%) participants reported that they received eye health education through an outreach program and 172 (40.70%) respondents surveyed stated that they had no source of information.

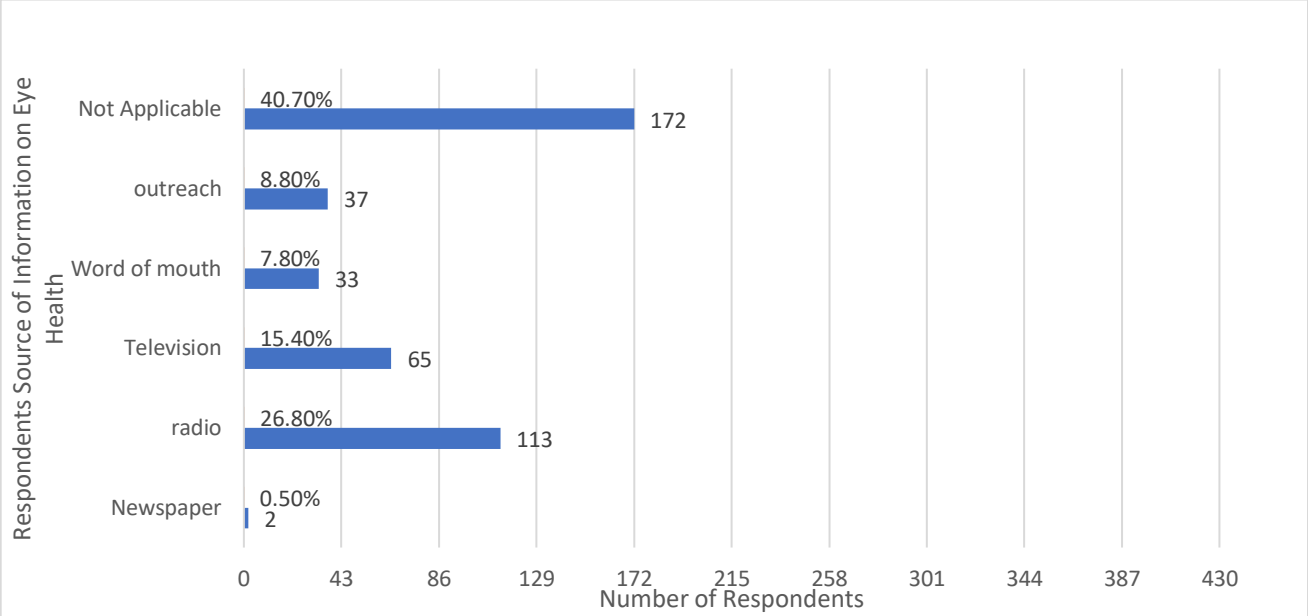

Figure 1.3. Respondents' Source of Information on Eye Health

Respondents' knowledge on Eye diseases

From figure 1.4.; Nineteen (4.50%) of the respondents surveyed stated that they were very knowledgeable in eye diseases and disorders, forty-five (10.70%) respondents stated that they were knowledgeable about eye diseases and disorders, one hundred and forty two (33.60%) respondents stated that they were somewhat knowledgeable about eye diseases and disorders and 216 (51.20%) respondents stated that they were not knowledge about eye diseases and disorders.

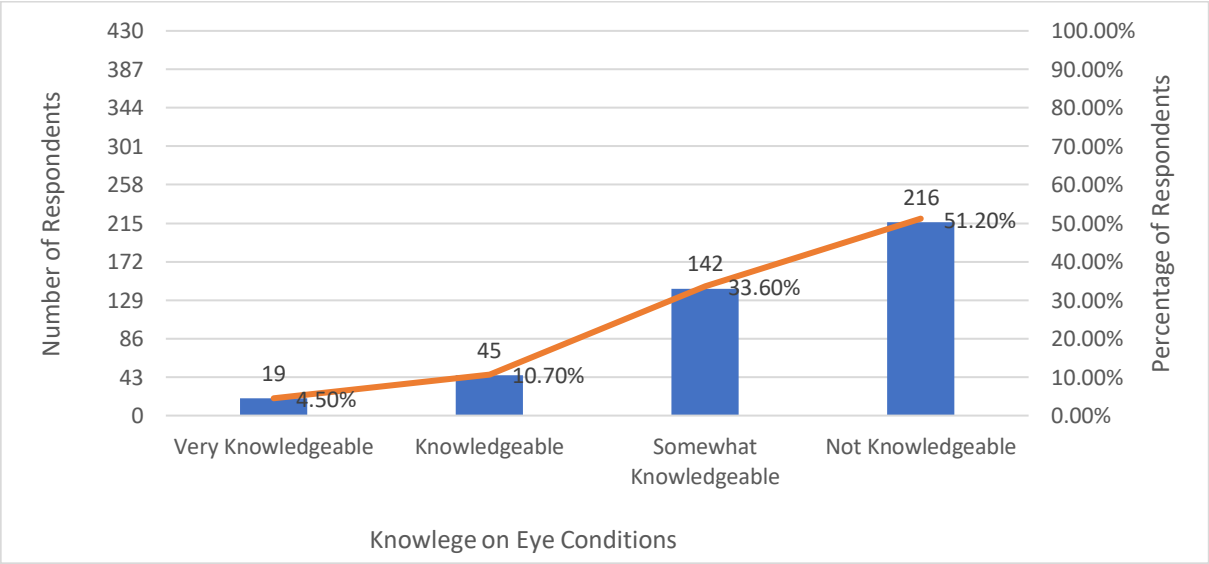

Figure 1.4. Respondents' knowledge on eye diseases

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Absence or Presence of an Eye Condition

Figure 1.5. depicts that; one hundred and eighty (42.70%) respondents claimed that they had an eye condition whiles 242 (57.30%) respondents claimed that they had no eye condition at the time of the study.

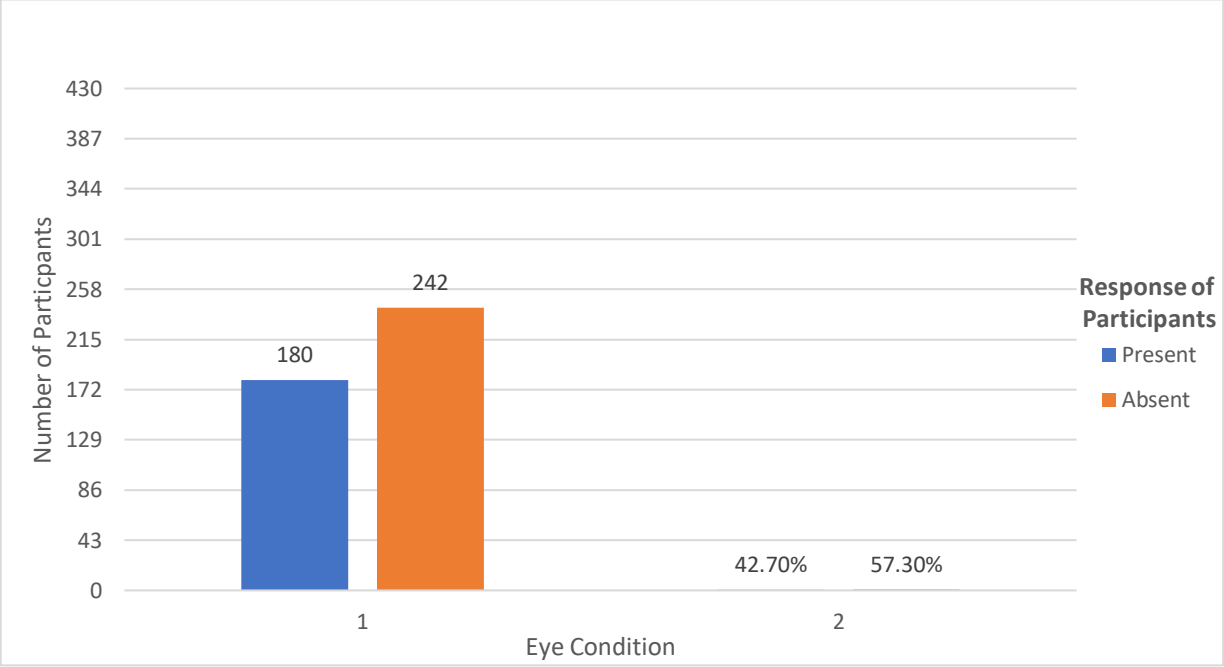

Figure 1.5. Participants' Response on the Presence and Absence of an Eye Condition

Respondents' type of eye condition diagnosed

According to figure 1.6.; Participants who reported that they had been diagnosed of an eye condition were 181 in number and were asked the type of condition they were diagnosed of. Sixty-eight (37.57%) respondents reported they had cataract; fourteen (7.73%) of the respondents reported they had glaucoma, seventy-two (39.78%) of the respondents reported that they had refractive error, nineteen (10.5%) participants said they were presbyopic and 8 (4.42%) respondents claimed that their healthcare providers said they had allergic conjunctivitis.

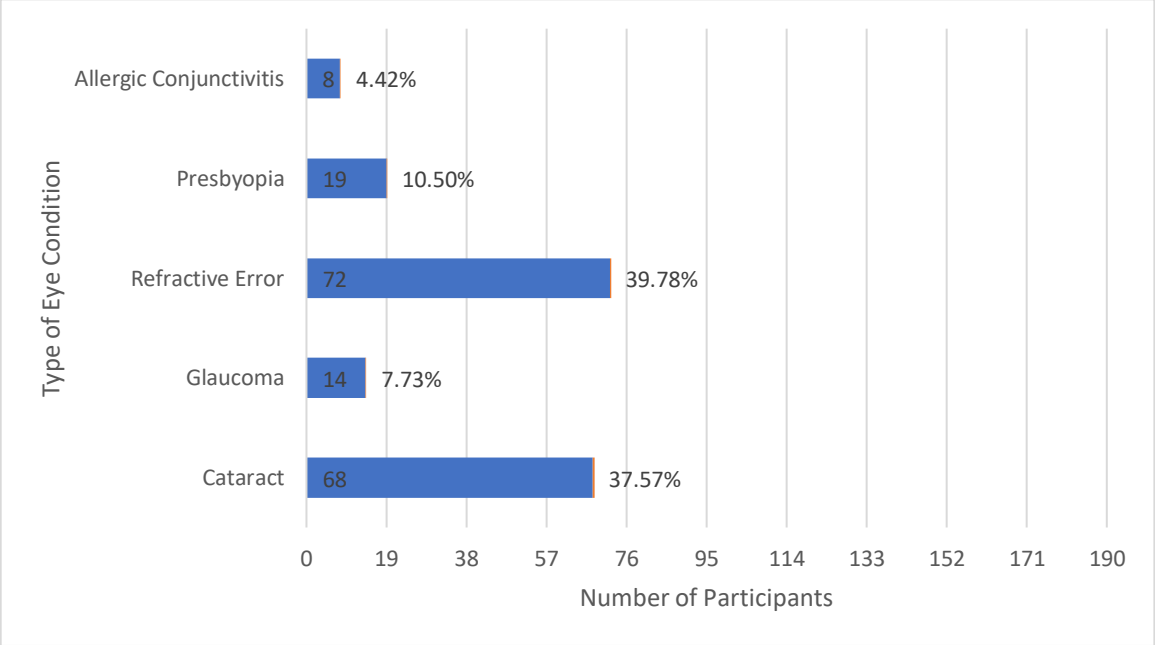

Figure 1.6. Respondents' Type of Eye Condition Diagnosed

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The importance respondents attached to eye health in relation to overall health

From figure 1.7., Participants when surveyed about how important they considered eye health in maintaining overall health and well-being; three hundred and sixty-seven (87.00%) respondents considered eye health in maintain overall health and well-being very important, 41 (9.70%) respondents considered it important. 12 (2.80%) respondents considered it somewhat important and 2 (0.50%) respondents considered eye health in maintaining overall health and well-being not important.

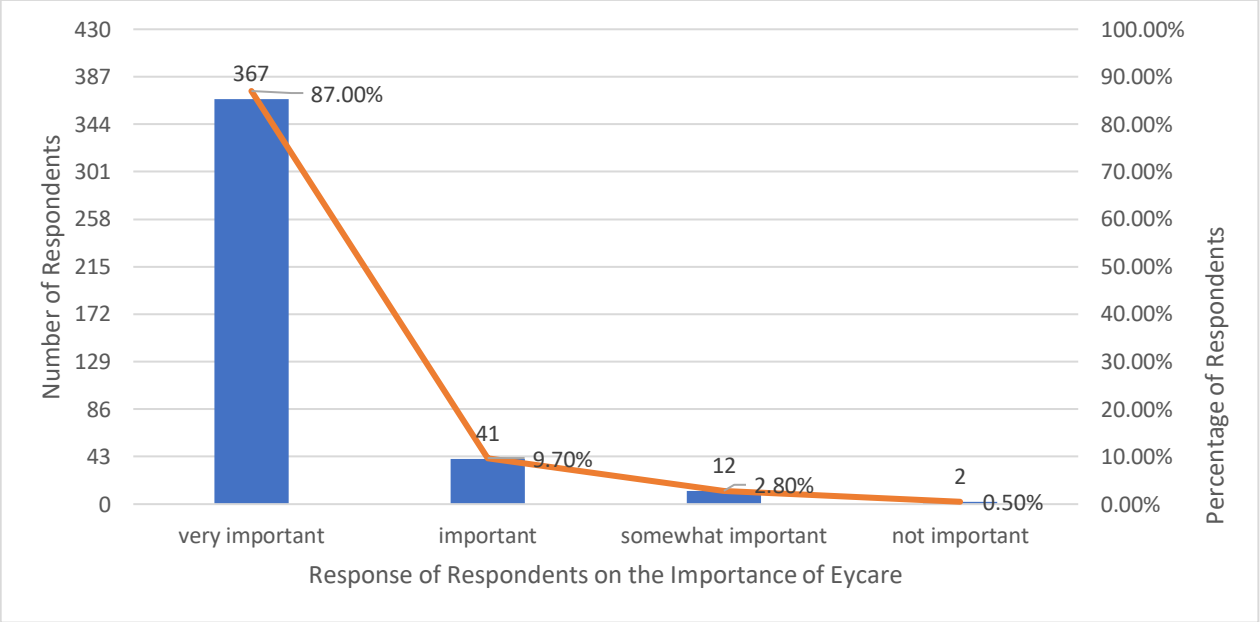

Figure 1.7. The Important Respondents Attached to Eye Health in Relation to overall Health

Action taken by respondents when there is an eye condition

Figure 1.8. illustrates when participants were surveyed about the action they took when they had an eye condition; ninety-eight (23.20%) of the respondents reported that they visited the eye clinic, fifty-four (12.80%) reported that they used herbal preparations on the eye, one hundred and thirty-four (31.80%) reported that self-medicated by getting medications from over-the-counter drug stores and 136 (32.20%) reported that they ignored by taking no action when they had an eye condition.

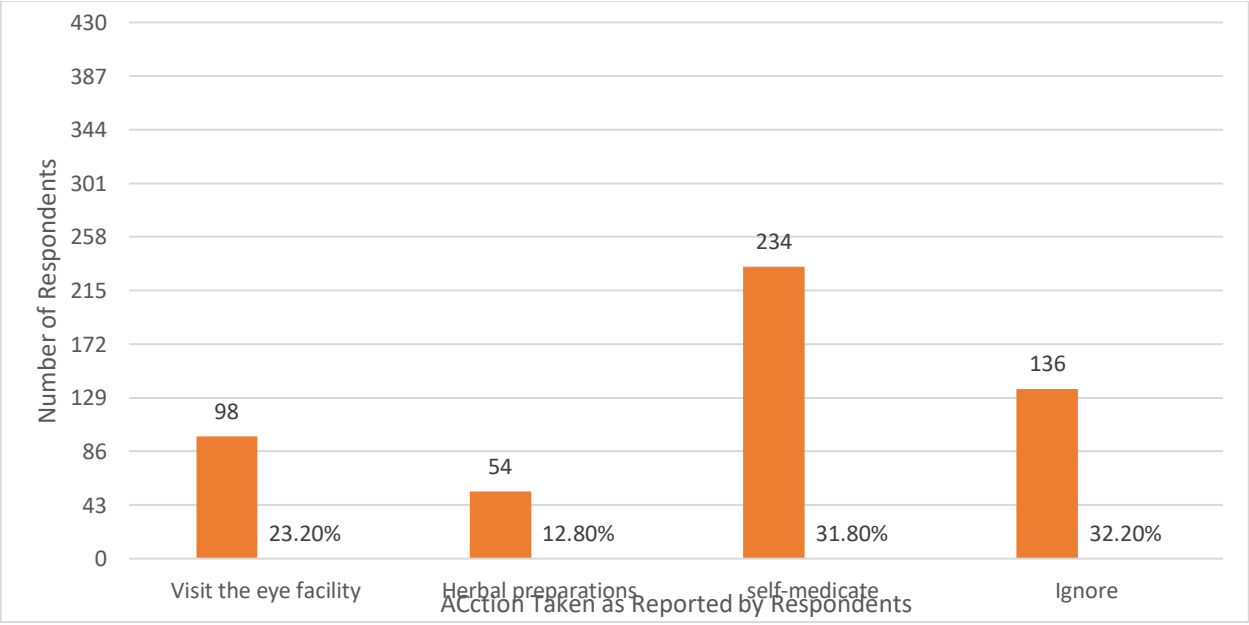

Figure 1.8. Action Taken by Respondents when there is an Eye Condition

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Awareness and attitudes towards regular eye examination of participants

Respondents awareness of eye care services in the municipality

From figure 2.1., Participants when asked about whether or not they were aware of any eye care services in the municipality; one hundred and seventeen (27.70%) respondents stated that they were aware of eye care services in the municipality whiles 305 (72.30%) of the respondents stated that they were not aware of any eye care services in the municipality.

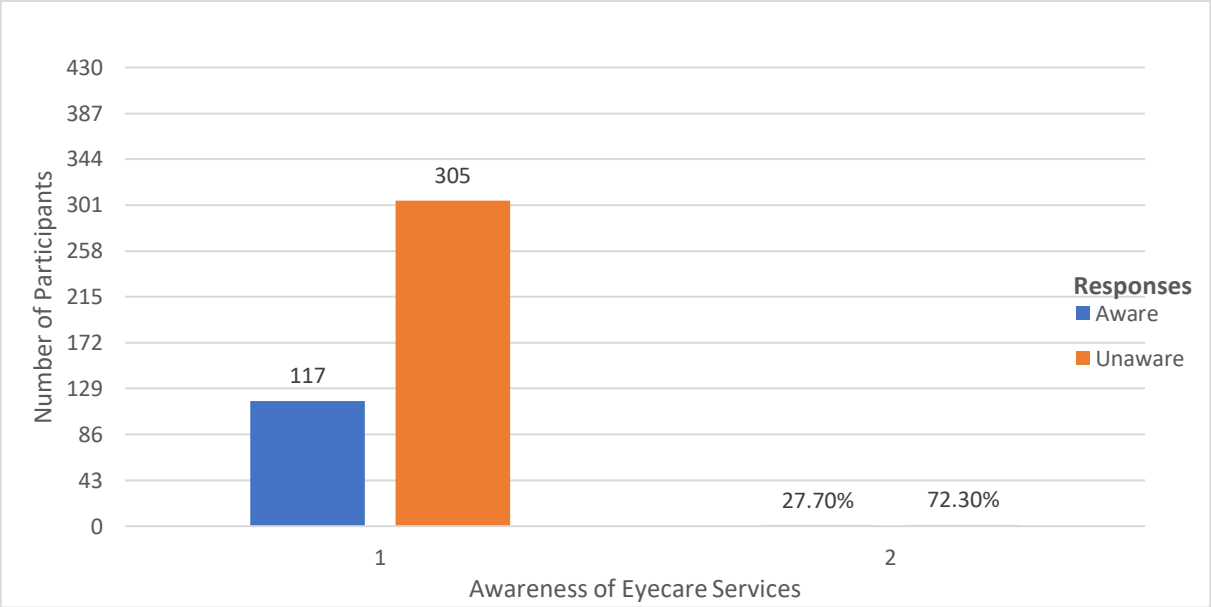

Figure 2.1. Respondents Awareness of Eye Care services in the Municipality

Respondents and source of information about their awareness of eye care services

According to figure 2.2., The participants were asked about the source of information about their awareness of eye care services in the municipality; five (1.20%) of the respondents stated that it was through a newspaper information, twelve (2.80%) respondents stated that it was through a radio broadcast, four (0.90%) of the respondents stated that it was through a television broadcast, seventy-six (18.0%) of the respondents stated that it was through word of mouth by some indigens, twenty-three (5.5%) respondents stated that it was through an eyecare outreach service and 302 (71.6%) respondents stated that they were not aware or had no source of information regarding the awareness of an eye care service in the municipality.

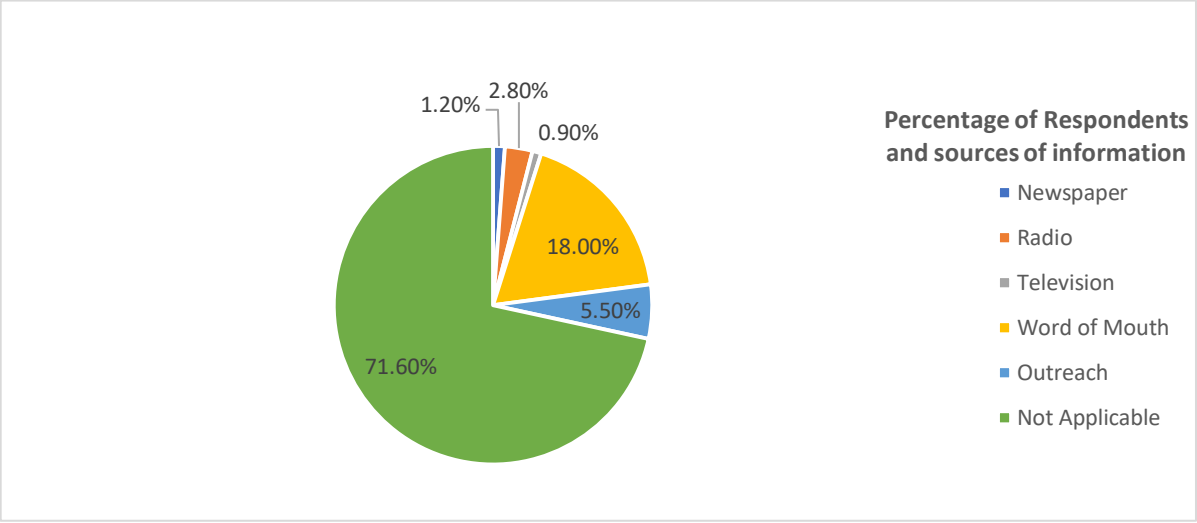

Figure 2.2. Respondents and Source of Information about their Awareness of Eye Care Services

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Responses of participants on accessibility of eye care services in the municipality

From figure 2.3., When participants were asked whether or not eye care services were easily accessible in the community and municipality as a whole; one hundred and five (24.9%) of the respondents reported that eye care services were easily accessible in the municipality whiles 317 (75.1%) of the respondents reported that eye care services were not easily accessible in the municipality.

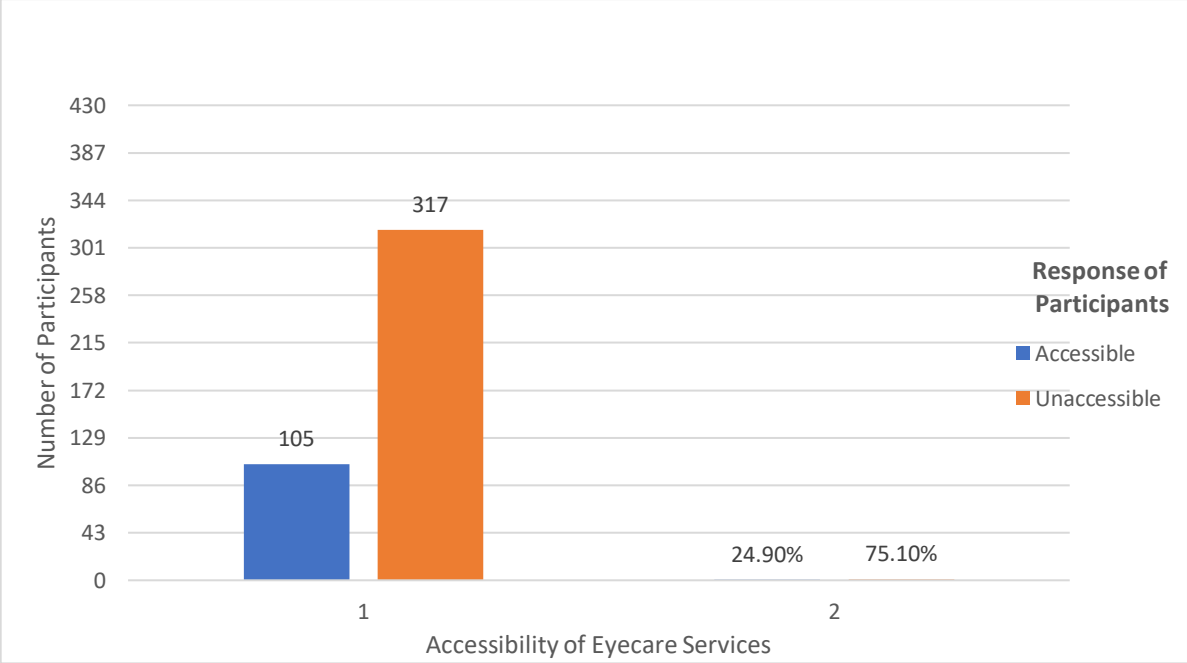

Figure 2.3. Respondents Accessibility of Eye care Services in the Municipality

Responses of respondents on receiving of eye care services

Participants were asked whether or not they had visited an eye facility or received an eye care service in their lifetime in the community; one hundred and thirty-seven (32.5%) of the respondents reported that they had either visited or received eye care services in their lifetime whiles 285 (67.5%) of the respondents reported that they had neither visited or received eye care services in the community.

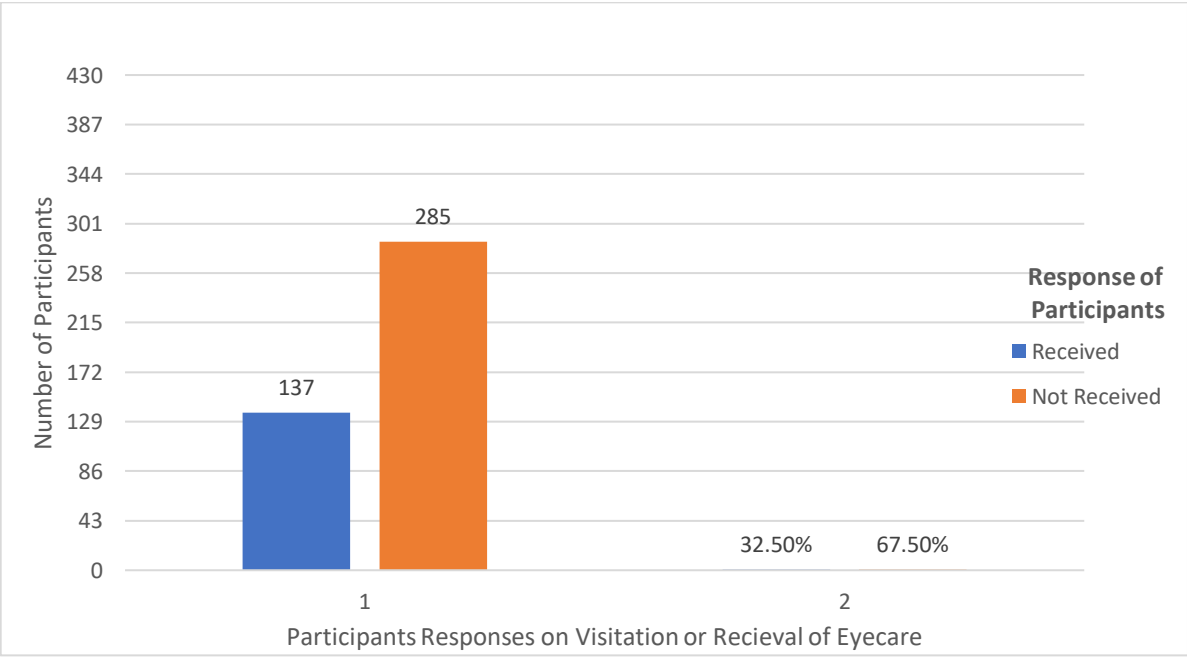

Figure 2.4. Respondents Receival or Visitation of Eye Care Services

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Responses on time taken for respondents to locate the nearest eye facility

With regards to figure 2.5., The participants when asked the time it took them to locate the nearest eye facility; ninety-two (21.80%) of the respondents reported that it took them less than 30 minutes, two hundred and sixty (61.60%) of the respondents reported that it took them between 30 minutes to 1 hour and 70 (16.60%) of the respondents reported that it took them greater than 1 hour before they located the nearest eye facility.

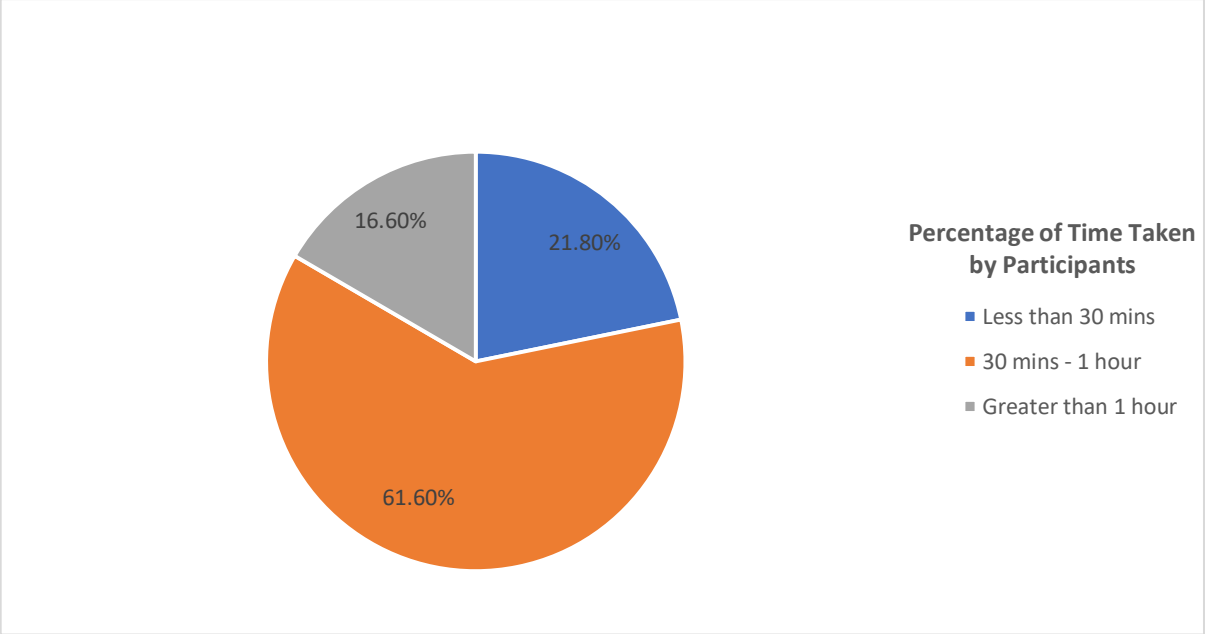

Figure 2.5. Percentage of Participants Reporting on Time Taken Respondents to Locate the Nearest Eye Facility

Responses of respondents on means of transportation to locate the nearest eye facility

According to figure 2.6., The participants were asked their means of transportation to locate the nearest eye facility; thirty-two (7.60%) respondents reported that they walked to the nearest eye facility, eight (1.90%) respondents reported that they rode bicycle to the nearest eye facility to seek eyecare services, twenty-seven (6.40%) respondents reported that they took motorcycles, three hundred and fifty-one (83.20%) respondents reported that they boarded cars before they got to the nearest eye facility and 4 (0.90%) reported that they did not have any means of transportation.

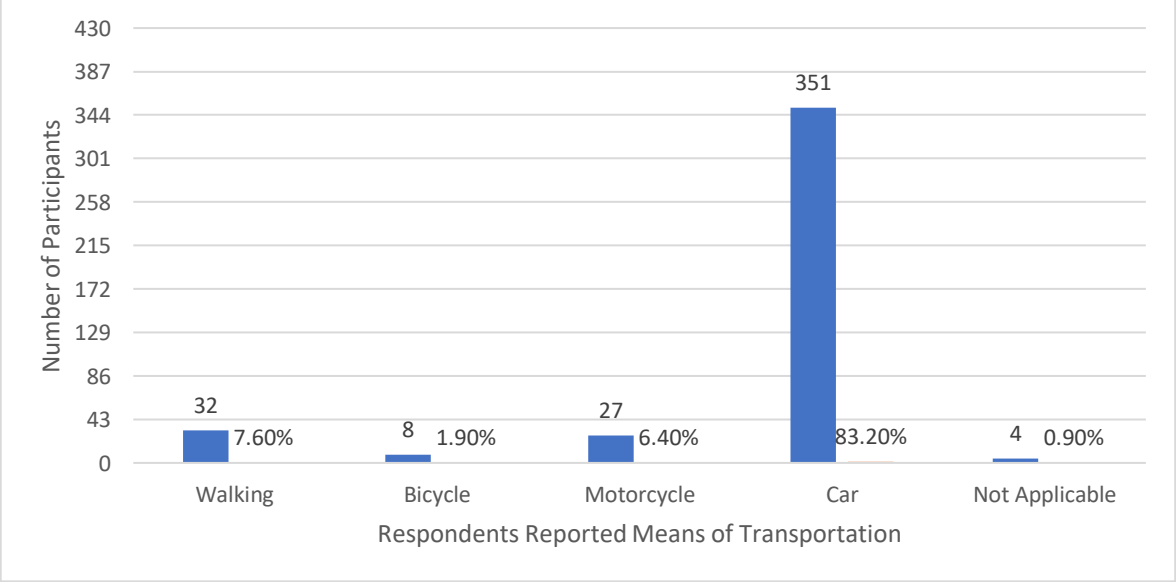

Figure 2.6. Respondents Reported means of transportation to locate the nearest eye facility

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Respondents Responses on Routine Eye Examination

Participants when asked how often they have had routine eye examinations; twenty-one (5.00%) of the respondents reported that they had an eye examination every 6 months to 1 year, sixteen (3.80%) respondents reported that they had their eye examined every 2 years, one hundred and twelve (26.5%) of the respondents stated that they rarely had eye examinations and 273 (64.7%) of the respondents reported that they had never had an examination in their lifetime as illustrated by figure 2.7.

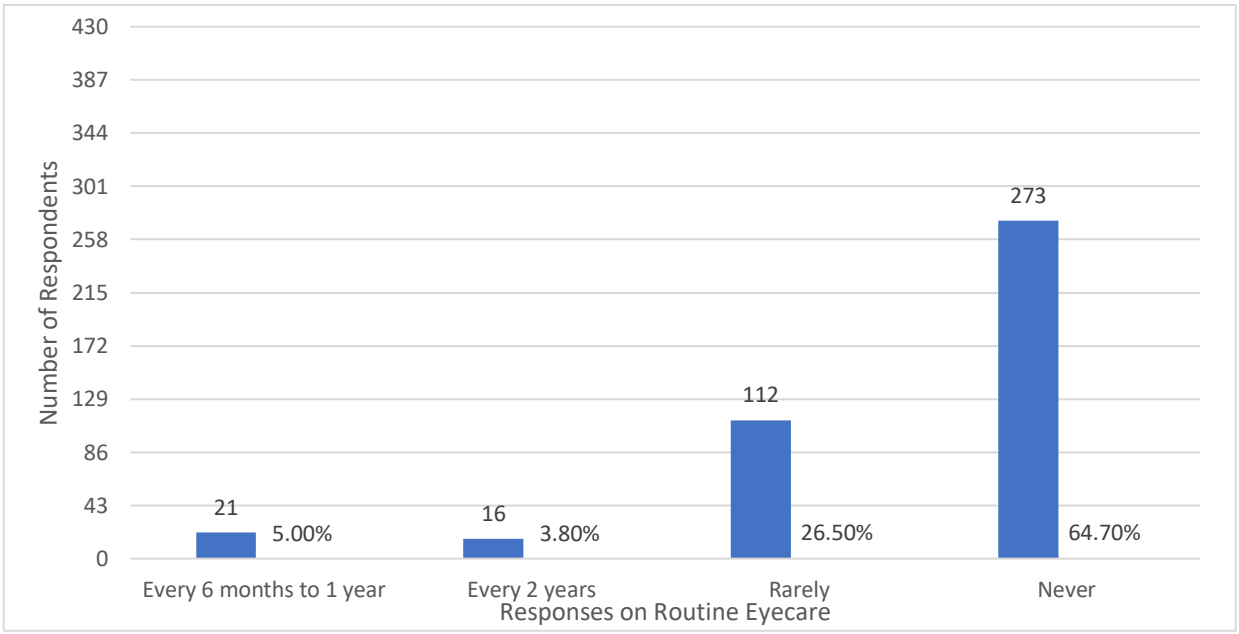

Figure 2.7. Respondents Responses on Routine Eye Examination

Respondents' responses on health insurance status

From figure 2.8., Participants when asked whether or not they had health insurance cover; two hundred and seventy-seven (65.6%) of the respondents reported that they had health insurance cover whiles 145 (34.4%) of the respondents reported that they did not have any health insurance cover.

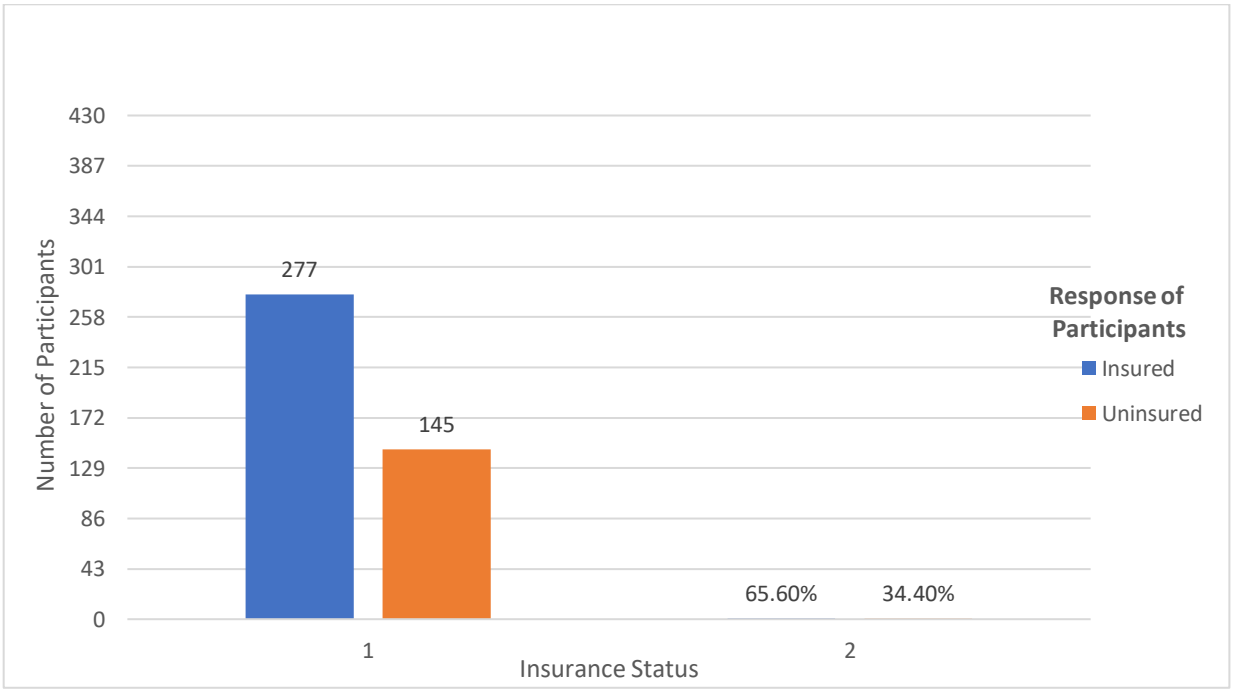

Figure 2.8. Respondents Responses on Health Insurance Status

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Eye health insurance coverage and respondents

According to figure 2.9., Participants were asked whether their health insurance policy covered eye care services or not; three hundred and thirty-one (31.0%) of the respondents claimed that their health insurance policy covered eye care service, ninety (21.3%) claimed that their health insurance policy did not cover eye care service and 201 (47.6%) claimed that they did not have any health insurance policy.

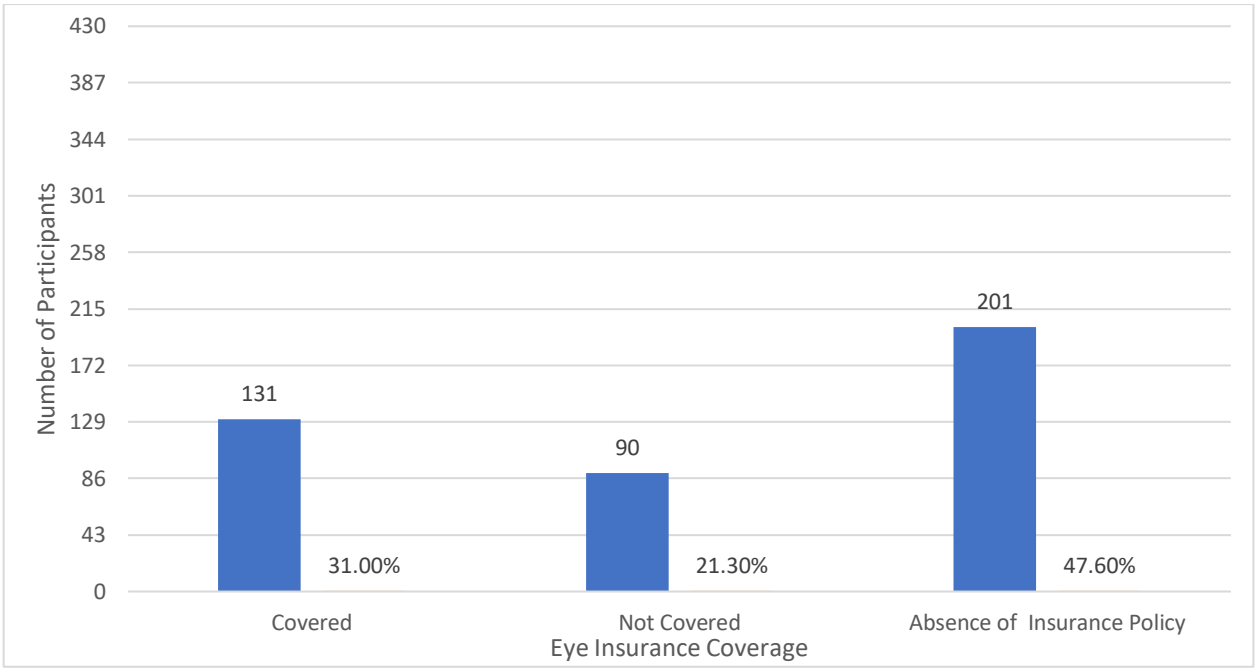

Figure 2.9. Respondents Responses on Eye Health Insurance Coverage

Respondents' responses on eye health insurance utilization

With regards to figure 2.10., Participants who reported that their health insurance policy cover eye care services were 136. They were asked whether or not they had used their insurance to utilize eye care services in the past; fifty-seven (41.91%) respondents reported that they had utilized eye services using their health insurance, seventy-nine (58.09%) of the respondents reported that they had never utilized eye care services with their health insurance.

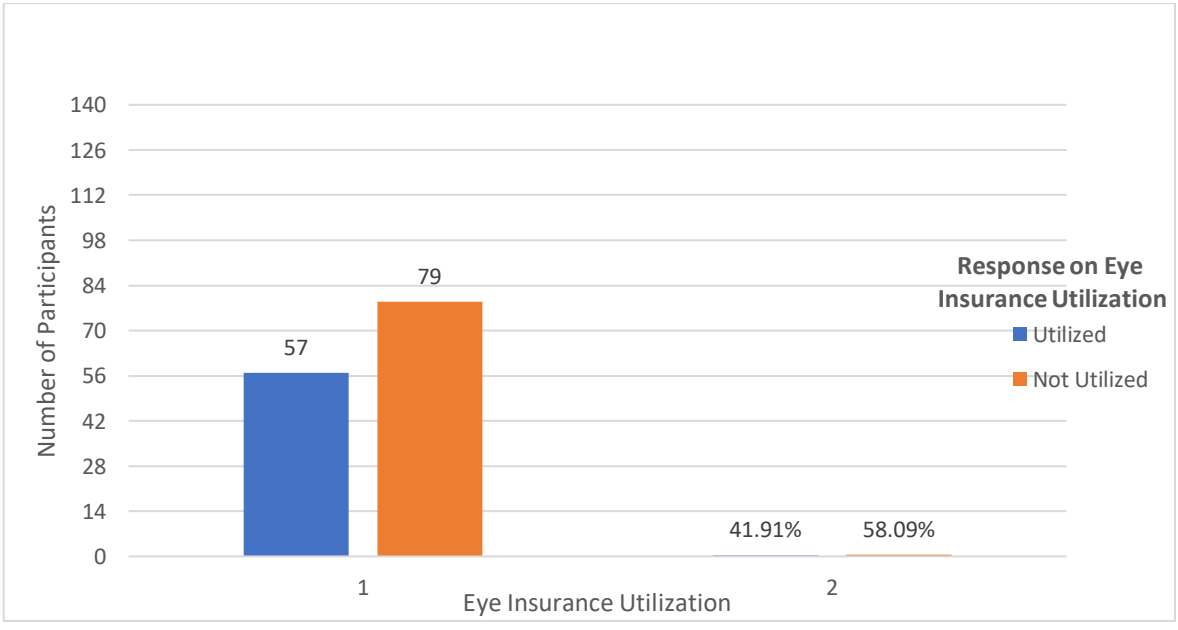

Figure 2.10. Respondents Responses on Eye Health Insurance Utilization

Responses of participants on the importance regular eyecare for maintaining good vision and eye health

From figure 2.11., Participants were asked how important they considered regular eye examination for maintaining good vision and eye health; three hundred and thirty-two (78.70%) of the respondents reported that they considered eye examination for maintaining good vision and eye health very important, sixty-three (14.9%) of the respondents stated that they considered it important, twenty-four (5.7%) considered it somewhat important and 3 (0.7%) respondents reported that they considered regular eye examination for maintaining good vision and eye health not important.

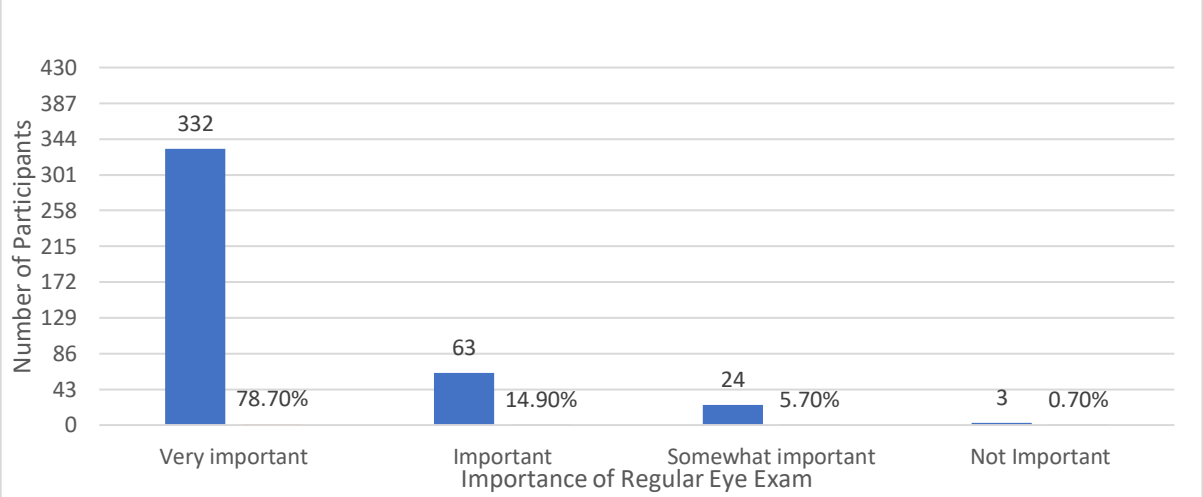

Figure 2.11. Responses on the Importance Regular Eyecare for Maintaining Good Vision and Eye Health

Respondents' responses on the confidence in the ability to access eye care services in the municipality

Participants when asked how confident they were in their ability to locate and access eye care and examination services within the municipality when needed; thirty-three (7.80%) of the respondents reported that they were very confident in their ability to locate and access eye care and examination services, one hundred and twelve (26.50%) of the respondents reported that they were confident in their ability, one hundred and two (4.2%) reported that they were somewhat confident and 175 (41.5%) reported that they were not confident in their ability to locate and access eye care and examination services in the municipality when needed.

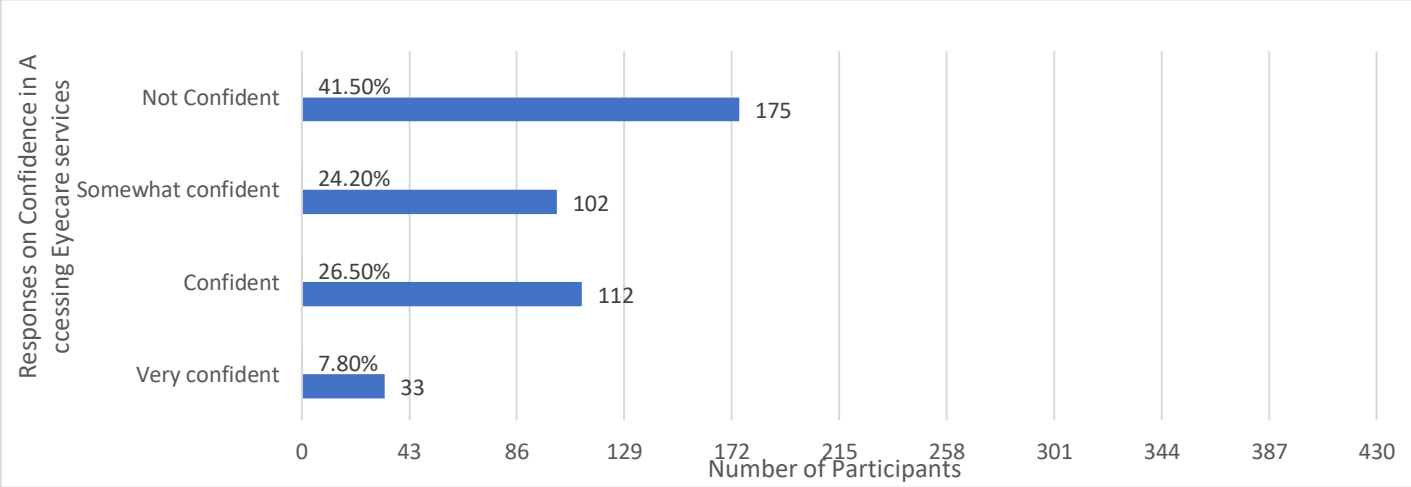

Figure 2.12. Respondents Responses on Confidence in the Ability to Access Eye Care Services in the municipality

Perceptions and barriers to eye health and regular eye examinations of participants

Concerns/Barriers related to eye care services and participants

From table 2., Participants were surveyed to give some of the concerns and barriers that they believed was impeding them from accessing eye health and regular examination. Some of the concerns raised were cost of

services, distance, quality of services, fear of diagnosis, lack of education on eyecare, lack of eye care facilities, poor road network. Two hundred and ninety-five (69.7%) of the respondents reported that lack of eye care facilities in their communities was a barrier preventing them from seeking eye care services. One hundred and sixty-nine (40.0%) of the respondents claimed that the cost of eye care services was a factor preventing them from assessing eye care. One hundred and thirty-nine (32.9%) of the respondents reported that lack of eye health education was a barrier. Thirty-seven (8.8%) of the respondents stated that distance was a barrier since they would have to travel a long distance in other to access eye care services. Twenty-eight (6.6%) of the respondents reported that they feared being diagnosed of an eye condition so they would rather not visit the eye facility so that they are not diagnosed at all. Twenty-four (5.7%) of the respondents claimed that poor quality of eye care services served as a barrier for them not to access eye care services. Fourteen (3.3%) of the respondents attributed their lack of accessing regular eye care services to poor road network. Forty-one (9.7%) of the respondents reported that they had no concern or barrier preventing them from accessing eye care service.

Table 2. Participants Response on Concerns/Barriers related to eye care services

	Surveyed Participants					
Barriers/Concerns of Participants	Participants Reporting		Participant not Reporting		Total	
	Number (n)	Percentage (%)	Number (n)	Percentage (%)	(n)	(%)
Cost of service	169	40	253	60	422	100
Distance	37	8.8	385	91.2	422	100
Quality of service	24	5.7	398	94.3	422	100
Fear of diagnosis	28	6.6	394	93.4	422	100
Lack of education	139	32.9	283	67.1	422	100
Lack of eyecare facilities	294	69.7	128	30.3	422	100
Poor road network	14	3.3	408	96.7	422	100
No concern	41	9.7	381	90.3	422	100

Source: Author's construct, 2023

Respondents response on motivation/influence to seeking eye care services

With regards to table 3., Participants when asked to share what they believe motivates and influence them or will motivate and influence them to seek eye health services including eye examinations; Three hundred and fifty-eight (86.9%) reported that they would only seek eye care services when they have symptoms with their vision. One hundred and fifty-eight (38.3%) of the participants believed that adequate education on the eye and the need for regular examinations would influence and motivate them to seek eye care. Forty-two (10.2%) of the participants claimed that recommendations by healthcare providers to seek eye care services would influence and motivate them to seek regular eye care services. Eighteen (4.4%) of the population claimed that recommendation from friends or family members would influence and motivate them to seek eye care services.

Table 3. Respondents Response on motivation/influence to seeking eye care services

	Surveyed Participants					
Motivation Factors	Participants Reporting		Participants not reporting		Total	
	Number (n)	Percentage (%)	Number (n)	Percentage (%)	(n)	(%)
Symptoms with vision	358	86.9	64	13.1	422	100
Recommendations from family/friends	18	4.4	404	95.6	422	100
Recommendation from health care provider	42	10.2	380	89.8	422	100
Education on eye health	158	38.3	264	61.7	422	100

Source: Author's construct, 2023

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Respondents suggestion to improving eye care services

Participants when asked to give suggestions as to how they believed the barriers and concerns raised could be addressed; Three hundred and twenty (76.7%) of the participants suggested that building more eye facilities within the communities and the municipality as a whole would encourage them to access eye care services regularly. Two hundred and twenty-nine (54.9%) of the participants suggested that free eye screening outreach program be brought to the door steps of communities that did have eye care facilities. One hundred and eighty-nine (45.3%) of the participants suggested that education and information on eye health be made available in all communities. Eighty-two (19.7%) of the participants suggested that reduction of the cost of eye care services would enable participants to seek eye care services effectively. Thirty-one (7.4%) of the participants believed that improving the quality of eye care services could enable them to seek eye care services effectively. Table 4 depicts the analyzed data on the responses of participants above.

Table 4. Respondents' suggestion to improving eye care services

	Surveyed Participants					
Factors for Improved Eye Care Services	Participants Reporting		Participants not reporting		Total	
	Number (n)	Percentage (%)	Number (n)	Percentage (%)	(n)	(%)
Build more facilities	320	76.7	102	23.3	422	100
Education on eye health	189	45.3	233	54.7	422	100
Screening	229	54.9	193	45.1	422	100
Quality of service	31	7.4	391	92.6	422	100
Cost of service	82	19.7	340	80.3	422	100

Source: Author's construct, 2023

DISCUSSION

The age distribution reveals a fairly young population, with over 65% of respondents being under the age of 44 years. This might indicate that the issues, beliefs, or concerns of younger individuals were primarily captured in this study, with those aged 35-44 years being the most represented group (27.3%).

The gender distribution is almost even, albeit with a slightly higher representation of males (52.8%) than females (47.2%). This suggests a balanced perspective from both genders in the study. The sociodemographic information reveals a significant number of married participants.

The majority representing 74.4% of respondents had primary (43.6%) and/or secondary (30.8%) school education. However, a concerning 15.9% of the respondents reported having no formal education. This might reflect either the education system's challenges in the area of study or cultural factors that de-emphasize formal education.

A significant proportion of the respondents are involved in farming (35.8%), trading (21.3%), or self-employment (20.4%). This suggests that the surveyed population was majorly from rural or semi-urban areas where agriculture and trade dominate. The unemployment rate at 14.5% is also noteworthy, making a section of the population unable to seek eyecare due to the cost involved.

A vast majority (60.4%) of the respondents earn less than GHC500 monthly, indicating potential financial challenges or the low economic standing of the communities sampled. A study by Ocansey et al. (2020) in the Greater Accra Region indicated age, education level and income as a significant determinant of utilization of eye care services.

A majority of the respondents (37.90%) rarely showed concern towards their eye health. This indifference could be attributed to a lack of awareness, education, or perceived priority of eye health in their daily lives.

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It is notable that 42.20% of respondents had never received eye health education in their lifetime. This could potentially explain the large percentage of respondents who rarely showed concern for their eye health.

A majority (51.20%) had very little knowledge about eye diseases and disorders. This again points to the potential need for more widespread and accessible eye health education. A study by Gyasi et al. (2016) in the Ashanti Region indicated the lack of knowledge about eye diseases and their treatment acted as a significant barrier to the utilization of eye care services.

Interestingly, despite the limited knowledge and concern regarding eye health, a significant 42.70% of the participants reported on having an eye condition.

Among those with eye conditions, refractive error and cataract were the predominant issues. This might indicate either a genetic predisposition in the population or lifestyle and environmental factors contributing to these conditions.

A significant majority (96.70%) recognize the importance of eye health in maintaining overall well-being. This might seem contradictory given the earlier findings, suggesting while respondents may acknowledge its importance, they might not proactively seek information or care. Even though a significant portion acknowledges the importance of eye health in maintaining overall well-being, a major percentage of 64.7% have never had an eye examination in their lifetime. A study by Rath and Mohan (2010) in India found that only 44.5% of the participants had ever had an examination in their life time The disconnection between understanding the importance and taking actionable steps to ensure eye health was evident.

A combined total of 76.8% either self-medicate, used herbal preparation or took no action when they had an eye condition. This indicates either a lack of access to specialist care, a cultural or systemic reliance on self-diagnosis, or economic constraints.

A revelation from the study is the limited awareness and proactiveness towards eye health and regular eye examinations.

The lack of awareness of eye care services in the municipality is evident, with 72.3% of participants being unaware of any such services. A study by Ngirawamungu et al. (2020) in Rwanda highlighted the lack of awareness regarding the availability of eye care services as a major barrier. This deficiency in knowledge possibly contributed to the larger percentage of participants who had not undertaken regular eye examinations.

The majority (75.1%) believe that eye care services are not easily accessible in the municipality. This highlights potential barriers to accessing care, which could range from physical distance to service costs. Studies have shown that access to eye care services is limited in rural areas of developing countries.

Most respondents (67.5%) had never received eye care services which reflects the findings on awareness and accessibility.

Three hundred and fifty two, representing 83.4% of the respondents could locate an eye facility within an hour, but transportation modes suggest potential barriers. The high reliance on cars (83.2%) within the rural area suggests that without this mode of transport, accessing facilities might be challenging.

A significant majority (64.7%) have never had a routine eye examination in their lifetime. This, coupled with the reported lack of accessibility and awareness, paints a concerning picture of eye health in the municipality.

While a majority (65.6%) had health insurance, only 31% had policies that cover eye care services with just a few of them (13.5%) utilizing it for eye care services. Insurance can play a pivotal role in facilitating regular eye check-ups and treatments. This gap in knowledge about the benefits of their insurance again showcases a dire need for widespread education and information dissemination.

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Encouragingly, 93.6% of respondents understand the importance of regular eye exams for maintaining vision and overall eye health. This suggests that while there is awareness of the importance, the actualization in terms of regular check-ups is lacking, potentially due to accessibility and awareness challenges.

Only 34.3% of respondents expressed confidence or high confidence in their ability to access eye care services when needed with 65.7% having no confidence or little confidence in their access eye care services when needed, emphasizing the need to improve the accessibility and visibility of these services.

The results shed light on respondents' perceptions and barriers to accessing eye care services, as well as potential strategies or motivations to mitigate these barriers. The predominant barrier to accessing eye care services, as stated by 69.7% of respondents, is the lack of eye care facilities in their communities. This is followed by concerns over the cost of services, with 40% finding it prohibitive. Factors like the quality of service (5.7%) and poor road networks (3.3%) were lower on the list, suggesting that the primary challenge is the physical availability of facilities and the associated costs. Additionally, the fear of diagnosis prevented respondents from seeking care indicates potential psychosocial barriers that need addressing.

The major reason of 86.9% of the respondents to seek eye care was the presence of symptoms affecting their vision. This reactive rather than proactive approach can lead to delays in treatment and potentially irreversible vision loss. Only a fraction was influenced by recommendations from healthcare providers (10.2%) or family/friends (4.4%), indicating a potential gap in health advocacy.

The largest recommendation, coming from 76.7% of respondents, is the establishment of more eye facilities in their communities. Furthermore, community-based free eye screenings (54.9%) and better education on eye health (45.3%) are also seen as crucial steps to enhance eye care access and awareness. Notably, improving the quality of eye care services, although essential, was less emphasized by the respondents, with only 7.4% suggesting this as a solution.

CONCUSSION

In conclusion, this study presented a comprehensive socio-demographic profile of 442 respondents. The data suggests a younger, predominantly Akan, and Christian population, with most having primary to secondary level education. Occupation-wise, farming appears significant, reflecting perhaps the agrarian nature of the surveyed area. Economically, there seems to be a leaning towards the lower income bracket with 60.4% making less than 500 Ghana cedis monthly.

The research unveils a notable disconnect between the perceived importance of eye health and the proactive steps taken for its care among the respondents. While a significant majority recognize the importance of eye health, the lack of education, awareness, and actionable steps towards its care are evident. Particularly concerning is the high number of individuals self-medicating, using herbal preparations on the eye or ignoring eye conditions.

The data suggests a pressing need for improved awareness, accessibility, and utilization of eye care services in the municipality and other rural areas. While there's a clear understanding of the importance of eye health, this knowledge doesn't translate to actionable steps in terms of regular examinations and treatments, largely due to awareness and accessibility issues.

The research identifies clear challenges in accessing eye care services in the municipality. There's an evident disconnect between the recognized importance of eye health and the infrastructure and services available to cater to this need. Primarily, the absence of local facilities and the cost of services stand out as significant barriers.

The reactive nature of seeking care, only when symptoms arise, is concerning and underscores the urgent need for proactive interventions.

The study concludes that there is a significant gap in awareness, access, and proactive approaches towards eye health in the Juaben Municipality. While many participants recognize the importance of eye health, this understanding is not translating into actionable steps like regular eye check-ups. The primary barriers, such as lack of eye care facilities and cost, play a crucial role in this observed behavior. Furthermore, the reactive approach, i.e., seeking eye care only when symptomatic, needs to be shifted towards a more preventive and proactive stance for better community eye health outcomes.

RECOMMENDATIONS

With 69.7% of participants identifying the lack of facilities as a significant barrier, there is an urgent need for the municipal assembly and the government as a whole to build more eye care centers within the communities. Initiating free eye screening outreaches by the municipal health directorate in partnership with the eye department at the Juaben district hospital can bridge the current gap. These can be instrumental in reaching those unaware or unable to access regular eye care due to cost or distance barriers. The municipal assembly and the municipal health directorate can engage eye care professionals to give public eye health education from communities to community to address these challenges, possibly leveraging platforms like radio and local information center, which seem to be the most popular medium among the respondents. Additionally, ensuring better access to specialized care and public health campaigns stressing the dangers of self-medication might further drive proactive eye care in the surveyed population. This could be extended to other rural areas in the country. To aid those living in remote areas, improving transportation services and the road network by the municipal assemblies through the road and transport ministry can prove beneficial. This will ensure easy access to eye care facilities in rural areas. Continuous monitoring and evaluation of the quality of eye care services can ensure high standards, encouraging more residents in rural areas to seek services without fearing subpar treatments.

CONTRIBUTIONS

GCO[*]: Conceptualization, Data Curation, Methodology, Investigation, Resource, Project Administration, Validation, Visualization, Software, Formal Analysis, Writing – Original Draft Preparation, Writing – Review & Editing

VHOT: Data Curation, Methodology, Investigation, Resources, Validation, Formal Analysis, Writing – Review & Editing

AAO: Data Curation, Methodology, Investigation, Resources, Validation, Formal Analysis, Writing – Review & Editing

RA: Methodology, Investigation, Resources, Validation, Formal Analysis, Writing – Review & Editing

PMT: Supervision, Project Administration, Methodology, Investigation, Resources, Validation, Formal Analysis, Writing – Review & Editing

REFERENCE

1. Abah, E. R., Oladigbolu, K. K. (2016). Knowledge, attitudes, and practices of Nigerians towards eye health and blindness. Journal of Community Health, 41(2), 394-399.
2. Alwadani, F., Alobaidan, A. H., AlQarni, S. A., Alkharashi, S. S., & Alotaibi, A. Z. (2018). Knowledge, attitude, and practice of eye care among medical students at King Saud University, Riyadh, Saudi Arabia. Journal of family medicine and primary care, 7(2), 349-353.
3. Awuni, J. A., Boamah, E. K., Biritwum, R. B., & Akazili, J. (2015). Visual impairment and associated factors in Ghana: Results from the 2014 World Health Survey. PloS one, 10(12), e0144200.
4. Ayisi-Boateng, G., Addy, B. E., Darko-Takyi, C., & Ocansey, S. (2020). Knowledge, attitudes and practices towards eye care among adults in the New Juaben South Municipality of Ghana. Ghana Medical Journal, 54(1), 52-59.
5. Baidoo R. Toward a comprehensive health care system in Ghana. Int Dev Stud 2009:13-81.

6. Balai, B. (2017). Eye Health in Rural Ghana: Challenges and Opportunities. Journal of Public Health and Development, 1(2), 63-66.
7. Bamgboye, E. A., & Ogunleye, A. A. (2017). Awareness and utilization of eye care services in a rural community in southwestern Nigeria. BMC Ophthalmology, 17(1), 109.
8. Bourne R.A, Flaxman S.R, Braithwaite T, Cicinelli MV, Das A, Jonas JB, Keeffe J, Kempen JH, Leasher J, Limburg H, Naidoo K, Pesudovs K, Resnikoff S, Silvester A, Stevens GA, Tahhan N, Wong TY, Taylor HR; Vision Loss Expert Group. Magnitude, temporal trends, and projection of the global prevalence of blindness and distance and near vision impairment: a systematic review and meta-analysis. Lancet Glob Health 2017;5(9):e888-e897.
9. Chuka-Okosa, C. M., Ukwade, M. T., Udensi, E. O., & Chuka-Okosa, A. C. (2019). Barriers to eye care utilization in a Nigerian population: a survey of adults attending an eye clinic. Nigerian Journal of Clinical Practice, 22(8), 1118-1126.
10. Ghana Statistical Service. (2021). 2021 Population and Housing Census Summary Report of Final Results. Retrieved from https://statsghana.gov.gh/gssmain/fileUpload/pressrelease/PHC_2021_Summary_report_of_final_results.pdf
11. Glenn D. Determining sample size. Sampling the evidence of extension program impact, PEOD-5, 1992. Available from: http:// www.edis.ifas.ufl.edu/pd006. [Last accessed on 2013 Jun 28].
12. Global Vision 2020. (2018). Eye health in Africa. Retrieved from https://globalvision2020.org/programmes/eye-health-in-africa/.
13. Gyasi M, Amoaku W, Asamany D. Barriers to cataract surgical uptake in the upper East region of ghana. Ghana Med J 2007;41:167-70.
14. Gyasi, M. E., Amoako, E. P., Asante, F. A., & Awuah, K. (2016). Barriers to accessing eye care services among visually impaired persons in the Ashanti Region of Ghana. BMC ophthalmology, 16(1), 159.
15. Gyasi, M. E., Mensah, B., & Adjei, E. (2017). Barriers to accessing eye care services among visually impaired persons in the Eastern Region of Ghana. BMC research notes, 10(1), 408.
16. Holden BA. Blindness and poverty: A tragic combination. Clin Exp Optom 2007;90:401-3.
17. Khandekar, R., Mohammed, A. J., & Al Raisi, A. (2008). Prevalence and determinants of spectacle use in rural and urban populations in the Omani region of Al Dhahira. Oman Journal of Ophthalmology, 1(2), 68-73.
18. Kostov, P., & Dinev, D. (2015). Attitudes towards eye health and utilization of eye care services in South Africa. BMC Ophthalmology, 15(1), 108.
19. Kumah, B. D., Ebri, A., Abdul-Kabir, M., & Ahmed, A. (2015). Assessment of knowledge, attitudes, and practices regarding eye health among urban residents in the Kumasi Metropolis, Ghana. Journal of Ophthalmology, 2015.
20. Lambert, J., Sivakumar, T., Palepu, A., Gudlavalleti, M. V. S., & Ramulu, P. Y. (2020). Community-based eye health education in rural India: A feasibility study. Journal of Community.
21. Lee, M., Lee, M. H., Kim, Y. K., Lee, S. H., & Moon, S. J. (2019). Factors influencing regular eye examination among Korean adults: The Korea National Health and Nutrition Examination Survey 2010-2012. Korean journal of ophthalmology, 33(1), 29-38.
22. Lewallen, S., Leske, M. C., Hennis, A., Chibonga, D., Chisi, J., & Kabeto, M. U. (2011). The prevalence and causes of visual impairment in rural southern Africa. Tropical Medicine & International Health, 16(12), 1562-1571.
23. Ngirawamungu, E., Courtright, P., Ruhagaze, P., & Tayari, J. C. (2020). Barriers to accessing eye care services among visually impaired populations in rural Rwanda. International health, 12(6), 561-567.
24. Ntim-Amponsah C, Amoaku W, Ofosu-Amaah S. Alternate eye care services in a Ghanaian district. Ghana Med J 2005;39:19-23.
25. Ocansey S, Kumi-Kyereme A, Awusabo-Asare K, Ilechie AA, BoadiKusi SB, Abraham CH. Utilization of eye care services among Ghanaian elderly population: Evidence from a peri-urban community. Ophthalmol Res Int J 2013;1:89-101.
26. Ocansey, S., Addy, B. E., & Darko-Takyi, C. (2020). Factors influencing the utilization of eye care services among adults in the Greater Accra Region of Ghana. Ghana Medical Journal, 54(1), 38-44.

27. Ormsby GM, Arnold A, Busija L, Morchen M, Bonn TS, Keeffe JE. The impact of knowledge and attitudes on access to eye care services in Cambodia. Asia-Pac J Ophthalmol 2012;6:331-5.
28. Owusu, D., Adjei, S., Asiamah, S., & Adjapong, J. (2019). Knowledge, Attitudes and Practices of Eye Health in Rural Communities in Ghana: A Community-Based Study. Journal of Public Health and Development, 3(1), 1-7.
29. Rabiu, M. M., Muhammad, N., & Alhassan, M. B. (2014). Knowledge and attitudes towards eye diseases and blindness among students of a special school in Northwestern Nigeria. Annals of African Medicine, 13(4), 187-191.
30. Rath, R. K., & Mohan, U. (2010). Knowledge, attitude and practices of the rural population towards eye health and utilization of eye care services in India. Indian Journal of Community Medicine, 35(3), 233-237.
31. Universal eye health: a global action plan 2014-2019. https://www.who. int/blindness/actionplan/en/. Accessed on June 2, 2017.
32. van den Boom GJ, Nsowah-Nuamah NN, Overbosch GB. Curative health care utilization in Ghana: A multinomial analysis of equitable access opportunities, 2004.
33. Vision 2020: The Right to Sight. (2020). Regular eye examinations. Retrieved from https://www.v2020.org/patient-care/regular-eye-examinations/.
34. World Health Organization. (2019). Visual impairment and blindness. Retrieved from https://www.who.int/news-room/fact-sheets/detail/visual-impairment-and-blindness.
35. World Health Organization. (2020). Comprehensive eye care. Retrieved from https://www.who.int/news-room/fact-sheets/detail/blindness-and-visual-impairment.
36. World Health Organization. (2020). Prevention of Blindness and Visual Impairment. Retrieved from https://www.who.int/blindness/causes/priority/en/.
37. World Health Organization. Blindness and vision impairment factsheet. http://www.who.int/mediacentre/factsheets/fs282/en/. Accessed on November 9, 2018.