HEALTH SEEKING BEHAVIOURS, KNOWLEDGE AND PERCEPTION OF CATARACT AMONG PATIENTS AWAITING SURGERY AT THE AJEROMI GENERAL HOSPITAL, LAGOS, NIGERIA

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DEDICATION

This dissertation is dedicated to the glory of God and humanity.

ABSTRACT

Cataract is a problem of public health importance worldwide, which accounts for most of the causes of blindness among persons aged 50 years and above in Nigeria. People's perceptions of cataract and their cataract related health-seeking practices have not been fully studied in Nigeria. The study was aimed at assessing the knowledge, perceptions and health-seeking behaviors relating to cataract surgery among patients aged 50-70 years who were awaiting surgery in Ajeromi General Hospital, Lagos.

Systematic random sampling technique was used to select 500 participants out of the 590 cataract patients awaiting surgery at the hospital from 27th June to10th August, 2009. A questionnaire which included a 15-point knowledge scale and questions on socio-demographic characteristic, knowledge, perceptions and treatments seeking-behaviours were used for data collection. Scores ranging from 1-6, 7-8 and 9-15 points were categorized as poor, fair and good respectively. Scores 0-8 and 9-15 were described as low and high respectively. Data were analysed using descriptive satistics, such as student's t-test and ANOVA.

Respondents' mean age was 59.4±5.1 years and 55.4% were males. All the respondents had at least primary school education. Forty-three percent of respondents had heard about cataract before diagnosis and their sources of information were friends (33.2%), family members (29.0%), mass media (24.2%) and health workers (13.6%). Only 12.8% were able to state correctly that it is a white object which blocks the eye thereby preventing it from seeing. Perceived causes of cataract included old age (9.4%) and witchcraft (8.4%). Respondents' mean knowledge score was 4.0±3.2. Mean score for males was 4.2±3.3 while that of females was 3.8±3.1. Mean knowledge scores by age group were 4.0±3.3 (50-54 years), 4.6±3.1(55-59 years), 4.1±3.2 (60-64 years) and 3.4±2.9(65-70 years) ($p<0.05$). Respondents with poor, fair and good knowledge scores were (74.6%) (17.2%) and (8.2%) respectively. The risks associated with cataract surgery were perceived by 8.4% to be worth taking, 32.7% not worth taking, while 46.9% were of the perceptions that the risks were inevitable. Perceived benefits of cataract surgery included restoration of vision (81.3%), better well-being (8.6%) and

protection of second eye from cataract in future (5.2%). Ninety percent of the respondents delayed surgery and the reasons given included lack of knowledge of its benefits (37.8%), high cost of surgery (20.2%), fear of surgery (18.4%) and fear of loosing the eye (13.4%). When symptoms of cataract were first noticed, 21.6% did nothing. The health seeking behaviors of the others included visit to a health centre (37.8 %,) patronized herbalists (6.8%), and request for help from family members (3.0%). Twenty- nine percent of respondents had previously visited several other eye clinics before accepting surgical intervention. Suggestions on how to improve eye-care services included subsidizing the cost of eye surgery (12.4%), provision of good quality equipment (21.6%) and training of more eye-care specialists (33.8%).

Respondents' knowledge was low and misconceptions as well as risky health seeking behaviors were common among them. Public enlightenment and preoperative counseling services are needed to address these concerns.

Key Words: Cataract, Risk perceptions, Health seeking behavior, Cataract-related knowledge.

Word Count: 487

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CERTIFICATION

I certify that this work was carried out by Ukonwa Maryanne IJEOMAH, in the Department of Health Promotion and Education, Faculty of Public Health, College of Medicine University of Ibadan, Nigeria.

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CHAPTER ONE

INTRODUCTION

1.1 Background Information

Cataract is the loss of transparency of the crystalline human lens. Cataracts are the major cause of blindness worldwide. It is estimated that over 50% of blindness world-wide is due to cataract (Onwasigwe , Umeh and Ozoh , 2008). Based on WHO definition of Visual Acuity (VA) in the best eye of (less than) < 3/60, approximately 20 million people were believed to be blind from cataract (Ledo, Rodriguez and Fontela, 2006). More than 30 million Americans aged 40 years and older have one or more of the major eye diseases that can cause low vision and blindness, including cataract, age-related macular degeneration (AMD), glaucoma, or diabetic retinopathy (National Eye Institute, 2002). There are over 12 million blind people in India and new cases per year are put at 3.8 million, majority due to cataract (Thulasiraj, Priya and Saravanan, 2004; Minassian and Mehra, 1990) According to a survey conducted in the early 1990s, an estimated 35,000 patients have cataract-related blindness in Brazil (Souza and Salles, 2005).

Cataract has been shown by various studies to be widespread in Nigeria. In a population-based study to determine the magnitude of cataract blindness in rural settings in northern Nigeria among those that were over forty years of age. A blindness prevalence of 8.2% was found and cataract was said to be responsible for 44.2% of the blindness. Specifically, a cataract prevalence of 3.6% was found (Rabiu, 2001a). Similarly, a cross-sectional survey of blindness carried out by Adeoye (2007) in the southwestern Nigeria reported overall prevalence rate of blindness (best corrected visual acuity less than 3/60 in the better eye) to be 0.9% and the major (48.1%) cause of blindness was cataract. In the north central geographical zone, cataract cases account for 54.5% of all ocular treatments at eye facilities in the zone and was most common in patients older than 45 years (Owoeye and Omolase, 2006).

In a nation-wide survey initiated by the Federal Ministry of Health, and supported by Sightsavers International, it was found that over 1 million adults were blind and another 3 million were visually impaired. This translates to 42 being blind out of every 1000 adults in Nigeria. Specifically, cataract was found to account for two out of three blind Nigerians. The number of adults that need immediate cataract surgery was put at 486,000 (Sightsavers International, 2008).

The most common cause of cataract is age-related i.e.the older the higher the risk. Other causes include trauma, intraocular inflammation and heredity. As there are no well-documented effective ways of preventing age-related cataract, all efforts are toward providing surgery to all those who need it. Cataract surgery involves removing the cataractous lens and thereby relieving visual impairment. The lens can be completely removed (intracapsular cataract extraction) or partially removed, with the posterior capsule of the lens remaining (extracapsular cataract extraction). The extracapsular technique permits insertion of an artificial intraocular lens. The majority of cataract patients can benefit from any of these types of surgery, which is very important in the overall rehabilitation of the patient. Over the past few decades, many advances were made in the operative techniques to bring cataract surgery to its present level of sophistication. Nonetheless people's use of health services is influenced by a range of psychological, social, cultural, economic and practical factors. Eye care services are no exception.

Studies have shown that individuals perceive vision loss as a serious problem but have limited knowledge regarding vision and eye wellness. In surveys in Australia, more than 70% of interviewees had heard of glaucoma, but less than a third exhibited correct knowledge about this condition (Fontela, 2006). In another study, it was found that 70% of participants lacked knowledge pertaining to age-related macular degeneration (AMD), (Rosenthal and Thompson, 2003). Alexander (2005) found that only 5% of focus group participants undertook preventive eye care measures. The behaviour was driven by the belief that vision was intact and the attitude that visits to eye care professionals are necessary only when new eye glass prescriptions need to be obtained. A qualitative study amongst visually impaired individuals found that individuals did not understand the meaning of low vision and the

benefits of low vision rehabilitation (Pollard, Simpson, Lamoureux, and Keeffe, 2003). It has been documented that the young, female, educated and married individuals exhibit more correct knowledge regarding eye diseases compared to their counterparts (Umeh and Ozoh, 2008). Individual knowledge, attitudes, and behaviours are related to perceived vision; for example, people with decreased knowledge about vision and eye wellness would tend to have limited understanding about the importance of vision screening and might have undiagnosed eye conditions resulting in the perception that vision is intact (Abiose, 2002).

Health-seeking behaviours of patients suffering from infectious and non-infectious diseases have been evaluated in many parts of Africa. These include those suffering from tuberculosis (Andwalo and Morkye, 2000; Yimer, Bjune and Alene, 2005; Odusanya and Babafemi, 2004; Kiwuwa, Charles and Harriet, 2005), sleeping sickness (Odiit, Shaw, Welbum , Fevre , 2004), sexually transmitted diseases (Akinnawo and Oguntimehin, 1997) and non-infectious diseases (Mwende, Bronsard, Mosha et al, 2005; Okeke and Okafor, 2008). Factors that determine when patients get hospital treatment vary from the patients' own reasons to those due to health providers. Patients' factors include expectations that the symptoms might improve, visit to local traditional healer and self medication from a nearby drug shop or private clinic.

Other factors that have been documented as causing delay in patients seeking health facilities' treatment include the distance to the nearest health facility and socio-economic status. Some households are far from hospitals and poor infrastructure makes accessibility to health care difficult. In areas where there is transportation, affordability of the costs of transport prevent patients coming to hospital on time (Ogwurike and Pam, 2004). Factors related to health provider included poor referral system, high work load and diagnostic difficulties (Andwalo and Morkye, 2000, Yimer et al, 2005, Odusanya and Babafemi, 2004, Kiwuwa et al, 2005 and Odiit, et al, 2004).

Health campaigns and health education programme attempt to create better awareness and motivate patients to take advantage of available health interventions such as cataract surgery, immunizations, or mastectomy. (Musa and Akanbi 2006). In the case of cataract, despite

such efforts, the patients needing correction for their impaired visions have not shown much response and there seems to be a general reluctance to hospitalization and/or surgery. Information on the knowledge and health-seeking behaviour for surgery among the elderly cataract patients in Southwest Nigeria, is yet to be given the desired documentation in the literature. To bridge this gap in knowledge, this study was an attempt to investigate the knowledge, perceptions and health-seeking behaviour of cataract patients towards surgery in an urban area of southwestern Nigeria.

1.2 Statement of the Problem

Cataract is the worlds leading cause of blindness, affecting 18 million people and accounting for 48% of world blindness according to the World Health Organisation. People with the most common causes of visual impairment are projected to double by 2030 (National Eye Institute, 2002). The number of adults suffering from blindness in Nigeria was estimated to be over 1 million and another 3 million are visually impaired (Sightsaver International, 2008). Cataract accounts for about 70% of blindness among Nigerian adults that are blind and as at 2007; an estimated 486,000 Nigerian adults were in need of immediate cataract surgery (Sightsavers International, 2008). The majority of cataract cases are age- related.

Low visual acuity and blindness may have adverse consequences, both at individual and population levels. They lead to psychological, social and economic problems and quality of life impairment, because they generate loss of self-esteem and of occupational status, with resulting loss of income. Along with the ageing of society, individual perceptions and practices about vision and how to preserve it may be contributing to the growing burden of visual impairment.

Despite the concerted efforts at providing access to cataract treatment in hospitals and; eye treatment camps and outreaches, the coverage rate for cataract surgery is still low in many parts of Nigeria. For example in the northern part of Nigeria, cataract coverage has been put at 39.2% in leprosy camps and 4.0% in the communities (Mpyet, Dineen, Solomon, 2005 and Rabiu, 2001b). This low coverage of surgical treatment for cataract common in developing countries has been attributed to economic and logistical constraints, fear of surgery and; lack

of time and cost (Snellingen, Shrestha, Gharti, Shrestha, Upadhyay and Pokhrel, 1998; Rabiu, 2001b; He, Chan and Baruwa, 2003 and Mpyet, 2005). Another barrier to uptake of cataract surgery apart from the socio-economic characteristics is the availability of alternative treatment such as couching (a method which involves using an object to hit the eye in order to dislocate the lens when it is affecting vision). More than half of cataract cases are treated through couching done by local herbalists. A study in a rural community of northern Nigeria revealed that couching of the eye is practiced 5 times more than cataract surgery (Rabiu, 2001a). This implies poor utilisation of treatment available, particularly among the elderly cataract patients which demands urgent intervention.

1.3 Justification

For proper planning of interventions to increase the acceptability of surgery by cataract patients, information is required specifically on the knowledge, perceptions and the barriers to adoption and uptake of surgical treatment for cataract. This study will bridge this gap. Factors that enhance or militate against the uptake of surgical treatment would be identified. All these will influence the design or improvement of any intervention for the promotion of cataract surgery among the elderly. The findings could also be used as a tool for advocacy among policy makers and also provide direction for further research.

1.4 Broad Objective of Study

The broad objective of this study was to investigate factors that affect the health-seeking behaviour of cataract patients between the ages of 50 and 70 years.

1.5 Specific Objectives

The specific objectives of this study were:

1. To assess the knowledge of cataract patients about the disease.
2. To determine the perceptions of cataract patients about surgical treatment for the disease.
3. To evaluate the types of health-seeking behaviours for the treatment of cataract among the patients.

4. To determine the factors that influence the adoption of surgery for the treatment of cataract among the patients.

1.6 Research Questions

1. How much do elderly cataract patients know about cataract and its treatment?
2. What are the perceptions of elderly cataract patients about surgical treatment of the disease?
3. What are the health-seeking behaviours relating to treatment of cataract among the patients?
4. What are the factors influencing the adoption of surgery for cataract treatment among the patients?

1.7 Research Hypotheses

The following null hypotheses were tested by the study:

1. There is no significant relationship between the age of respondents and their knowledge about cataract.
2. There is no significant relationship between educational qualification of respondents and their knowledge about cataract.
3. There is no significant relationship between the level of knowledge of respondents about cataract and their health seeking behavior
4. There is no significant relationship between the health seeking behaviours of the respondents and their age, sex, marital status and occupational status.

CHAPTER TWO

LITERATURE REVIEW

2.1 Anatomy and Physiology of the eye

The human eye is a spheroid structure that rests in a bony cavity (socket, or orbit) on the frontal surface of the skull. The thick wall of the eyeball contains three covering layers: the sclera, the choroid, and the retina. The sclera is the outermost layer of eye tissue; part of it is visible as the "white" of the eye. In the center of the visible sclera and projecting slightly, in the manner of a crystal raised above the surface of a watch, is the cornea, a transparent membrane that acts as the window of the eye. A delicate membrane, the conjunctiva, covers the visible portion of the sclera.

Underneath the sclera is the second layer of tissue, the choroid, composed of a dense pigment and blood vessels that nourish the tissues. Near the center of the visible portion of the eye, the choroid layer forms the ciliary body, which contains the muscles used to change the shape of the lens (that is, to focus). The ciliary body in turn merges with the iris, a diaphragm that regulates the size of the pupil. The iris is the area of the eye where the pigmentation of the choroid layer, usually brown or blue, is visible because it is not covered by the sclera. The pupil is the round opening in the center of the iris; it is dilated and contracted by muscular action of the iris, thus regulating the amount of light that enters the eye. Behind the iris is the lens, a transparent, elastic, but solid ellipsoid body that focuses the light on the retina, the third and innermost layer of tissue (Kaufman, and Alm, 2003)).

The retina is a network of nerve cells, notably the rods and cones, and nerve fibers that fan out over the choroid from the optic nerve as it enters the rear of the eyeball from the brain. Unlike the two outer layers of the eye, the retina does not extend to the front of the eyeball. Between the cornea and iris and between the iris and lens are small spaces filled with

aqueous humor, a thin, watery fluid. The large spheroid space at the back of the lens (the center of the eyeball) is filled with vitreous humor, a jellylike substance.

Accessory structures of the eye are the lacrimal gland and its ducts in the upper lid, which bathe the eye with tears, keeping the cornea moist, clean, and brilliant, and drainage ducts that carry the excess moisture to the interior of the nose. The eye is protected from dust and dirt by the eyelashes, eyelid, and eyebrows. Six muscles extend from the eyesocket to the eyeball, enabling it to move in various directions (Galloway, 2006).

The eye is a complex organ composed of many small parts, each vital to normal vision. The ability to see clearly depends on how well these parts work together. Light rays bounce off all objects. If a person is looking at a particular object, such as a tree, light is reflected off the tree to the person's eye and enters the eye through the cornea (clear, transparent portion of the coating that surrounds the eyeball). Next, light rays pass through an opening in the iris (colored part of the eye), called the pupil. The iris controls the amount of light entering the eye by dilating or constricting the pupil. In bright light, for example, the pupils shrink to the size of a pinhead to prevent too much light from entering. In dim light, the pupil enlarges to allow more light to enter the eye. Light then reaches the crystalline lens. The lens focuses light rays onto the retina by bending (refracting) them. The cornea does most of the refraction and the crystalline lens fine-tunes the focus. In a healthy eye, the lens can change its shape (accommodate) to provide clear vision at various distances. If an object is close, the ciliary muscles of the eye contract and the lens becomes rounder. To see a distant object, the same muscles relax and the lens flattens (Priya, 2004)

Behind the lens and in front of the retina is a chamber called the vitreous body, which contains a clear, gelatinous fluid called vitreous humor. Light rays pass through the vitreous before reaching the retina. The retina lines the posterior two-thirds of the eye and is responsible for the wide field of vision that most people experience. For clear vision, light rays must focus directly on the retina. When light focuses in front of or behind the retina, the result is blurry vision (Saravanan, 2004)

The retina contains millions of specialized photoreceptor cells called rods and cones that convert light rays into electrical signals that are transmitted to the brain through the optic

nerve and back to the eyes for a clear vision to occur. Rods and cones provide the ability to see in dim light and to see colours respectively.

The macula, located in the center of the retina, is where most of the cone cells are located. The fovea, a small depression in the center of the macula, has the highest concentration of cone cells. The macula is responsible for central vision, seeing colour, and distinguishing fine detail. The outer portion (peripheral retina) is the primary location of rod cells and allows for night vision and seeing movement and objects to the side (i.e., peripheral vision).

The optic nerve, located behind the retina, transmits signals from the photoreceptor cells to the brain. Each eye transmits signals of a slightly different image, and the images are inverted. Once they reach the brain, they are corrected and combined into one image. This complex process of analyzing data transmitted through the optic nerve is called visual processing (Saravanan, 2001).

2. 2 Cataract Formation

Cataract is an eye condition whereby there is clouding of the lens in the eye that affects vision. Most cataracts are related to ageing (Tielsch, Sommer, Witt, Katz, and Royall, 1990 and Coleman, 2008). Cataracts can occur in either or both eyes; however it cannot spread from one eye to the other. The lens is a clear part of the eye that helps to focus light, or an image, on the retina. The retina is the light-sensitive tissue at the back of the eye where image is recorded. The lens also adjusts the eye's focus for clear vision of both far and near objects. In a normal eye, light passes through the transparent lens to the retina. Once it reaches the retina, light is changed into nerve signals that are sent to the brain. The lens must be clear for the retina to receive a sharp image. If the lens is cloudy from a cataract, the image will be blurred. The lens is made of mostly water and protein. The protein is arranged in a precise way that keeps the lens clear and allows light pass through it (Figure 2.1).

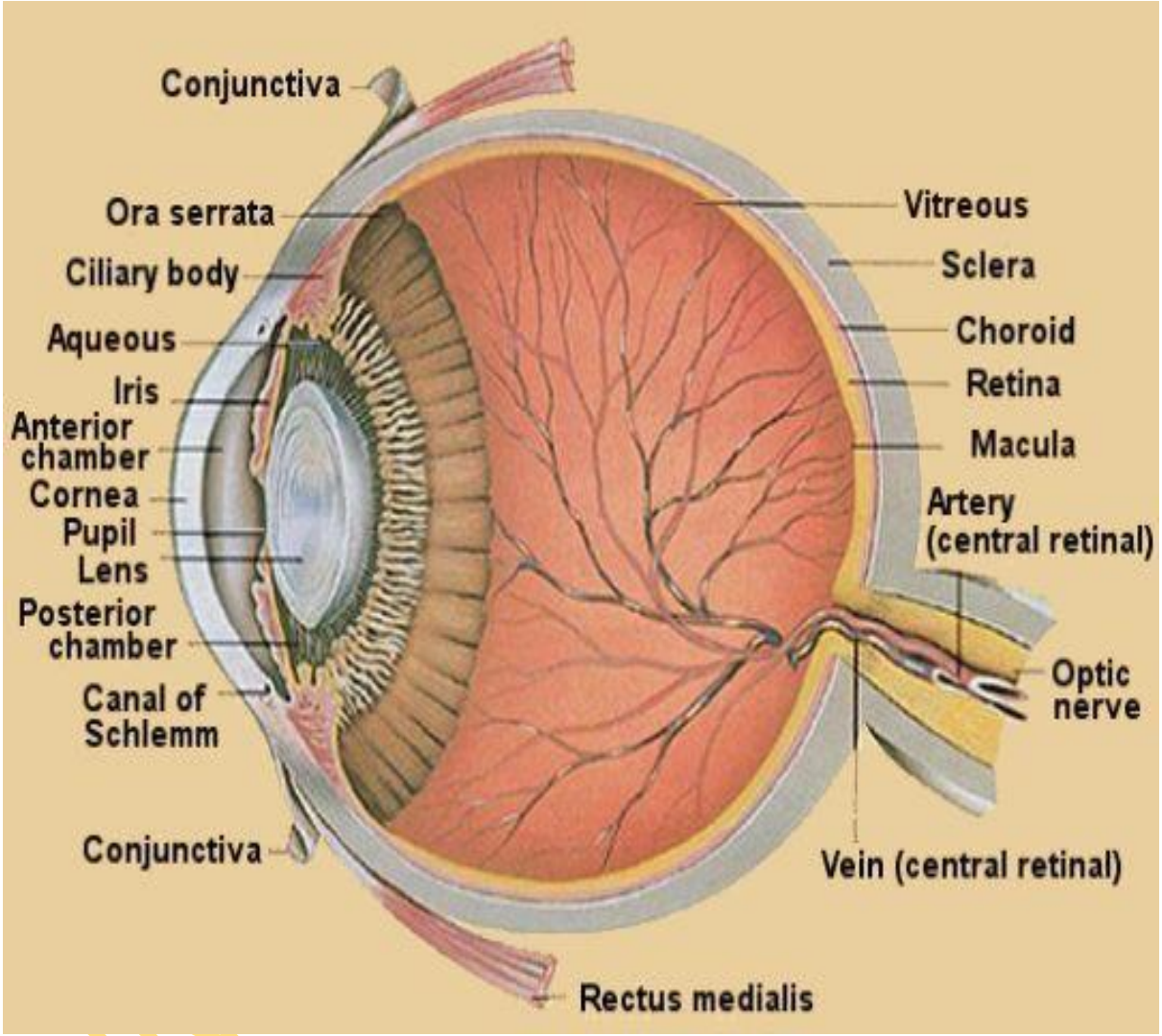

Fig. 2.1 The Structure of the Eye (Kaufman, and Alm.)

With ageing, some of the protein may clump together and start to cloud a small area of the lens. This is a cataract. When the protein clumps up, it clouds the lens and reduces the light that reaches the retina. The clouding may become severe enough to cause blurred vision. Most age-related cataracts develop from protein clumping. When a cataract is small, the cloudiness affects only a small part of the lens and changes in vision may not be noticed. Cataracts tend to "grow" slowly, so vision gets worse gradually. Over time, the cloudy area in the lens may get larger, and the cataract may increase in size. Seeing may become more difficult and vision may get duller or blurrier.

Age-related cataracts can affect vision in two ways: Clumps of protein which reduce the sharpness of the image reaching the retina or the clear lens slowly changes to a yellowish/brownish colour, adding a brownish tint to vision. As the clear lens slowly colours with age, vision gradually may acquire a brownish shade. At first, the amount of tinting may be small and cause no vision problem. Over time, increased tinting may make it more difficult to read and perform other routine activities. This gradual change in the amount of tinting does not affect the sharpness of the image transmitted to the retina. People with advanced lens discoloration may not be able to identify blues and purples (Musa and Akanbi, 2006).

2.3 Causes of Cataract

Although most cataracts are related to ageing, there are other causes of cataract. Cataracts can form after surgery for other eye problems, such as glaucoma. Cataracts can also develop in people who have other health problems, such as diabetes. Cataracts are sometimes linked to personal behavior such as smoking, alcohol use and steroid use. Other types of cataract not related to ageing are traumatic cataract associated with eye injury; congenital cataract which occurs among babies; and radiation cataracts which develop after prolonged eye exposure to some types of radiation from sunlight (Hall and Lion 2005, Barhanpurkar, Kumar and Kapadia, 2005, Arya, Malhotra, Dhir and Sood, 2001). Children may have cataract as a result of hereditary disease or because of trauma or intra-uterine infections such as rubella. Cataract may be a consequence of a clinical syndrome or disease such as Down's syndrome, juvenile diabetes mellitus, galactosaemia, Lowe's Syndrome or hypoparathyroidism. The cataracts

formed as a result of all these causes are called secondary cataract (Delcourt, Cristol, Tessier, 2000).

2.4 Types of Cataract

There are three types of cataract, each defined by their location on the lens. Nuclear cataracts are found in the center, or nucleus of the lens. Cortical cataracts begin at the outer rim of the lens, which is known as the cortex, and work toward the center. Subcapsular cataracts affect the back of the lens in the capsule, or the membrane that envelops the lens. Because each of these cataract types affects vision in a distinct manner, it is possible for a patient to have more than one type of cataract at the same time (Musa and Akanbi, 2006).

Nuclear cataracts are the most common of the cataract types. Nuclear cataracts affect the center of the lens, so they interfere with a person's ability to see objects in the distance. This type of cataract is usually the result of advancing age. Of all cataract types, cortical cataracts are most commonly seen in patients who have diabetes. Cortical cataracts begin at the outer rim of the lens and gradually work toward the central core of the lens. This type of cataract resembles spokes of a wheel that extend from the outside of the lens to the center. Subcapsular cataracts progress the most rapidly. Subcapsular cataracts affect the back of the lens, causing glare and blurriness. This type of cataract is usually seen in patients who use steroids, or who suffer from diabetes or extreme nearsightedness.

2.5 Symptoms and Diagnosis of Cataract

The most common symptoms of a cataract as illustrated by National Eye Institute (2002) are: Cloudy or blurry vision, colours seem faded, Glare-Headlights, lamps, or sunlight may appear too bright. A halo may appear around lights, poor night vision, double vision or multiple images in one eye, this symptom may clear as the cataract gets larger and frequent prescription changes in eyeglasses or contact lenses,

Cataract can be detected through a comprehensive eye examination that includes:

1. Visual Acuity Test. This is a chart that has different letters of various sizes placed at a standard distance of 6m. The size a patient sees at a distance of 6m determines whether cataract is affecting the vision or not. In the most well-known vision test, the visual acuity

test, the patient will be asked to read letters or symbols of various sizes from a chart. The eyes will be tested individually and together to measure the accuracy of eyesight at different distances. This test is frequently used to screen for any visual problems, including cataracts. The visual acuity test provides easy, painless, and quick cataract diagnosis. More tests may be necessary before the doctor can be sure that cataracts are causing the vision problems (Klien et al, 1991).

2.6 Prevention and Treatment of Cataract

Wearing sunglasses and a hat with a brim to block ultraviolet sunlight may help to delay cataract. Smoking should be avoided as much as possible. It is also believed that good nutrition can help reduce the risk of age-related cataract and eating of green leafy vegetables, fruits, and other foods with antioxidants is highly recommended in order to prevent cataract. People of age 60 years or older should have a comprehensive dilated eye examination at least once every two years. The symptoms of early cataract may be improved with new eyeglasses, brighter lighting, anti-glare sunglasses, or magnifying lenses. If these measures do not help, surgery is the only effective treatment. Surgery involves removing the cloudy lens and replacing it with an artificial lens.

A cataract needs to be removed only when vision loss interferes with the person's everyday activities, such as driving, reading, or watching Television. The decision to have cataract surgery is best made by the cataract patient and the eye care professional jointly. Once the patient understands the benefits, risks, alternatives and expected outcomes of surgery, he can make an informed decision about whether cataract surgery is right or not (Omolase, Fadamiro, Omolase et al, 2007). In most cases, delaying cataract surgery will not cause long-term damage to the eye or make the surgery more difficult (National Eye Institute, 2006). Therefore patients do not have to rush into surgery.

Sometimes there may be need for cataract removal even if it does not cause problems with vision. For example, a cataract should be removed if it prevents examination or treatment of another eye problem, such as age-related macular degeneration or diabetic retinopathy (NEI, 2006). At the same time, if eye care professional finds a cataract, the person may not need cataract surgery for several years or may never need cataract surgery. The need for cataract

surgery is determined on the merit of each cataract involved and this can be achieved by having a regular vision test to enable the patient and the eye care professional to discuss if and when treatment might be needed. The type of cataract surgery for an individual is determined by his peculiarities such as age, type of cataract and health status. If a patient has cataracts in both eyes that require surgery, the surgery will be performed on each eye at separate times, usually four to eight weeks apart (Delcourt , Cristol, and Tessier 2000).

Couching is a common procedure for the treatment of blinding cataract in Northern Nigeria and also elsewhere in West Africa. The technique of couching is usually ascribed to Susruta, India, in the period 1000BC to 500 BC. It is presently practised mainly in remote areas where there is a lack of surgical facilities, particularly in West Africa, the Indian Sub-Continent and in China. In China it is an officially recognized technique used by doctors in hospitals. Elsewhere it is not practiced in hospitals and is only performed by traditional healers (Goyal and Hogeweg, 1997).

About half of cataract cases in Nigeria are treated by this method. The procedure is performed by herbalists whereby an instrument is used to dislocate the opaque lens away from the pupil into the back of the eye .This procedure is, however always associated with complications. Traditional beliefs, sometimes good results, the scarcity of surgical facilities and low costs as well as lack of qualified eye care providers help to sustain this procedure and practice (Duvey and Meyers, 2002). In this part of Nigeria the number of ophthalmologists is less than one per million population (Sightsavers International, 2008).

There is an extensive network of ‘couchers’, mainly nomadic Fulani, that perform couching in villages and at the home of the patient. Two methods of couching are reported: The ‘sharp’ method (the eye is perforated and the lens is pushed backwards by a sharp instrument, for example a long thorn) and the ‘blunt’ method (the lens is pushed backwards into the vitreous, either by massage or possibly by a ‘magic drop’ which may cause zonulysis). In the blunt method the eye is not perforated and this procedure is assumed to be safer.

The technique, as practised by the traditional healers, is secret and even eye nurses, who are close to the community, cannot witness it. The obvious advantages are low costs, simple technique with locally available materials, performed in the village where the patients live, and it is culturally and religiously acceptable (Goyal and Hogeweg, 1997). In these remote and poor places, a success rate of only 50% may be considered by patients and their guardians as worthwhile, if there is no alternative (Duvey and Meyers, 2002).

2.7 Cataract Surgery

Cataract extraction surgery was introduced in 1745 by Daviel (Ledo, 2006) and has become one of the most frequently performed surgical procedures throughout the world. It is an effective method of restoring unimpeded light transmission to the retina. It is a procedure performed to remove a cloudy lens from the eye. Usually an intraocular lens is implanted at the same time, with the purpose of restoring clear vision. There are two types of cataract surgery. The doctor should explain the differences and help the patient determine which one is better for the cataract concerned.

2.8 Types of cataract surgery

Intracapsular surgery: Intracapsular cataract surgery removes the entire lens ,the capsule, cortex, and nucleus. The procedure is rarely performed today but still is used in some situations, such as when the lens is partially or completely dislocated (Delcourt, Cristal, et al, 2000).

Extracapsular surgery: Extracapsular surgery is by far the most common type of cataract surgery because it minimizes trauma to the eye and is associated with fewer postoperative complications than intracapsular surgery. In extracapsular surgery, the surgeon makes an incision at the side of the cornea (the transparent, dome-shaped disk covering the iris and pupil) and removes the front of the lens capsule, followed by the nucleus and cortex. The back of the lens capsule remains intact. After the natural lens has been removed, it often is replaced by an artificial lens, called an intraocular lens (IOL). An IOL is a clear, plastic lens that requires no care and becomes a permanent part of the eye. Light is focused clearly by the IOL onto the retina, improving vision. Some people cannot have an IOL. They may have

another eye disease or have problems during surgery. For these patients, a soft contact lens, or glasses that provide high magnification, may be suggested (NEI National Eye Institute, 2006).

2.9 Surgery procedures

Surgery procedures can be divided into three phases: before, during and after surgery. The pre-operative procedures start with counselling and running of some tests which may include measuring the curve of the cornea and the size and shape of the eye. This information helps the doctor choose the right type of IOL. This is done about two weeks before the surgery. The patient may be asked not to eat or drink anything 12 hours before the surgery.

During the surgery at the hospital or eye clinic, drops will be put into the eye to dilate the pupil. The area around the eye will be washed and cleansed. The operation usually lasts less than one hour and is almost painless. Many people choose to stay awake during surgery. Others may need to be put to sleep for a short time. For those who prefer to stay awake, unless medically contraindicated, cataract surgery is usually performed under local (regional) anaesthesia. Local anaesthesia is the blockage of a nerve sub-serving a given part of the body by infiltrating the area around the nerve with local anaesthetic. In the eye, infiltration of the periocular area is done to block all the nerves around the globe. The goal is safe, painless, efficient and effective local anaesthesia (Hamilton 1988; Erdurmus, Aydin, Usta, Yagci, Gozdemir and Totan. 2008).

There are different approaches to the delivery of local injection anaesthesia for cataract surgery. The two main approaches are retrobulbar and peribulbar. The retrobulbar approach appears to be more commonly practised but there is an increasing tendency to use peribulbar anaesthesia, which is claimed to provide the same degree of akinesia and anaesthesia as retrobulbar injection (Ross, 2003). Although newer techniques of administering local anaesthesia for cataract surgery, such as sub-tenons, and topical or intracameral application, are gaining popularity peribulbar or retrobulbar anaesthesia is still the technique of choice in several parts of the world (Hansen 1999; Leaming 1999). Retrobulbar anaesthesia is produced by delivering the local anaesthetic agent into the space behind the eye. This space is enclosed by the muscles that move the eye. It also contains the optic nerve, the nerves that

control eye muscle contraction and the sensory nerves that supply sensation to the globe and its surrounding structures (Springs 2001). Peribulbar anaesthesia is given by delivering the local anaesthetic agent outside the muscle cone (Ross, Avery, 2003).

After the operation, a patch may be placed over operated eye and the patient will be required to rest for a while during which the medical team will watch for any problems, such as bleeding. Most people who have cataract surgery can go home the same day.
Itching and mild discomfort are normal after cataract surgery. Some fluid discharge is also common. The eye may be sensitive to light and touch. After one or two days, moderate discomfort should disappear. For a few days after surgery, use of eye-drops may be recommended to help healing and decreasing the risk of infection. The patient will need to wear an eye shield or eyeglasses to help protect the eye. Rubbing or pressing on the eye should be avoided. The patient should try not to bend from the waist to pick up objects on the floor and should not lift any heavy objects. The patient can walk, climb stairs, and do light household chores. In most cases, healing will be complete within eight weeks. The doctor will schedule exams to check on progress (Ezegui , Ajewole 2007).

2.10 Outcome of Cataract Surgery

Cataract removal is one of the safest and most effective types of surgery. In about 90 percent of cases, people who have had cataract surgery have better vision afterward (Abiose, 2006). Cataract patients can return quickly to many everyday activities, but vision may be blurry in the early periods of the surgery. The healing eye needs time to adjust so that it can focus properly with the other eye, especially if the other eye has a cataract. If an IOL is used, the patient may notice that colours are very bright. The IOL is clear, unlike the natural lens that may have had a yellowish/brownish tint. Within a few months after receiving an IOL, the patient will become used to improved colour vision. Also, when the eye heals, the patient may need new glasses or contact lenses.

Compared to the local alternative of couching, visual outcomes of cataract surgery as measured by the visual acuity are much better. For example it has been reported that visual acuity ≥3/60 had been restored to 82.1% of eyes that had had orthodox surgery, but only

58.6% of eyes that had been couched, also 57% of couched eyes were either blind or had severe pain, compared to 8% of the surgically treated eyes (Mpyet et al, 2005) (Dineen and Solomon, 2004).

It is also becoming evident, however, that much more attention must be given to improving visual acuity outcomes among those who have had cataract surgery. Recent population-based surveys in several countries have shown that 40–75% of postoperative eyes have a presenting visual acuity worse than 6/18, with as many as 50% worse than 6/60 (Pokharel, Selvaraj and Ellwein, 1998; He et al, 1999, Ellwein, 2000). This high proportion of cataract-operated cases with poor vision is a matter of great concern. Many cataract patients are not experiencing the level of vision restoration possible with modern day surgery.

Multiple factors, undoubtedly, contribute to poor visual acuity among the cataract operated: a less than favourable surgical setting, such as found in surgical camps; a less than competent surgical technique; inappropriate selection of surgical cases; or perhaps inadequate patient follow-up (Ellwein, 1998). It is apparent that patients operated on in well equipped facilities by experienced surgeons do better. Patient hygiene and behaviour are also important. Other ocular pathology, which may have been coexisting at the time of cataract surgery, or that which manifested itself later, is also responsible for some of the poor outcomes.

From the perspective of the patient, however, the reason behind the poor outcome is less important than the fact that poor vision exists. The patient may not be able to distinguish between vision deterioration associated with the onset of new ocular pathologies and that associated with surgical complications or undetected co-existing disease. Patients with poor vision may conclude that cataract surgery is only partially, or temporarily, effective in restoring sight, if at all. This message may be communicated to those still contemplating whether to seek such surgery and, thus, serve as a deterrent to care.

2.11 Complications of Cataract Surgery

As with all surgical procedures, there are complications that may occur with cataract surgery. Complications associated with cataract surgery are usually classified as minor or major. Most

minor cataract surgery complications are temporary and are often easily treated by healthcare providers. Examples of minor complications seen with cataract surgery include double vision, droopy eyelid, and increased pressure in the eye. Major complications with cataract surgery are rare and may include severe infection, detached retina, bleeding, swelling, loss of vision, and high or low eye pressure. With prompt medical attention, these problems can usually be treated successfully. Before cataract surgery, the doctor may ask the patient to temporarily stop taking certain medications that increase the risk of bleeding during surgery. After surgery, the patient must keep the eye clean, wash hands before touching the eye, and use the prescribed medications to help minimize the risk of infection. Serious infection can result in loss of vision (Youngberg, 2005).

Cataract surgery slightly increases risk of retinal detachment. Other eye disorders, such as high myopia (nearsightedness), can further increase risk of retinal detachment after cataract surgery. One sign of a retinal detachment is a sudden increase in flashes or floaters. Floaters are little “cobwebs” or specks that seem to float about in the field of vision. A retinal detachment is a medical emergency. If necessary, the patient should go to an emergency service or hospital for urgent examination by an eye surgeon. A retinal detachment causes no pain. Early treatment for retinal detachment often can prevent permanent loss of vision (Kuhn, 2003).

Sometimes the eye tissue that encloses the IOL becomes cloudy and may blur your vision. This condition is called an after-cataract. An after-cataract can develop months or years after cataract surgery. An after-cataract is treated with a laser. The doctor uses a laser to make a tiny hole in the eye tissue behind the lens to let light pass through. This outpatient procedure is called a YAG laser capsulotomy. It is painless and rarely results in increased eye pressure or other eye problems. As a precaution, the doctor may give eye drops to lower eye pressure before or after the procedure (NEI, 2006)

2.12 Barriers to Cataract Surgery in Nigeria

Cataract patients are still hesitant to avail themselves of these benefits, due to a number of reasons such as cost, transportation, fear of surgery and lack of time (Snellingen, et al, 1998

and Donoghue, 1999). In any health intervention, mere availability or proclaimed effectiveness will not be adequate to motivate the beneficiaries, unless it is acceptable as well (Brahmachari, Anantharaman, Rao et al, 1998; Kravits, 2001). A patient's satisfaction and consequently, acceptability of surgical treatment is influenced by their pre-surgical expectations and psychological wellbeing. Negative expectations, anxiety and stress can slow down the recovery process (Phillips, Kiyak, Bloomquist and Turvey, 2004). Assessing the expectations of the patients prior to medical or surgical intervention would have the added advantage of alerting the health professionals in their health care as well as counseling patients with unreasonable or unrealistic expectations (Cockburn, 1997).

The effectiveness of prevention of blindness programmes is seriously weakened by the low levels of cataract surgery up-take. The WHO states that globally only a quarter of people in need of cataract surgery currently use eye services (WHO, 1999). This is supported by evidence from studies conducted in India and Nepal which demonstrate levels of utilization of eye services, and uptake of cataract surgery ranging from 7% to 35% (Fletcher, Donoghue, Devavaram, et al, 1999; Brilliant, Lepkowski, Zurita and Thulasiraj 1991 and Brilliant, 1985). Cataract surgery still has a very low coverage in Nigeria. In the northern part of Nigeria, cataract coverage has been put at 39.2% in leprosy camps and 4.0% in the communities (Mpyet et al, 2005 and Rabiu, 2001b). This low coverage of surgical treatment for cataract common in developing countries has been attributed to economic and logistical constraints, fear of surgery and lack of time (Snellingen, Shrestha, Gharti, et al, 1998). In Nigeria and other developing countries, the main barrier to seeking cataract surgery is cost of the service and transportation (Ogwurike and Pam 2004; Rabiu, 2001; He, Chan and Baruwa, 2003; Iqbal, 2005, Awobem, Bekibele, Baiyeroju, 2005 and Mpyet et al, 2005).

Another barrier to uptake of cataract surgery apart from the socio-economic characteristics is the availability of alternative treatment, for example, couching. More than half of cataract cases are treated through couching particularly in the northern part of Nigeria. A study in a rural community of northern Nigeria reveals that couching of the eye is practised 5 times more than cataract surgery (Rabiu, 2001). Three probable reasons were given. Firstly, Couching is more readily available to the people than cataract surgery. Many couching

practitioners move from village to village to solicit clients (people with cataract or at time any eye problem) on whom they will practice their trade. They conduct their services often within the premises of their patients/clients without any delay. Thus, couching is mostly done on the first visit. Cataract surgery often requires the poor villager to travel long distances several times before having the surgery. In some instances the service (i.e., cataract surgery) is just not available. As in many developing countries, Nigeria suffers from a lack of trained staff and equipment to enable the backlog of cataract operations to be reduced.

Secondly couching is often more affordable to these poor people. Some couching practitioners are paid in kind (e.g. by receiving agricultural products), instead of money. Sometimes services are paid only after the patient is satisfied with the outcome of the couching. This is in contrast to surgery where the patient is required not only to pay in money, but also to pay before surgery. Even if the surgery is free the indirect cost involved (travel cost, lost wages, etc.) in accessing the surgery is an enough hindrance to the surgery. .

2.13 Factors contributing to High Volume and High Quality Cataract Surgery

Apart from attempts at overcoming barriers relating to unaffordability and inaccessibility of cataract surgery in this part of the world, it is necessary to provide a cataract service that is competitively better in outcome than the best couched eye. This is capable of inspiring confidence in the people. This requires that the visual outcome of the post-operative surgical eye will be obviously better than the best couched eye with aphakic spectacles (Mpyet and Solomon , 2005). Factors that can contribute to high volume and high quality cataract surgery are illustrated in Table 2.1.

Table 2.1. Factors Contributing to High Volume and High Quality Cataract Surgery

	Activities & Inputs that help in achieving	
	High Volume	High Quality
Demand	Community outreach Community involvement Using satisfied patients as motivators Counseling Building an institutional image	Case selection Uniform demand Forecasting and planning for expected work load Base hospital approach
Building Infrastructure	Bed strength, OPD & Operation theatre capacity Accessibility Working days/time	Layout Maintenance Sanitation and Hygiene
Manpower	Number of staff Staff mix Working hours Job allocation	Trained staff Technical skills Task-Skill matching CME
Instrument, Equipment and Supplies	Number and balance of operating tables, operating microscopes, surgical instrument sets Availability in required quantity Availability in required quantity	Good maintenance Spares planning Calibration Quality of instruments Reliability Selection of brand and vendor for quality supplies
Systems and Procedures	Procedures that ensure good: Patient flow Work flow Cash flow Flow of supplies Resource utilization	Standardization Clinical effectiveness Medical records Quality assurance system Review meetings Management Information System Patient centred systems
Attitude	Commitment to address the magnitude of the problem Willingness to do large volume Team work Discipline	Patient centred behavior Desire to be perfect Willingness to continually learn Willingness to change

Source: Thulasiraj, Priya and Saravanan, (1997).

2.14 Knowledge, Perceptions and their Effects on Health Seeking Behaviours of Cataract Patients

Poor user demand for health services has been attributed to ignorance of treatment availability and benefit. Though 'Ignorance' may explain a proportion of eye service non-utilization, nevertheless there are other root causes such as fear of surgery cost in time and money, ageism and "I-can-cope" attitudes of cataract patients (Fletcher et al, 1999). The prevalence of misconceptions about low visual acuity leads to possible misinformation about the chances of rehabilitation. This is confirmed when we observe that many people remain blind due to fear of undergoing surgery (Kara-jose , Contreras , and Campos, 1990). The lack of information about senile cataract surgery leads people to believe they may die during the surgical procedure, when, in reality, this procedure is extremely unlikely to cause death. The fact that it is performed with local and/or topical anesthesia drastically reduces the risk of anaphylactic shock and wipes out anesthesia-related death (Lieberman, 2001).

On the other hand, when viewed in context, many of the reasons make sense. Fears about treatment such as cataract surgery 'spoiling' eyes may not be irrational. A study about the perceptions of patients participating in a community-oriented visual rehabilitation project in an urban area in the state of Sao Paulo has found that the fear of cataract surgery, mentioned by 40.0% of the interviewed subjects, was linked to supposed consequences of the surgical procedure that is visual loss and death (Souza and Salles , 2005). In response to concerns about the quality of cataract surgical outcomes, WHO strongly recommends the need for better monitoring and evaluation systems (WHO, 1998). It is well known that 'bad news travels fast'. Treatment failures may unfortunately impact more upon community attitudes to eye treatment than all the examples of success.

In a consumer-driven society, almost nothing can escape the inevitable tag of 'Commodity.' Even health is fast achieving this status. It is therefore necessary to keep abreast with the community and it needs to ensure the sound functioning of a health system. The level of knowledge, attitude of the community and level of satisfaction may be good indicators to determine the expectations of the community for eye care in a country. This will allow better planning and delivery of services. An exploratory study using qualitative methods, focus

group discussions and semi-structured interviews were conducted with various community group (teachers, church leaders, parent and employees of enterprises), patient group (waiting in eye clinics) and health care providers (doctors, optometrists and nurses). This information was then analysed using a thematic framework. The key findings were:

- Poor understanding of blindness and its causes; As a result there were tendencies to try out traditional remedies and wait till the disease worsens before seeking help
- Cost was identified as another barrier
- Dearth of understanding; the impact of health education for diabetes and glaucoma shows that messages were heard but not understood.

Conclusion: These data shows that there is a lack of awareness of blindness and visual impairment. Certain eye conditions need to be understood by the community, therefore eye health promotion activities and strong primary health care (PHC) are important. The project recommends strengthening links to PHC by training primary health and primary eye care professional to improve the service.

To describe the barriers to uptake of cataract services in Nakuru, Kenya and to make recommendations on how to overcome the barriers a population-based survey (rapid assessment for available blindness) identified 229 patients needing cataract survey. Of those, 91 had cataract surgery but 138 had not accepted surgery despite being recommended to do so. All 138 non-acceptors were interviewed using Barriers to Surgery Questionnaire and each person gave four reasons for not taking up the surgery such as lack of knowledge, finances, distance and ability to manage with one eye. There were no statistically significant differences between age, sex and place of residence as being risk factors for not accepting surgery. This was a surprise as often elderly woman are seen to be at higher risk to being blind from cataract. The main barrier for not taking up surgery was lack of awareness followed by cost and ability to manage with one eye.

Conclusions: Health education campaigns are necessary to persuade people in Nakuru to take up surgery. Experiences from other countries show that this is possible and can prevent people in the community remaining blind from a treatable cause (Rodrigues, 2006).

This review explores the role of health promotion in the prevention of avoidable blindness in developing countries using examples from eye health and other health topics from developing countries. The review demonstrates that effective eye health promotion involves a combination of three components: Health education directed at behaviour change to increase adoption of prevention behaviours and uptake of services; improvements in health services such as the strengthening of patient education and increased accessibility and acceptability; and advocacy for improved political support for blindness prevention policies. Current eye health promotion activities can benefit by drawing on experiences gained by health promotion activities in other health topics especially on the use of social research and behavioural models to understand factors determining health decision-making and the appropriate choice of methods and settings. The challenge ahead is to put into practice what we know to work. An expansion of advocacy, the third and most undeveloped component of health promotion, is essential to convince governments to channel increased resources to eye health promotion and the goals of vision 2020 which include creating awareness by improving peoples attitudes and knowledge about their health in order to wipe out diseases.

The prevention of blindness involves addressing the role of human behaviour in eye health. In some cases this might involve encouraging the adoption of eye health promoting behaviours and in other cases the discouragement of behaviours that damage eye health. The concept of health promotion was first elaborated in 1986 in the Ottawa Charter which set out five areas of activity which can be grouped into areas of action; health education, reorientation and advocacy. In this review the focus will be on the health education component, highlighting the role of reorientation of health services and advocacy where relevant.

Health education to promote the adoption of eye health promoting behaviours and increase uptake of eye care services provides the backbone of health promotion. Changing longstanding behaviours that might be deeply rooted in culture is never easy. However, well planned educational programmes can be effective provided two critical requirements are fulfilled: the underlying influences on behaviour are addressed, and appropriate methods, target groups, and setting are selected (Resnikoff 2001).

Understanding influences on behaviour

Qualitative research methods provide useful insights into reasons for use and non-use of eye health services. Barriers to the uptake of cataract services from patients' perspectives can include one or more of the following: acceptance of impaired sight as an inevitable consequence of old age, fear of the operation, contact with individuals who have had bad experiences, lack of encouragement from the family, lack of knowledge concerning where surgery is provided, distance from the service, lack of a person to accompany the patient to hospital, poor state of hospitals, long waiting lists, and cost. Recent studies in Malawi, Nigeria, Gambia and Nepal show that cost is the most important barrier (Alexander , 2005). Barriers vary from location, and a study from India suggests that barriers can also change over time. Barriers smilar to those outlined above for cataract also apply to trichiasis surgery, and in northern Nigeria, low perceived risk and lack of appreciation of the benefits of surgery emerged as important barriers. The impact of uptake of developing affordable community-based services has been shown in the Gambia. Lack of confidence in the service being provided was identified as an important factor in a study of glaucoma in Togo, West Africa. In a survey of 767 people who lived in and around the capital city, Lome, almost two thirds of sample who were aware of glaucoma (25%) were not confident of the capabilities of doctors to treat the disease. Stigma attached to some diseases (for example, leprosy) can be a deterrent to coming forward for treatment with the result that ocular complications may be identified at a late stage. Here, the health promotion strategy is to address the issue of stigma and other barriers to early presentation for treatment in the general public and train leprosy healthcare workers in the recognition of ocular complications and lid surgery for lagophthalmos (Thulasiraji Priya et al, 2004).

Community-based approaches build on local resources that include traditional healers – many of whom treat eye complaints. In Malawi, traditional healers were invited to attend a course in primary eye care specifically designed for them, which included observing cataract surgery. However, despite this, delays in presentation persisted demonstrating the need for health promotion in the communities where the traditional healers come from.

Health promotion, to be successful, must be built on a detailed understanding of the health topic and the intended audience. The vital contribution that a qualitative data would make

when planning a health promotion strategy is important as each community poses its own particular challenges and opportunities for creative solutions. Information from research about what an intended audience thinks, knows, and does about a particular health concern leads on to the development of the health education strategy, including the setting and nature of the intervention. Materials need to be developed and pilot-tested, to ensure that the messages are correctly interpreted and understood (Courtright, Kanjaloti and Lewallen, 1995).

BELIEFS AND ATTITUDES OF CATARACT PATIENTS AWAITING SURGERY;

In 2006, a cost free qualitative programme took place in Owo, Nigeria .This study sought to identify factors that are of marketing importance. A cross-sectional survey of post operative patients using questioner to probe into patient socio-demographic factors, source of awareness about the eye program, initial perception of the progromme and overall assessment of the eye care program was carried out. The conclusion was that adequate publicity, patients good perception, excellent eyecare team performance and patients overall satisfaction can create awareness about the need to avail of cataract eye surgery (Oluleye 2006). According to Nwosu (2002) in a study on belief and attitude to Eye diseases and blindness in rural Anambra State, Nigeria (,94.6%) of respondents would advise a relation with cataract to go to hospital and (93.3%) kinsmen were likely to contribute to treat the blind and (58.7%) will exclude him from tax and levies. Recommending herbs, consulting herbalists and offering sacrifices to the gods were other options. While (87%) persons would accept eyeglasses, only (59.7%) would submit to surgery if necessary.(18.4%) persons saw eye surgery as frightening and (8.66%) viewed it as useless.

The Balance between Supply and Demand

Promoting the use of cataract services requires a balance between supply and demand. In this issue, we focus on the use, rather than the supply of services. ‘Standing’ identifies two components of ‘demand side’ concerns. “One is understanding health seeking behaviours and patterns of utilization with a view to either changing them or catering better to them. The other is to find ways to harnessing the demand side in pressing for change and improving the responsiveness of the supply side”. While the first component is well recognized, the eye

health community has paid less attention to the second component, which encompasses ideas expressed in the 2004 World Development Report on improving service delivery to poor people. The notion of accountability is linked to the notion of empowerment and capturing consumers' voices. Successfully achieving this means building the confidence, trust and motivation for patients to deliver themselves to services, and for communities to play a role in shaping those services to meet their needs (Duvey and Meyers, 2002).

There are three main questions related to use of health services. Are they accessible? The answer lies in geographical location, transportation availability and organizational factors such as timing of services. Are they affordable? We need to look at the direct costs of fees, the indirect costs of transport, food and lost earnings, and the impacts of these costs on household livelihoods.

Finally, are the services acceptable to patients and their families? Trust in the quality of clinical care, the cultural acceptability of how services are delivered, interpersonal communication and the dignity afforded to patients, are relevant here. Acceptability relates to how comfortable patients feel about using the services, and raises the issue of cultural distance between providers and beneficiaries. It is widely accepted that persuading people to take up services is often best done by those close to the community. Such individuals have been given a range of titles such as aphaikic motivators, cataract case finders and so forth. The case study from Nigeria describes expanding the role of Community Based Distributors of Ivermectin. The Mexician case study shows how demand for eye care was stimulated by community workers who integrated eye care with their other roles, and were able to provide a service which people valued that is presbyopic spectacles. The case study from Cambodia describes how outreach services can help to reduce the gap between people and medical services, but also cautions that this depends on good counselling, and might still not be enough for people to make the step from being identified as needing cataract services, to actually going for the operation (Phillips, 2004).

The strangeness of hospitals and experiences of less than courteous or sensitive treatment by medical personnel, may make many patients reluctant to subject themselves to the ordeal of

cataract surgery. This raises supply-side issues. How culturally acceptable is the hospital environment? Are the needs of women addressed, for example, through separate seating areas, separate wards for women, availability of female counselors and private washing and toilet facilities? Is everything done to ensure the dignity of patients? Trust is closely related to acceptability. Trust in services accumulates through experience, reputation accrued through a history of good surgical outcomes, and the testimony of satisfied patients. However, as noted in some of these articles, trust can also be undermined by a perception that the services offered by outside agencies is better. Tan (2002) refers to the "tidal wave of problems" that can follow when well-intentioned one-off programmes offer free services (Fitzpatrick , 1991) describe how a prevailing attitude of mistrust of locally trained surgeons is compounded when a foreign surgical team arrives, provides free surgery and undermines the trust being gradually built up by the local eye doctors (Onwasigwe , Umeh , Ozoh , 2008) also refers to the problems that arise from free eye camps threatening the sustainability of permanent eye hospital services.

Addressing the barriers to uptake of surgery is crucial, but still may not be enough. People need to be motivated to act. Motives or reasons for changing behaviour or spending money and energy on acquiring something, are described in marketing terms as 'consumer drives'. This concept captures the notion of internal tension between the desired ideal state (sightedness for oneself or a family member) and the actual state (diminishing or lost sight). This arouses motivation, propelling the individual and close ones to seek solutions. The information that cataract is curable might not arouse sufficient drive to take up the services. However, the value placed on sight throughout the life span might provide the motivation act. Every context is different, and this is why qualitative methods are becoming more widely valued as a way to understand the mindset and motivations of users.

Dealing with direct treatment costs has been a major concern of service providers. This is a very important obstacle to overcome. However, it is only part of the cost borne by service users and their families. The concept of 'time is money' is not only the preserve of the city professionals, in fact it has a sharper reality for people living in poverty. Seeking treatment involves leaving day-to-day responsibilities. In an existence of 'work today, eat today' early treatment intervention is a luxury that may be unaffordable. Furthermore, costs are multiplied

when other family members are involved, either to fulfill escort or care-giver roles (Lieberman, 2001).

Unless actively addressed, there is scope for negative attitudes to old age to become a bigger barrier to treatment. Cataract is an age-related condition. Given demographic forecasts and life expectancy patterns, many of the people requiring surgical treatment will be women and widows. In many communities these are the people who are likely to be forgotten (Donoghue1999) .To a greater or lesser extent, people report that they are coping and do not perceive a need for treatment/surgery (Fletcher et al,1999; Brilliant, et al 1991; Johnson and Goode, Faal 1998 and Brilliant 1985). This includes bilaterally blind people too. This is somewhat surprising but possible explanations are that they have good adjustment to their disability with little evidence of handicap. On the other hand, this response may mask hidden barriers. After weighing up the advantages and disadvantages it is not worth the bother - 'I'll manage'. Currently the explanation is not clear, and requires further exploration.It should be emphasized that cataract surgery is conditioned by some patient dependent factors:

(1) reduced visual acuity
(2) subject's awareness about and agreement with respect to the existence of a manageable ocular disorder
(3) awareness of treatment availability and confidence in the recovery of visual capacity
(4) search for ophthalmologic care, which should be available
(5) acceptance of diagnosis and therapeutic approach
(6) presence of physical, psychological, and economic conditions as well as an appropriate family set-up (Souza, 2005).

2.15 Conceptual Framework

A conceptual framework is the investigators frame of reference, which forms the theoretical base for explaining relationships between different variables of interest under study. Theories and models are important tools in health education research as they provide strategies for understanding human behaiviours and the factors that influence their behaviours and ways to

develop programs to help people behave in healthier ways.Models and theories are recommended to capture aspects of behaiviours (Igun,1998).

The theoretical framework for the study is the Health Belief model (Glanz , Rimer and Lewis 2002). The Model was developed as a framework for determining preventive behaviour of an individual. It emphasizes on individual perceptual world and motivation. The model was based on the predictions that the individual's readiness to comply with a recommended behaviour depends on his perceived susceptibility and perceived seriousness of the health condition or illness. These form the perceived 'illness threat'. The model is seen to be a reliable predictor of compliance.

Health Belief Model as it were has two channels: Perceived threat of the disease in question (cataract) and Perceived benefits of technology (Surgery) recommended to prevent loss of vision. These two channels are modifiable by knowledge. The perceived threat, the motivating and enabling (or conversely the discouraging and constraining) forces determine the individual's compliance to the behaviour. In this case, belief and knowledge of the people about the cause and prevention (of cataract) are modifying factors, while susceptibility to cataract and perceived seriousness of its consequences would determine the threat they perceive.

Perception of low vision due to cataract risk will increase the willingness to go for surgery. If patients in the community perceive that they are susceptible to cataract, and that the disease is a serious one, then their perceived threat would be high. Consequently, they would likely accept surgery as treatment.

This presents three possibilities:

1. There may be some persons who presumably see connections between cataract and surgery and; therefore, their perceived threat (risk) from cataract is translated into willingness to go for surgery.
2. Other persons or patients may or may not have knowledge, but they perceive cataract as a nuisance and feel threatened by cataract not surgery.

3. Finally, income as a modifying factor may influence perceived benefits such that patients with less income feel a constraint; when it comes to considering surgery, while those with more income do not.

Also, expenditure on curative care could deplete household's income, making them unwilling to pay for preventive intervention (Abiose, 2001). Some intervention variables or modifying factors influence the chance that the individual will be motivated to take recommended action. These variables influence compliance with a recommended action through the other variables of perceived threat and perceived benefits. These factors include demographic variables such as age, income, parity, educational status, as well as knowledge of the cause of cataract threat and benefits of surgery.

"Cues to action'' is another important element of the model. It consists of the stimuli, which increase threat perception and therefore promote action. This could be communicated through health provider and mass media. Experience and opinion of significant persons i.e. mothers/mothers–in-law, husbands, sisters, friends, could also encourage or discourage compliance. It has been noted that readiness to comply with surgery depends also on the individual's belief in a particular behaviour that will reduce threats that will not cost more, and will lead to good health. This therefore means that high cost of surgery, transportation, accommodation, perceived surgical risk, and conception of health hazards are likely barriers. Therefore, these assumptions are crucial in the formulation of guide in investigating cataract patients' knowledge about cause, prevention, perceptions, consequences of surgery, perceived vulnerability and seriousness of cataract and associated factors and the impact of the referent peoples (husband, wife, children, friends or relatives and health workers).

While the Health Belief Model is helpful in predicting the readiness or willingness of the patient to go for surgery, it has certain limitations. For example, the model is based on the assumption that all persons have the mental ability to assess their susceptibility to and perceived seriousness of a health condition. Unfortunately, many patients and others in the community may not engage in this type of assessment due to differences in local and cultural knowledge about surgery. Thus many persons may frown at surgery since they see no connection between cataract and surgery.

This model was used to generate questions that were used to predict or reveal attitude of people towards surgery; their intention and willingness towards surgery vis-à-vis the opinions of key ones such as the husband, wife, children, friends and health workers. Questions, which elicited the intention to go for surgery and the effects of others, were framed with the aid of this model.

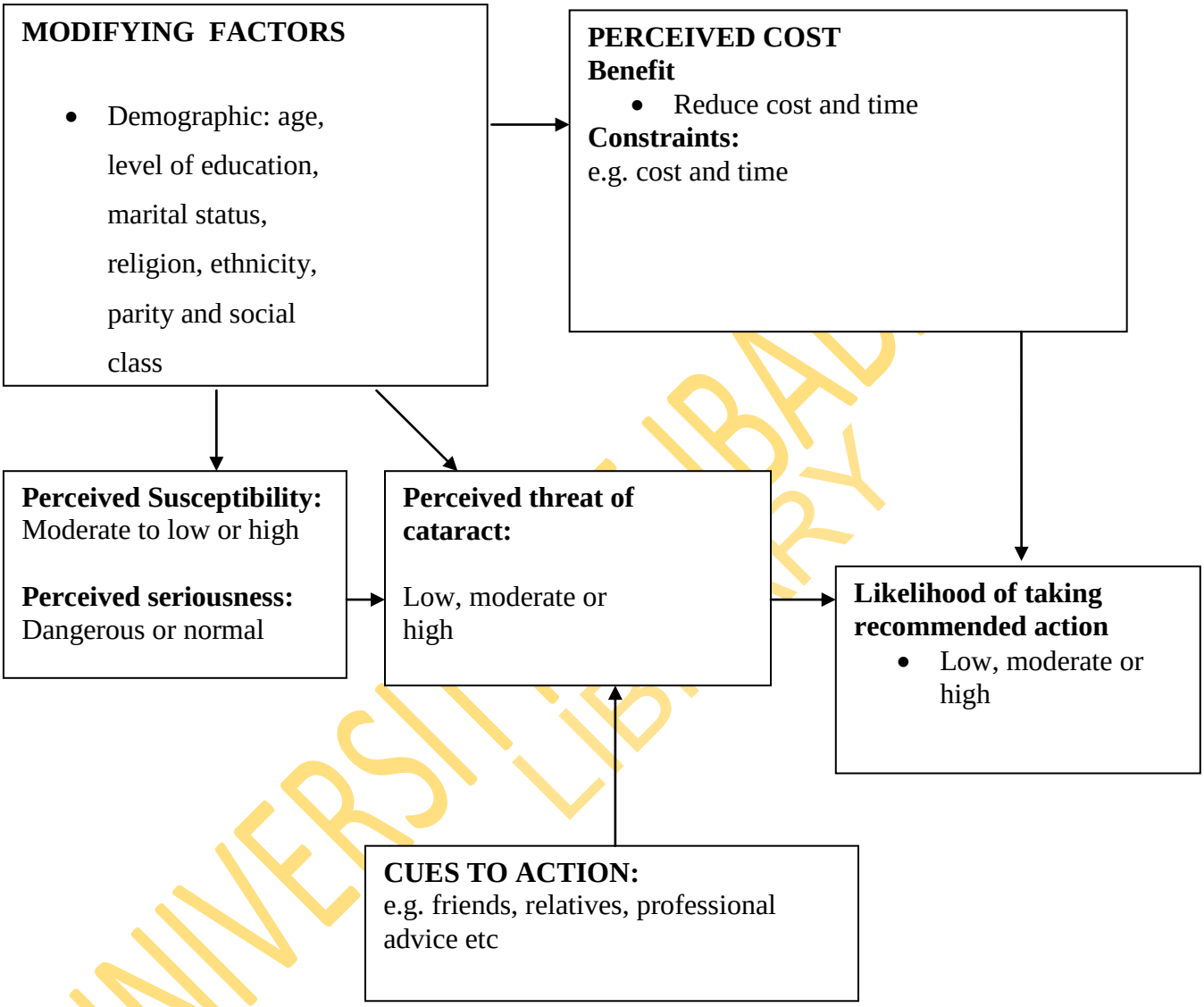

Figure 2.2 Health Belief Model

Source: Glanz, , Rimer and Lewis (2002).

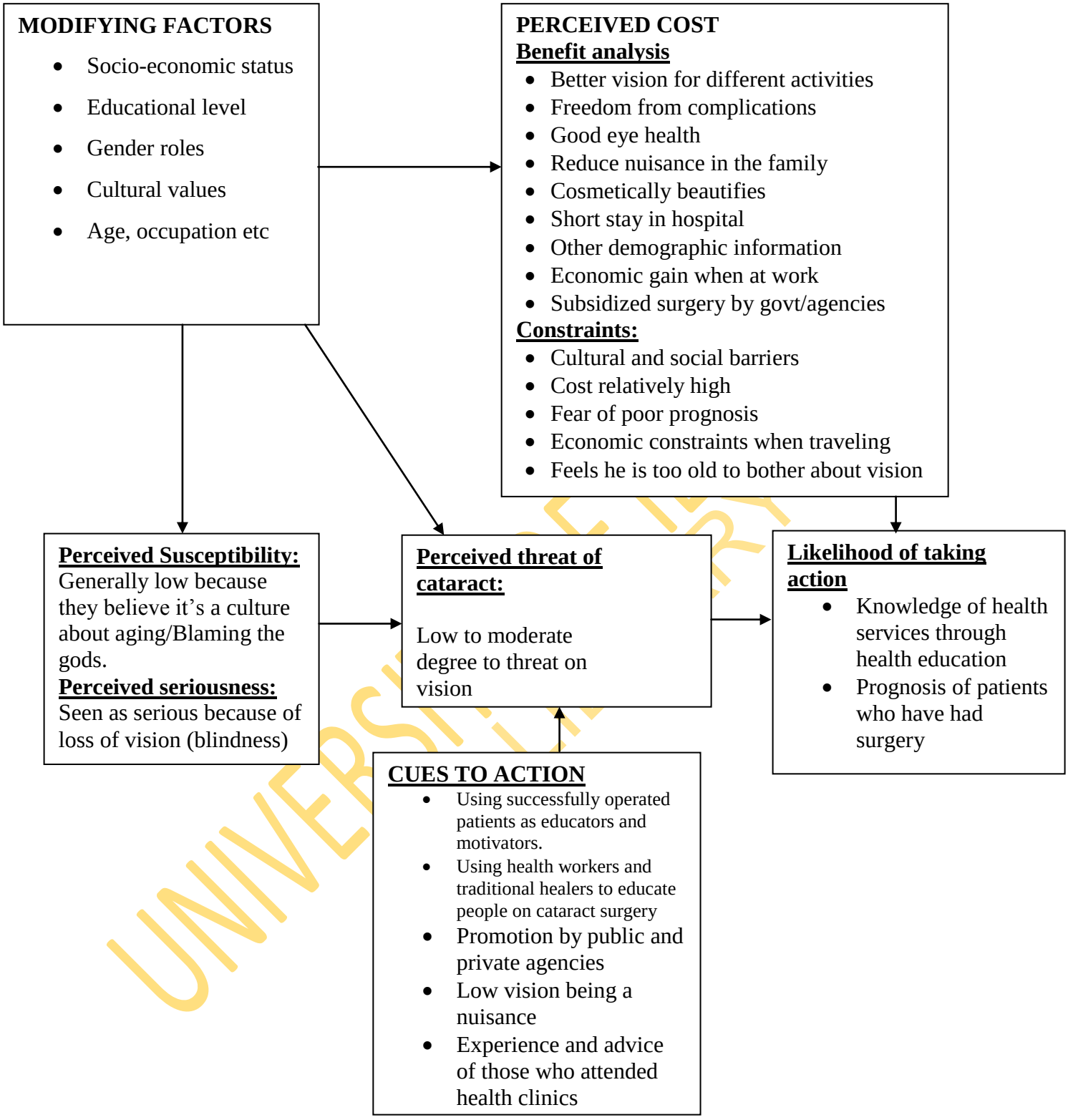

Figure 2.3 Health Belief Model as applied to Surgical Removal of Cataract.

Adapted from Ross and Mico (1980): Theory and Practice in Health Education

CHAPTER THREE

METHODOLOGY

3.1 Study Design

The design was a case series study carried out among cataract patients aged between 50 and 70 years awaiting surgery in Ajeromi General Hospital, Lagos Nigeria.

3.2 Description of the Study Area

Lagos State was created on May 27, 1967, by virtue of the State (Creation and Transitional Provision) Decree No 14 of 1967, which restructured Nigeria into a Federation of twelve states. Prior to this, Lagos Municipality had been administered by the Federal Government through the Federal Ministry of Lagos Affairs as the regional authority, while the Lagos City Council (LCC) governing the city of Ikeja, Agege, Mushin, Ikorodu, Epe and Badagry was administered by the western region. The State took off as an administrative entity on April 11, 1968 with Lagos Island serving the dual role of being the State and Federal Capital.

However with the creation of the Federal Capital Territory of Abuja in 1976, Lagos ceased to be the capital. Equally with the formal relocation of the seat of the federal Government to Abuja on 12th December 1991, Lagos ceased to be Nigeria's political capital. The state has however remained the financial hub of the country as it is dominated by a lot of commercial activities. Odewunmi (1995) noted that the state controls more than 60% of the trade and commerce of the country.

Although, Lagos State has been unaffected by subsequent state creation exercises in the country since the 1970s, its local government structure has been reorganized about six times, from eight in 1976 to twenty in 1996, with a further creation of twenty additional local government areas in 2005. The 20 Local Government Areas in the state are:

Lagos Island, Apapa, Ikeja, Oshodi-Isolo, Ajeromi-Ifelodun, Mushin, Somolu, Agege, Lagos Mainland, Kosofe, Eti-Osa, Amuwo-Odofin, Surulere, Ojo, Ikorodu, Badagry, Epe, Ifako-Ijaiye, Ibeju-Lekki and Alimosho

Although Lagos State is the smallest state in terms of land mass, it has the highest population, which is over six percent of the national estimate. According to the 2006 national census, the state has a population of 9,685,781 out of a national estimate of 140,001,220 (Odewunmi 2006). Out of this number, Lagos metropolitan area is occupied by over 85 percent on an area that is 37 percent of the land area of the state. The rate of population growth is about 300,000 persons per annum with a population density of about 1,308 persons per sq.km. According to a recent UN study (2004), the city of Lagos is expected to hit the 24.5 million population mark and thus be among the ten most populous cities in the world by the year 2015 (Lagos State Government (LASG), 2005).

The state has a Ministry of Health that oversees the provision of health services to the populace. The ministry functions with seven directorates namely; finances administration; healthcare, planning research and statistics; hospital services; medical administration, training and programmes; occupational/ environmental health and staff clinic; pharmaceutical services and primary healthcare. The ministry works hand in hand with State Health Service Commission to provide health care services through the activities of a number of General Hospitals and Health Centers. Also, some federal-owned and private health facilities complement the state-owned institutions.

Ajeromi-Ifelodun Local Government Area is one of the 20 Local Government Areas in Lagos state. It is bounded by Surulere Local Government in the North, badagry express way in the south, Apapa Tincan/Oshodi Apapa Express way in the east and in the west by Amuwo Odofin Local Government Area. It has a land size of about 2,216 hectares.

Ajeromi General Hospital (Awodiora Ajegunle) is under Health Service Commission of Lagos State. The hospital was started on the 19th of April 1983, as a health centre then, General Hospital in 1985. It is made up of 9 departments of which are : Administrative,

Nursing, Dental clinic, Eye clinic, Engineering dept. , Pharmacy, laboratory, obstetrics and Gynaecology, Medical.

The Eye Clinic started in 2002 with a visiting Opthamologist from General Hospital Apapa and a nurse. By 2003, the Ophthalmic nurse was made permanent at the Ajeromi General Hospital Eye Clinic. The present Ophthalmologist came in 2004 to resume duty at the eye clinic. As more patients were seen, the Eye Clinic grew and more items of equipment were brought in to care for all the different eye surgeries performed such as Cataract, Trabeculectomy, Pterygium excisions and Eye surgery emergencies. Patients are referred to the Eye Clinic from other Local governments like Amuwo-Odofin, Mile 2, Ajegunle, Okokomiko, Apapa, Badagry, Ajamgbadi, Festac.

The Eye Clinic has one Ophthalmologist, one Optometrist and four Ophthalmic Nurses. The outpatient load (i.e. patients referred from other clinics that do not have Ophthalmologists) has increased tremendously with the free eye screening done there three times in a year. An average of sixty patients are attended to daily. A total of 128 operations are performed weekly, of which 93 include cataract surgeries.

3.3 Study Population

The study population consisted of patients aged 50 -70 years who had been diagnosed as having matured cataract and were awaiting surgery.

3.4 Sample Size Determination

The sample size when studying proportions with population less than 10,000 is given as follows (Araoye, 2004):

Prevalence of 50%

Estimated non-response rate of 50%

An absolute derivation of 5% as a measure of precision for the study populations.The sample size(s) determined at 95% confidence interval (i.e, z= 1.96) ,with 5% precision, d 0.05 is calculated using the formular

$n = z^2pq/d^2$

n = sample size

q = 1-p

z = confidence limits of the survey result: 95% (z = 1.96)

p = prevalence of 44% (Adeoye , 2007)

d = 5% precision

$n = (1.96)^2(0.44)(0.5)\}/(0.05)^2$

n = 338.1

Sample size was increased to 500 to take care of possible non-response or not properly completed questionnaire to ensure generalizable findings.

3.5 Size and Sampling Procedures

The average number of patients on a typical clinic day was obtained from the hospital record section. Based on this, a systematic random sampling procedure was used to select patients at an interval of every two patients required till a sample size of 500 was reached.

3.6 Research Instrument.

Quantitative research instrument (Questionnaire) was used for data collection. The questionnaire was semi-structured and interviewer-administered. It was designed to collect data on demographic characteristics, knowledge about cataract disease, perceptions about cataract surgery, types of health-seeking behaviour for cataract treatment and factors that influence the uptake of cataract surgery.

3.7 Validity of Instruments

The validity, that is, the ability of the instrument to measure what it sets out to measure, was ensured through the following validation procedure:

1. Development of a draft instrument by consulting relevant literature,
2. Preparation of the instrument using simple English for easy understanding by both the research assistants and respondents,
3. Subjecting the draft to independent peer and expert reviews, particularly experts in eye-care, public health and data processing,

4. Criticism during proposal presentation and supervisor's comments were used to further fine-tune the instruments
5. Translation of the questionnaire to Yoruba and back to English by independent persons,
6. Pre-test and adjustment of the fine-tuned instrument before use for the main study

3.8 Reliability of Instruments

This is the quality of the instrument in terms of reproducibility of the data generated that is, the extent to which similar data is supplied or obtained when a measurement is performed more than once. To ensure this, the questionnaire was pre-tested and analyzed using the Cronbach's Alpha model based on standardized items and was found to be 0.6. The pre-tested instruments were further refined before use for the main study.

3.9 Pretest of Research Instruments

The pretest exercise was carried out between 20th and 23rd, April, 2009 among ninety-five cataract patients in Isolo General Hospital, Lagos. This hospital is a secondary public health facility as the site for the main study. The hospital has similar characteristics in terms of service provision and patrons, particularly people of low and medium economic status such as civil servants, traders and artisans.

During the pretest, respondents willingly participated without any noticeable disagreement with the study, data collection method and instrument. The time for interview was between 15 - 30 minutes. This was used to appropriately allocate other resources such as men, material and money (budgeting). The wording of the questionaire was found to be appropriate and the spaces provided for answers were adequate. However the questions were rearranged to follow a logical sequence. The proposed SPSS software was found to be suitable for data analysis.

3.10 Data Collection Procedure

Three (3) research assistants were recruited based on their proficiency in both English and Yoruba languages and previous experience in data collection. They were trained to minimize reporting errors. The following areas were covered.

1. Overview of the study including the objective site, population and the sampling procedures as well as the research instrument item by item,
2. Inter-personal skills including how to secure informed consent and have respect for privacy,
3. Interviewing skills such as how to ask questions in a neutral manner, not asking a leading question and not suggesting answers either by words or facial expression,
4. How to record answers to open ended questions precisely,

The trained research assistants, including the researcher, collected the data between 27th June and 10th August, 2009 using the pre-tested instrument. Prior to this, advocacy visits were made to the hospital management to intimate them with the purpose of the study and seek permission. Verbal informed consent of individual participating patients was secured before the interview exercise.

The data collection was done while the patients were waiting to see the doctor or during registration procedures on clinic days which were Tuesdays and Thursdays. The questionnaire copies were administered in the language the respondents understood. Those that could not understand English had their questionnaire interpreted for them. Debriefing meetings were held each day for submission, review of work done and planning for the next clinic day's work.

Data collection: Permission was taken from the hospital management and verbal by informed consent was secured from individual respondents. Respect for privacy and human dignity as well as protection of individual identities was ensured.

3.11 Operational definition of terms:

- GLAUCOMA; A condition in which loss of vision occurs because of an abnormal rise in the eye pressure.
- DIABETIC RETINOPATHY; Any of various disorders of the retina resulting in loss of vision due to a rise in the bloodsugar.
- INTRAOCULAR INFLAMATION; Inflamation of the area within the eyeball

- AGE- RELATED MACULA DEGENERATION (AMD); A group of age related conditions affecting themacula lutea of the eye, resulting in a reduction or loss of central vision.
- LOW VISION; When the eyes are not seeing well.
- INTRACAPSULAR CATARACT; cataract located toward the centre of the lens capsule.
- EXTRACAPSULAR CATARACT; cataract located toward the periphery of the lens capsule
- AKINESIA; A loss of normal muscular responsiveness
- APHAKIC SPECTACLES; Eyeglasses with very thick lenses, which are prescribed after cataract surgery when no intraocular lens(IOL) is inserted into the eye.
- LAGOPHTHALMOS; Any condition in which the eye does not close completely.
- APHAKIC MOTIVATORS; Substances (usualy chemical) that help the eye after the lens has being removed.
- MASTECTOMY; This involves simple removal of the breast
- DOWNS-SYNDROME; A condition of the body resulting from a genetic abnormality
- LOWES-SYNDROME; A condition resulting from a genetic disorder
- INTRAOCULAR LENS (IOL) ; Is a plastic lens placed inside the eye after cataract surgery to replace the natural lens
- OUT PATIENT DEPARTMENT (OPD);Where patients not admitted in the hospital are seen
- COUCHING; An operation for cataract in which the lens is pushed out of the pupil downwards and backwards into the jellylike vitreous by an object through the cornea.
- ZONUNOLYSIS; A dissolution of the suspensory ligament of the lens of the eye

Source: Oxford Medical Dictionary sixth edition, 2002

3.12 Data Processing and Analysis

The completed copies of the instrument were cleaned for missing values and copy errors; sorted and serially numbered. The data were appropriately scored and coded. The coded data were then entered into the computer and cleared through logical checks. Data analysis was

done using the SPSS package (12.0 version). Frequency tables were generated and key variables were cross-tabulated. Analysis of variance (ANOVA) was used for comparing means and chi-square statistic for establishing relationship between variables.

A 15-point scale was developed to assess respondents' knowledge of cataract. In scoring the scale, one mark was assigned to every correct response and zero to wrong response. The 15 point knowledge scale was derived by awarding 5 points each to the three questions that reflected knowledge. 10-15 points was classified as Good,5-10 as Fair and nil to5 as poor.

3.13 Ethical Issues

Due consideration was given to research ethics as applied to human participants. This was ensured in both data collection and consent confidentiality assurances .Security of the data was ensured by not including respondents names on the instruments and the data was securely kept prior to, during and after data analysis.

3.14 Limitation of the study

The study was carried out in a hospital setting and may not reflect the true situation in the communities. It was also carried out among those who had accepted to undertake surgery, excluding those who were either unaware of or refused to accept surgery. This study is a perception of those already scheduled for surgery, not those outside and limits generalization.

CHAPTER FOUR

RESULTS

4.1 Demographic Characteristics

A total of five hundred cataract patients were interviewed. Their mean age was 59.4±5.1 years ranging from 50 – 70 years. There were 166 (33.2%) in age group 55-59%, 152 (30.4%) respondents in the age group 60-64 years and 97 (19.4%) in age group 50-54 years (Figure 4.1).

There were 277 (55.4%) males and 223 (44.6%) females. Almost twenty percent had at least primary school education and more than half (54.4%) had post-secondary school education. The breakdown of the different levels of educational attainment is shown in Figure 4.2.

Only 9 (1.8%) of the respondents were not married while the rest were married. Out of the married ones, 282 (56.4%) were living with their partners, 47 (9.4%) were divorced, 104 (20.8%) widowed and 58 (11.6%) were separated. There were 313 (62.6%) Christians and 153 (30.6%) Muslims. One hundred and ninety-two (38.4%) of the respondents belonged to Yoruba ethnic group while 173 (34.6%) were of Igbo origin. One hundred and thirty-three (26.6%) were artisans, 117 (23.4%) were traders and 92 (18.4%) were civil servants (Table 4.1).

The knowledge score of fifteen was used as the three variables used were each scored over five. The scores were categorized as poor (1-5), fair(6-10) and good(10-15).

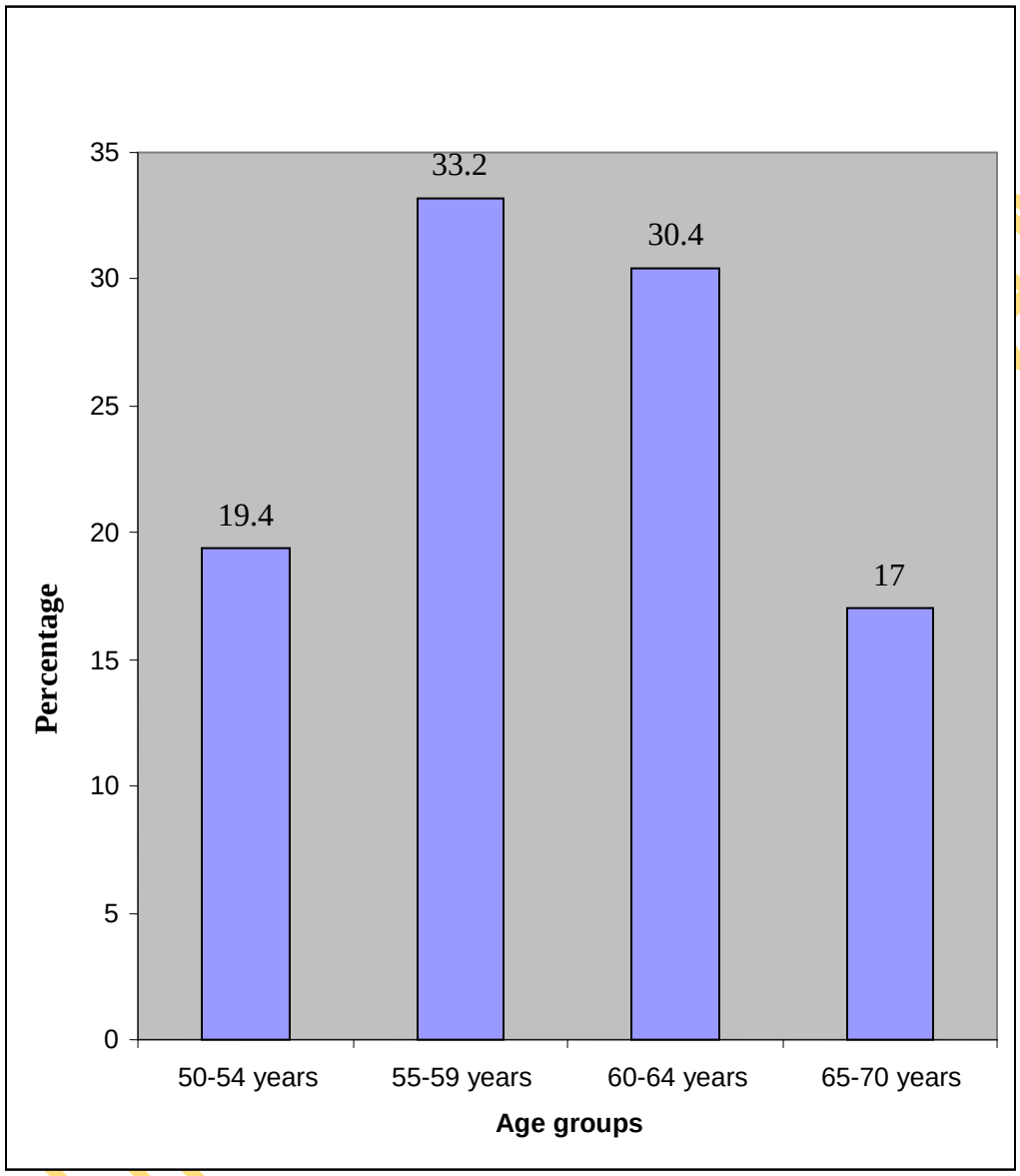

Figure 4.1: Age group of Respondents

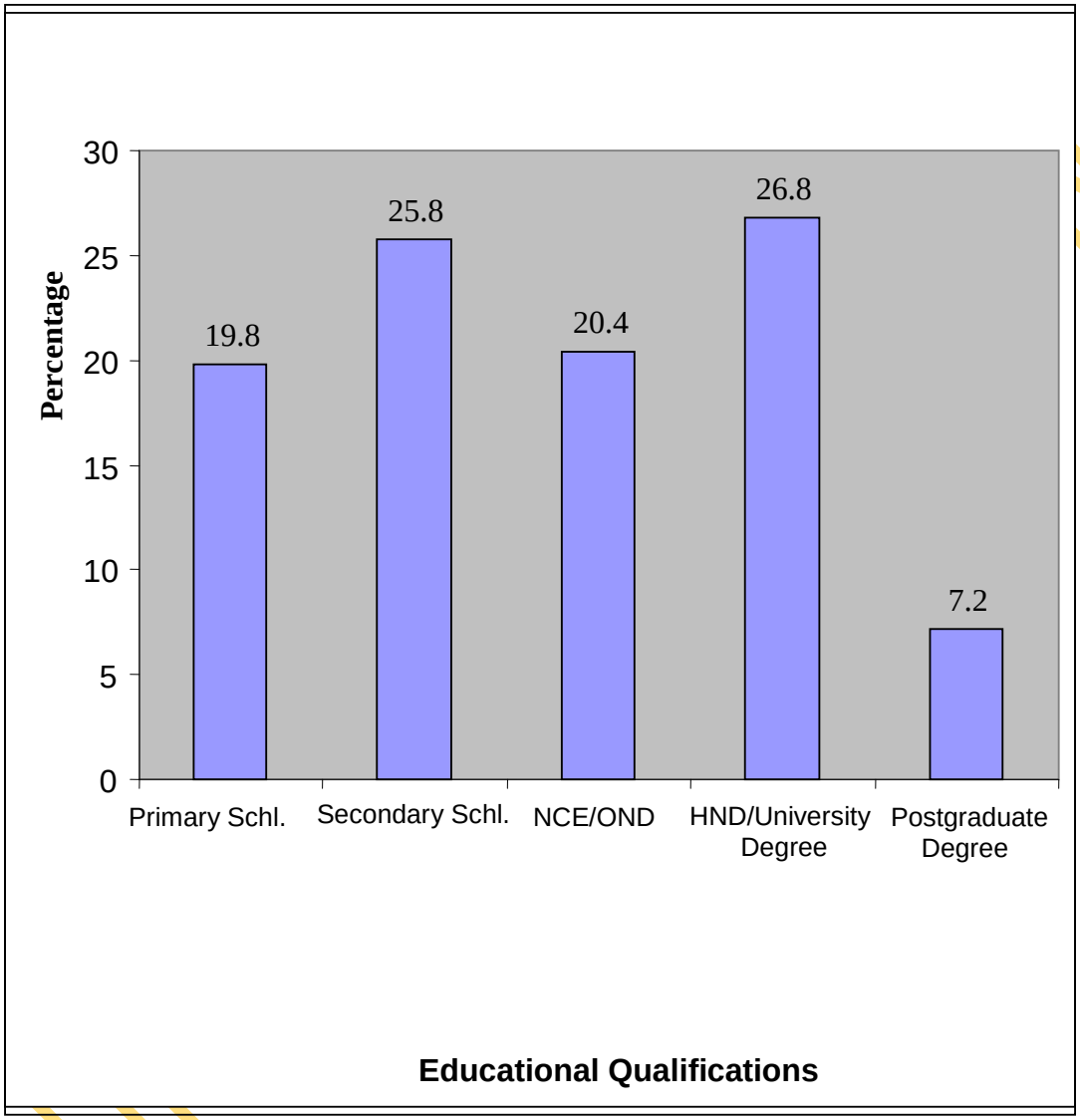

Figure 4.2: Educational Qualifications of Respondents

Table 4.1: Demographic Characteristics of Respondents

Characteristics	Frequency	Percentage (%)
Marital Status		
Single	9	1.8
Divorced	47	9.4
Separated	58	11.6
Widowed	104	20.8
Married	282	56.4
Total	500	100.0
Religion		
Christianity	313	62.6
Islam	153	30.6
Traditional	10	2.0
Others	24	4.8
Total	500	100.0
Ethnic group		
No Response	55	11.2
Hausa	80	16.0
Igbo	173	34.6
Yoruba	192	38.4
Total	500	100.0
Occupation		
No Response	12	2.4
House wives	20	4.0
Retired	50	10.0
Civil servants	92	18.4
Traders	117	23.4
Artisans	133	26.6
Total	500	100.0

4.2 Knowledge about Cataract

Two hundred and fourteen (42.8%) of the respondents had knowledge about cataract before they were diagnosed of it. Their sources of information were friends (33.2%), family members (29.0%), health workers (9.6%) and the media (24.2%) (Figure 4.3).

Using this scale, the overall mean knowledge score of the respondents relating to cataract was 4.0±3.2 out of a maximum of 15

373 (74.6%) respondents had poor knowledge, 86 (17.2%) had fair knowledge and 41 (8.2%) had good knowledge, these were grouped into low (0-9) and high (10-15). The level of knowledge as it relates to sex, age and educational qualification is presented in Table 4.2.

The scores were categorized into poor (1-6 points), fair (7-8 points) and good (9-15 points)

Only 111 (22.2%) could mention a local name for cataract. Out of the 111 that mentioned a local name, 51 (45.9%) called it “white eye”, 12 (10.8%) called it “bad eye”, while 4 (3.6%) and 37 (33.3%) mentioned “Apollo” and “Disease of the eye ball” respectively.

One hundred and seventy-six (35.2%) of the respondents could express their understanding of cataract surgery. Out of this, 152 (86.4%) correctly defined cataract surgery as the removal of the white object blocking the eye from seeing, while 24 (13.6%) said it was the improvement of sight.

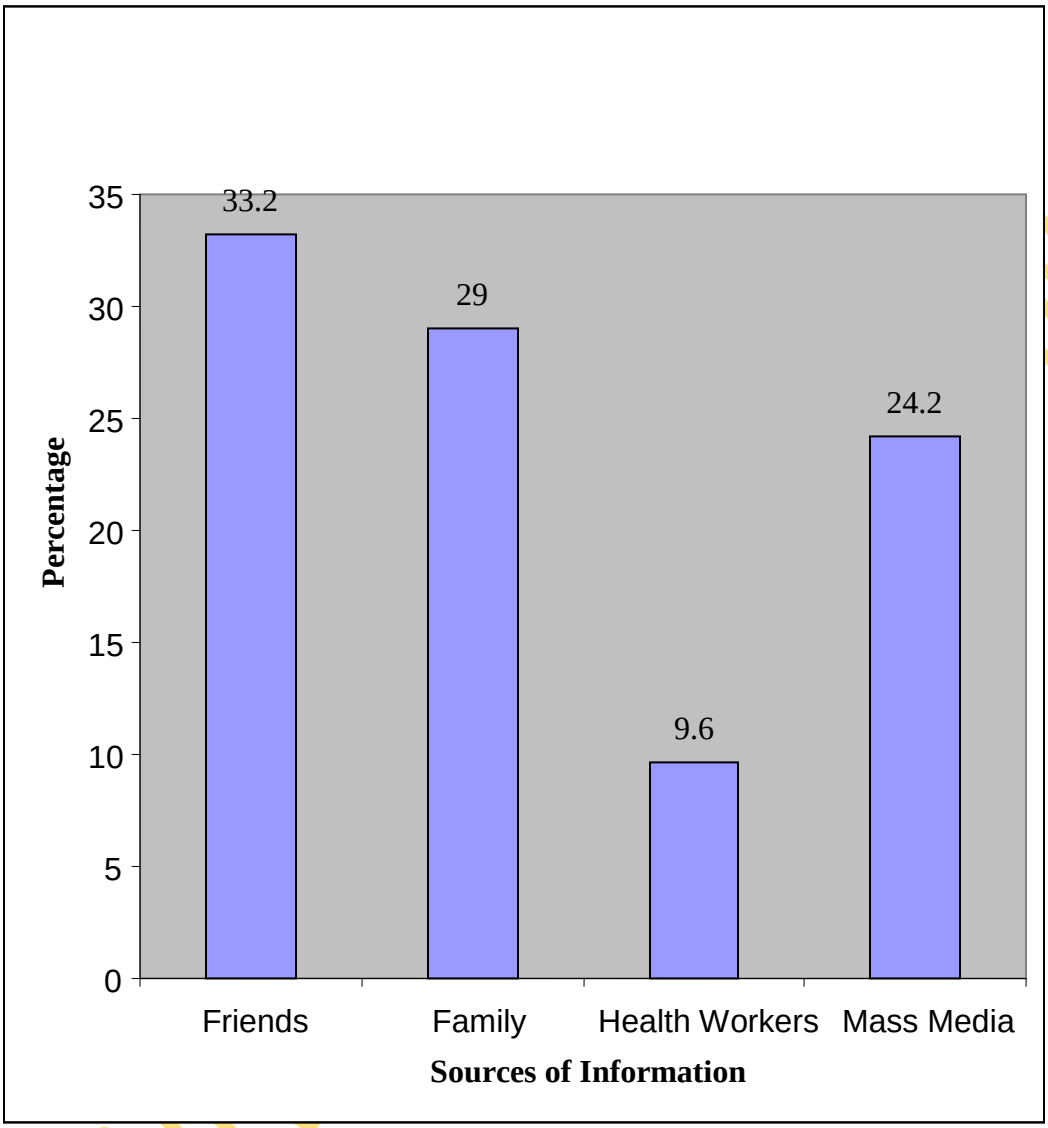

Figure 4.3: Respondents' Sources of Information about Cataract

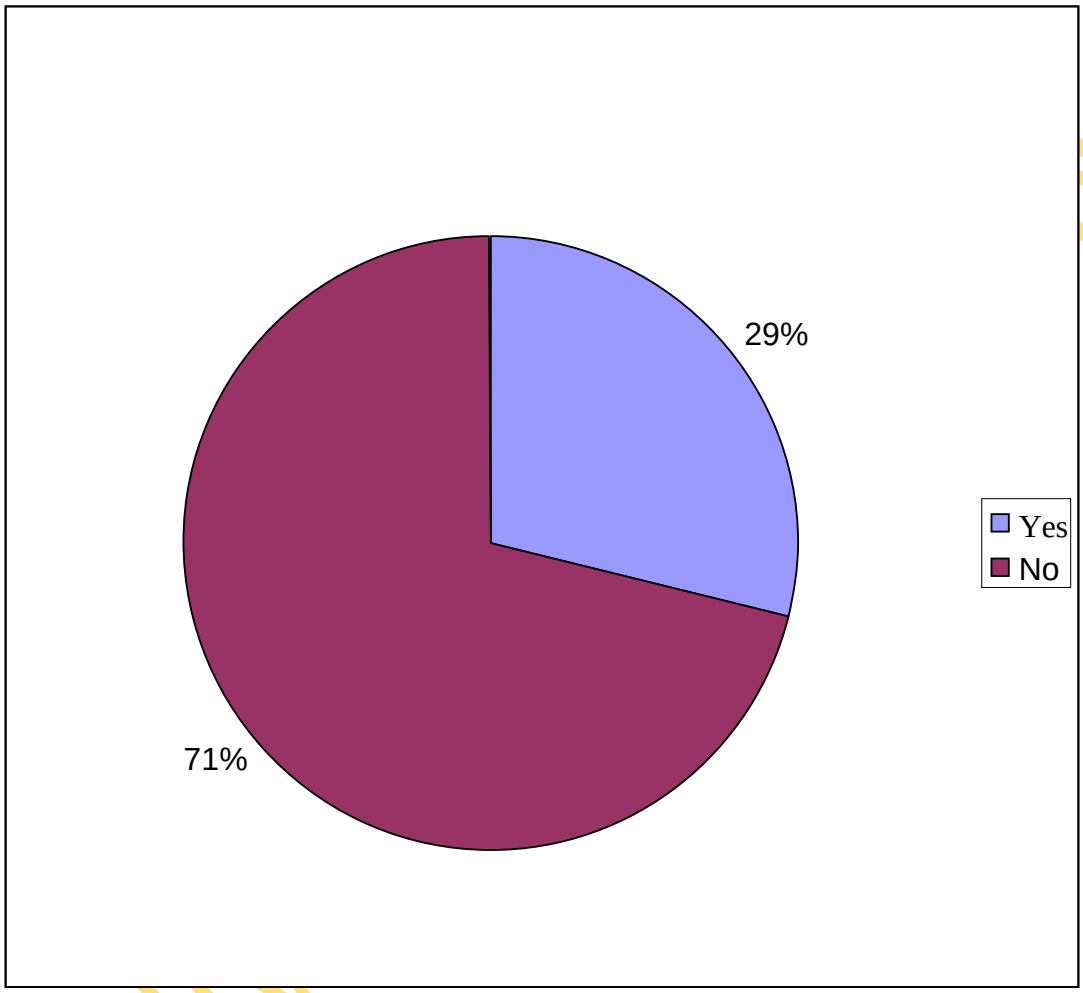

Figure 4.4: Respondents that had attended multiple eye facilities

Table 4.2: Knowledge Levels of Respondents on Cataract

Characteristics	Knowledge-Scores							
	Poor	%	Fair	%	Good	%	Total	%
Sex								
Male	198	53.1	54	62.7	25	61.0	277	55.4
Female	175	46.9	32	37.3	16	39.0	223	44.6
Total	373	100.0	86	100.0	41	100.0	500	100.0
Age								
50-54 Years	78	20.9	9	10.5	10	24.4	97	19.4
55-59 Years	118	31.7	33	38.4	15	36.6	166	33.2
60-64 Years	116	31.0	23	26.7	13	31.7	152	30.4
65-70 years	61	16.4	21	24.4	3	7.3	85	17.0
Total	373	100.0	86	100.0	41	100.0	500	100.0
Educational Level								
Primary School	80	21.4	17	19.8	2	4.9	99	19.8
Secondary School	100	26.8	17	19.8	12	29.3	129	25.8
NCE/OND	74	19.8	18	20.9	10	24.4	102	20.4
Degree/HND	96	25.7	25	29.1	13	31.7	134	26.8
Postgraduate	23	6.2	9	10.5	4	9.8	36	7.2
Total	373	100.0	86	100.0	41	100.0	500	100.0

4.3 Perception of Respondents about Cataract Surgery

The perception of the respondents about cataract surgery were assessed in terms of benefits and risks of cataract surgery to the patients. On the perception about the risk of cataract surgery, only 113 (22.6%) responded. Out of this, 53 (46.9%) agreed that surgery is part of inevitable risks in life. Thirty-seven (32.7%) reported that the risk involved was not worth taking because it was not a permanent solution and there was the possibility of losing the eye in the process, while 23 (20.4%) thought it was worth taking because it restored good sight and health.

The benefits, as mentioned by 359 (71.8%) respondents were restoration of clear vision (81.3%), better health and well-being (8.6%), saving of the second eye from developing cataract (5.2%) and reduction in the cost of incessant treatment (1.9%) (Table 4.3).

The opinions of the respondents on what hindered patients from undergoing cataract surgery included lack of knowledge of its benefits (31.8%), high cost of surgery (20.2%), fear of surgery (18.4%) and fear of losing eye (13.4%).

Table 4.3: Respondents' Perceptions about Cataract and Cataract Surgery

Perceptions About Causes of Cataract	**Frequency**	**Percentage**
Malnutrition	1	0.2
Accident	2	0.4
Smoke	5	1.0
Infection	9	1.8
Stress	32	6.4
Witchcraft	42	8.4
Old age	47	9.4
Cloudy/opacity of the lens	64	12.8
Illness	139	27.8
Do not know	159	31.8
Total	**500**	**100.0**
Perceptions of Risks involved in cataract Surgery		
Worth taking because it restores good sight and health	23	20.4
Not worth taking because it is not a permanent solution and there is possibility of losing the eye	37	32.7
Part of inevitable risks of life	53	46.9
Total	**113**	**100.0**
Perceptions of benefits from cataract surgery		
It reduces the cost of incessant treatment	7	1.9
Wrong Responses	10	3.0
It saves the second eye from developing cataract	19	5.2
It is good because it brings about better health/wellbeing	31	8.6
It restores clear vision	292	81.3
Total	**359**	**100.0**

4.4 Health Seeking Behaviours

On notice of cataract, 189 (37.8%) respondents visited health centers, 34 (6.8%) visited herbalists and 108 (21.6%) did nothing. The rest of the respondents resorted into self-medication (4.4%) or sought help from close associates such as family members (3.0%) and friends (1.8%) (Table 4.4).

The respondents that reported visiting more than one eye care center constituted 29.0%, while 44.0% of the participants said they would be willing to do surgery on the second eye if the need arose (Figures 4.4). One of the factors that influenced the decision to go for cataract surgery was the advice given out of personal experiences by previous cataract patient who had undergone surgery. Out of 190 (38.0%) respondents that knew cataract patients who had undergone surgery, 69 (13.8%) got encouraging advice such as 'cataract surgery is not painful' or 'cataract surgery ensures sight recovery', while 74 (14.8%) got discouraging (such as high cost, stress, pain or discomfort) advice. Four (0.8%) reported that they were neither positively nor negatively influenced by the experiences of the patients that had undergone surgery (Table 4.5).

Other factors that contributed to the respondents' decision to have surgery were reactions from family members and referent groups as well as the cost of surgery. Four hundred and eighty-three (96.9%) respondents reported that they got reactions from their family members, which were in form of encouragement (43.8%) or discouragement (18.4%), while 114 (22.8%) were undecided on their reaction to go for surgery. Similarly, reactions from other referent groups were either encouraging (46.2%) or discouraging (17.4%) (Table 4.6).

In order to improve eye care services, including cataract treatment, respondents gave some suggestions, some of which were, provision of modern equipment (36.8%), health education of patients on the care of eye (20.8%) and provision of subsidy on eye surgery (Table 4.7).

Table 4.4: Action Taken by Respondents on Notice of Cataract

Behaviours	Frequency	Percentage
Did you take any action		
Yes	272	56.4
No	228	43.6
If yes action taken		
Visited Health Center	189	37.8
Self Medication	22	4.4
Visited Herbalist	34	6.8
Sought Help from Family Members	15	3.0
Sought Help from Friends	9	1.8
Went to church for prayers	3	0.6
Total	500	100.0

Table 4.5: Categorisation of advise given

Categorisation of advise given by people who have had cataract surgery	Frequency	Percentage
Encouraging	69	13.8
Discouragement	74	14.8
Indifferent	4	0.4
Total	147	29

Table 4.6 Factors that Influence Respondents' Decision to Undergo Cataract Surgery

Factors Influencing Decision to Undergo Cataract Surgery	Frequency	Percentage (%)
Reactions of Family		
Encouragement	219	43.8
Undecided	131	26.2
Discouragement	92	18.4
Resort to traditional treatment	58	11.6
Total	500	100.0
Reaction of Referent Group (Not family members)		
Encouragement	231	46.2
No Effect	100	20.0
Discouragement	87	17.4
Resort to traditional treatment	62	12.4
No response	20	4.0
Total	500	100.0
Cost as graded by respondents of cataract surgery		
High	204	40.8
Moderate	186	37.2
Cheap	86	17.2
No response	24	4.8
Total	500	100.0

Table 4.7 Suggestions on How to Improve Eye care Services In Nigeria (N=500)

Suggestions*	**Frequency**	**%**
Provision of quality drugs	17	3.4
Provision of free eye care services	37	7.4
Health Education of cataract patients to disabuse their minds about surgery	52	10.4
Improvement of salary and welfare of eye care workers	55	11.0
Provision of subsidy on eye surgery	62	6.2
No response	83	16.6
Provision of quality facility/equipment	108	21.6
Establishment of more hospitals	128	25.6
Employment of more eye care specialists	169	33.8

*Multiple responses

4.5 Test of Hypotheses

1 **There is no significant relationship between the age of respondents and their knowledge about cataract:** The age of the respondents was cross-tabulated with the level of knowledge and tested for statistical significance using the Chi-square at 95% confidence level (Table 4.8). The p value was greater than 0.05. The null hypothesis stated above is thus accepted, that is, there is a relationship between the age of respondents and their knowledge about cataract.

Table 4.8 Relationship between Age of Respondents and Their Knowledge About Cataract

		KNOWLEDGE			Total
		POOR	FAIR	GOOD	
AGE	50-54 YEARS	78	9	10	97
	55-59 YEARS	118	33	15	166
	60-64 YEARS	116	23	13	152
	65-70 YEARS	61	21	3	85
Total		373	86	41	500

$X^2 = 11.212$ $p = 0.082$

2. There is no significant relationship between educational qualification of respondents and their knowledge about cataract

The educational levels of the respondents were compared with their knowledge and tested using Chi-square statistic at 95% level p=0.268. (Table 4.9). The null hypothesis is thus accepted. This implies that education had an effect on the knowledge of the respondents about cataract disease.

Table 4.9 Relationship between Educational Qualification of Respondents and Their Knowledge about Cataract

EDUCATIONAL QUALIFICATION	KNOWLEDGE			Total
	POOR	FAIR	GOOD	
PRIMARY	80	17	2	99
WASC/GCE/SSCE	100	17	12	129
NCE/OND	74	18	10	102
DEGREE/HND	96	25	13	134
Postgraduate degree	23	9	4	36
Total	**373**	**86**	**41**	**500**

$X^2 = 9.953$ $p = 0.268$

3 There is no relationship between the level of knowledge of respondents about cataract and their health seeking behaviour. This was tested with Chi-square statistic at 95% confidence level and the p value was greater than 0.05. This implies that knowledge about cataract has no significant influence on the action taken by the respondents on treatment (Table 4.10).

Table 4.10: Relationship between Knowledge of Respondents about Cataract and Health Seeking Behaviour

Knowledge	APPROPRIATENESS OF HEALTH-SEEKING BEHAVIOUR		Total
	APPROPRIATE	INAPPROPRIATE	
POOR	140	233	373
FAIR	28	58	86
GOOD	21	20	41
Total	189	311	500

$X^2 = 4.157$ $p > 0.125$

4. **There is no significant relationship between the health seeking behaviours of the respondents and their demographic characteristics (age. Sex, marital status, occupational status, educational qualification)**

(a) Age of respondents as compared to the appropriateness of health seeking behaviour; As stated in table 4.11. The p-value as was tested with chi-square statistics at 95% confidence level was less than 0.05. the null hypothesis stated above is therefore rejected as there is no significant relationship between the respondent age group and health seeking behavior

(b) Sex of respondents as compared to the appropriateness of health seeking behaviour; As stated in table 4.11. The p-value as was tested with chi-square statistics at 95% confidence level was less than 0.05. the null hypothesis stated above is therefore rejected as there is no significant relationship between the respondents sex and health seeking behavior

(c) Marital Status of respondents as compared to the appropriateness of health seeking behaviour; As stated in table 4.11. The p-value as was tested with chi-square statistics at 95% confidence level was less than 0.05. the null hypothesis stated above is therefore rejected as there is no significant relationship between the respondents marital status and health seeking behavior

(d) Occupational Status of respondents as compared to the appropriateness of health seeking behaviour; As stated in table 4.11. The p-value as was tested with chi-square statistics at 95% confidence level was less than 0.05. the null hypothesis stated above is therefore rejected as there is no significant relationship between the respondents occupational status group and health seeking behavior

(e) Educational Qualification of respondents as compared to the appropriateness of health seeking behaviour; As stated in table 4.11. The p-value as was tested with chi-square statistics at 95% confidence level was greater than 0.05 the null hypothesis stated above is therefore accepted and there is no significant relationship between the respondents educational qualification group and health seeking behavior

4.11 Health seeking behaviour of cataract patients compared by age, sex, marital status, occupational status and educational qualification

	Appropriateness of Health Seeking Behaviour			
Demographic Variable	**Appropriate**	**Inappropriate**	**Total**	**p-value**
Age				
50-54yrs	39(20.6 %)	58(18.6%)	97(19.4%)	
55-59yrs	49(25.9%)	117(37.6%)	166(33.2%)	
60-64yrs	72(38.1%)	80(25.7%)	152(30.4%)	
65-70yrs	29(15.3%)	56(18.0%)	85(17.0%)	
Total	**189(100%)**	**311(100%)**	**500(100%)**	**0.009**
Sex				
Male	120(63.5%)	157(50.5%)	277(55.4%)	
Female	69(36.5%)	154(49.5%)	223(44.6%)	
Total	**189(100%)**	**311(100%)**	**500(100%)**	**0.005**
Marital Status				
Married	103(54.5%)	179(57.6%)	282(56.4%)	
Single	7(3.7%)	2(6%)	9(1.8%)	
Divorced	25(13.2%)	22(7.1%)	47(9.4%)	
Widowed	38(20.1%)	66(21.2%)	104(20.8%)	
Separated	16(8.5%)	42(13.5%)	58(11.6%)	
Total	**189(100%)**	**311(100%)**	**500(100%)**	**0.009**
Occupational status				
Retired	29(15.3%)	21(6.8%)	50(10.0%)	
Trader	38(20.1%)	79(25.4%)	117(23.4%)	
Civil Servant	53(28.0%)	39(12.5%)	92(18.4%)	
House wife	8(4.2%)	12(3.9%)	20(4.0%)	
Artisan	42(22.2%)	91(29.3%)	133(26.6%)	
Students	5(2.6%)	7(2.3%)	12(2.4%)	
Professionals	12(6.3%)	38(12.2%)	50(10.0%)	
Clergy	0(0.0%)	3(1.0%)	3(0.6%)	
Herbalist	0(0.0%)	3(1.0%)	3(0.6%)	
No response	2(1.1%)	18(5.8%)	20(4.0%)	
Total	**189(100%)**	**311(100%)**	**500(100%)**	**0.00**
Educational Qualification				
Primary	32(16.9%)	67(21.5%)	99(19.8%)	
WASC/GCE/SSCE	47(24.9%)	82(26.4%)	129(25.8%)	
NCE/OND	43(22.8%)	59(19.0%)	102(20.4%)	
Degree/HND	50(26.5%)	84(27.0%)	134(26.8%)	
Pg-Degree	17(9.0%)	19(6.1%)	36(7.2%)	
Total	**189(100%)**	**311(100%)**	**500(100%)**	**0.471**

CHAPTER FIVE

DISCUSSION, CONCLUSION AND RECOMMENDATION

Findings from the study are discussed in this chapter. The chapter consists of the following sections; Demographic characteristics, knowledge about cataract, perceptions of respondents about cataract, health seeking behaviours and conclusions arrived at with the recommendations made.

5.1 Demographic Characteristics

There were more male cataract patients than their female counterparts in the study. A study by Owoeye and Omolase (2006) reported similar predominance of males presenting for cataract surgery at the University Teaching Hospital, Ilorin. Though women are more disproportionately affected by cataract (Klein et al, 1996; Foran et al, 2000; Abou-Gareeb et al, 2001 and Fransis, 2006), men accept surgery more than women. This may be because women have less access to information, greater barriers to traveling to services, and also greater resignation to the fate of blindness (Francis, 2006). Given the life expectancy patterns, many of the women requiring surgical treatment are possibly widows. In many communities these are the people who are likely to be forgotten (Donoghue, 1999). Generally, treatment seeking for diseases is significantly higher for males compared with females and this is true for almost all age groups (FHS, 2008). The fact that the sample included educated civil servants, retired and the artisans shows that people from various occupational groups suffer from cataract.

5.2 Knowledge about Cataract

Poor user demand for health services for a health condition is usually due to ignorance of treatment availability and benefit of such treatment approach, among other reasons (Fletcher et al, 1999). The process of seeking treatment for any disease starts with some cognitive issues about the disease which involves the knowledge and recognition of onset of symptoms

and awareness of treatment availability and confidence in the treatment outcome (Souza, 2005).

This study revealed that the knowledge of the subjects about cataract was very poor and there exist misconceptions about the causes of cataract due to lack of awareness, finances, distance and ability to cope with one eye. In surveys in Australia, similar poor knowledge of ocular disorders was reported (Livingston et al, 1998 and Attebo, 1997). The belief that “witchcraft" might cause cataract (15.2%) is a misconception and may lead patients to search for inappropriate and ineffective forms of treatment based on cultural traditions thereby decreasing the search for surgical treatment. After the patient becomes aware of the decrease in visual acuity, the next step is to gain understanding of the problem, so that its causes and consequences can be established on the short term. The patient can seek visual rehabilitation and avoid becoming marginalized due to the visual deficit. The fact that many people relate cataract to false causes may decrease the search for surgical treatment.

The reason for the low level of knowledge may be attributable to lack of adequate information about cataract in the general public. This is supported by the fact that majority of the respondents said they were not aware of cataract disease before they were diagnosed of it. False and distorted conceptions about cataract point towards the need to develop orientation programme to present factual information about cataract (what it is, what are its causes, consequences and treatment) to the public. Such programme would arguably bring more people to the eye-care centers, and these people would in all likelihood, undergo surgery and recover their vision, their status of independence and an active participation in the labour market.

Patients with more knowledge and information about cataract surgery are willing to accept surgery Hubley (2005) and Gilbert (2005) found a similar relationship between the role of health promotion in the prevention of avoidable blindness in developing countries, especially cataract. This ability is directly dependent on the level of information through health promotion.

5.3 Perception of Respondents about Cataract Surgery

There is always a palpable fear anytime surgery is mentioned among Nigerians and cataract surgery is not an exception (Odebode, 2008). In this study all the cataract patients perceived cataract surgery as a risky procedure. They classified the risk as worth-taking, not worth-taking or inevitable based on the level of fear being entertained by each respondent. The reasons given by those who described cataract surgery as not worth-taking include not being a permanent solution and possibility of losing the eye in the process. A study about the perceptions of patients participating in a community-oriented visual rehabilitation project reported a similar fear linked to supposed consequences of the surgical procedure, that is visual loss and death (Souza, 2005).

Fears about treatment such as cataract surgery 'spoiling' eyes may not be irrational. Some studies have reported poor cataract surgical outcomes in Nigeria and some other developing countries (Pokharel et al, 1998; He et al, 1999: Ellwein, 2000 and Dandonal, et al, 1999). Multiple factors have been attributed to poor cataract surgical outcomes.The factors include a less than favourable surgical setting, such as found in surgical camps; a less than competent surgical technique; inappropriate selection of surgical cases; or perhaps inadequate patient follow-up (Ellwein, 1998). Patient hygiene and behaviour are also important. Other ocular pathology, which may have been coexisting at the time of cataract surgery, or that which manifested itself later, is also responsible for some of the poor outcomes.

In response to concerns about the quality of cataract surgical outcomes, WHO strongly recommends the need for better monitoring and evaluation systems (WHO, 1998). It is well known that 'bad news travels fast'. Treatment failures may unfortunately impact more upon community attitudes to eye treatment than all the examples of success. Patients with poor vision may conclude that cataract surgery is only partially, or temporarily effective in restoring sight, if at all. This obviously manifested among the respondents as majority of them reported receiving discouraging messages from cataract patients who had undergone surgery.

Another probable reason why cataract patient may decline surgery is the perception that cataract is a normal irreversible ageing process or the perceived ability to cope with their eye problems. Studies have shown that cataract patients, including bilaterally blind people report that they are coping and do not perceive a need for treatment/surgery (Fletcher et al, 1999; Brilliant et al, 1991, Johnson Goode, Faal, 1998). Possible explanations are that they have good adjustment to their disability with little evidence of handicap. On the other hand, this response may mask hidden barriers. After weighing up the advantages and disadvantages the overriding fear may make them conclude that it is not worth the bother.

5.4 Health Seeking Behaviours (Implications of findings for health promotion and education)

Health education is a vital part of public and community health (Moronkola and Okunlawon 2003). Health education involves helping people to change or adapt new behavior through changing knowledge, attitude and perception as well as having acces to resources of social support (Green, Kruter,Deeds and Patridge, 1980).

The study revealed that some of the patients had sought treatment for cataract in some other places before the decision to accept surgery from where they were interviewed. This behaviour of visiting multiple health facilities has also been reported among STD patients (Akinnawo and Oguntimehin, 1997). Most patients, especially during period of economic instability, experiment first with the chemist, patent medicine stores and herbal homes where in most cases temporary relief may be given. The primary reason for consulting incompetent providers at the initial stage could be economic. Treatment is far cheaper at the chemists', patent medicine stores or herbal homes than in good private hospitals or clinics.

Another health behaviour exhibited by some of the patients was self-medication. Self-medication is a common practice among Nigerians as it has been reported in various studies for the treatment of a wide range of diseases (Salako, 2001 and Okeke and Okafor, 2008). Pattern of treatment always begins at home with herbal remedies or drugs purchased from drug sellers. It is only when home treatment is obviously not working that people resort to a health facility thereby resulting in delay and possible complications. In Nigeria, sale of drugs (including prescription and outlawed) across the counter is highly unregulated.

Cost of surgery was a major barrier to accessing cataract surgery and was reported by most of the patients. This finding agrees with other studies that have been done on barriers to uptake of cataract surgical services in Nigeria and other developing countries (Ogwurike and Pam 2004; Rabiu, 2001; He et al, 2003; Iqbal, 2005; Awobem et al, 2005 and Mpyet, 2005). The concept of 'time is money' is not only the preserve of the city professional. It also has a sharper reality for people living in poverty. Seeking treatment involves leaving day-to-day responsibilities. In an existence of 'work today, eat today' early treatment intervention is a luxury that may be unaffordable. Furthermore, costs are multiplied when other family members are involved.

5.5 Conclusion

Surgery uptake by cataract patients depends on their knowledge about the disease; awareness about treatment availability and confidence in the recovery of visual capacity; acceptance of diagnosis and therapeutic approach and presence of physical, psychological, and economic conditions as well as an appropriate family support. The cataract blind, and particularly those in poverty, must overcome the numerous socioeconomic barriers to accessing surgical treatment. Eye care service providers must do more to ensure that, to the greatest extent possible, the result is complete sight restoration. The ability to produce consistently good surgical outcomes is important for cataract patients to develop enough confidence in the treatment. This will definitely increase number of cataract patients seeking surgery.

5.6 Recommendations

The interplay between social, economic and cultural factors is the key to understanding service utilization, and to developing effective intervention strategies. Many of the reasons specified for poor service use are largely a consequence of poverty, gender inequality and lack of participation in decision making. Tackling these causes is fundamentally challenging. At a practical level, dealing with the challenges can begin by:

1. Improving the evaluation of cataract surgical outcomes through health promotion;
2. Providing 'fast track' consultation and follow-up in the community with health personnel and past patients;
3. Modifying post-operative surgery recommendations to facilitate a quick return to day-to-

day responsibilities.

4. Promoting the benefits of cataract treatment for elderly people through health promotion and education
5. Maintaining better service information systems so that planners know who uses, and does not use their services.

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APPENDIX

KNOWLEDGE, PERCEPTIONS AND HEALTH SEEKING BEHAVIOURS OF CATARACT PATIENTS AWAITING SURGERY IN AJEROMI GENERAL HOSPITAL, LAGOS, NIGERIA

QUESTIONAIRE

Dear Respondent,

Good day, I am one of the students of Health Promotion and Education of University of Ibadan.

I am conducting a research on the above topic. This questionnaire is designed to assess the knowledge, perceptions and health seeking behaviours among cataract patients awaiting surgery in Ajeromi general hospital, Lagos, Nigeria.

Also, the survey will help to identify hindrances to effective management of cataract by surgery.

The information given here is strictly for research purposes only and confidentially is guaranteed as your name is not requires.

I would like you express your candid opinion in answering theses questions so ask to make this study a success.

However, your participation in this study is voluntary and not compulsory.

Thank you.

SECTION A: SOCIO DEMOGRAPHIC CHARACTERISTICS
TICK IN THE RIGHT BOX

1. SEX

   i. Male ( )

   ii. Female ( )

2. AGE

   i. 50 - 54 years ( )

   ii. 55 – 59 years ( )

   iii. 60 – 64 years ( )

   iv. 65 – 70 years ( )

3. MARITAL STATUS

   i. Married ( )

   ii. Single ( )

   iii. Divorced ( )

   iv. Widowed ( )

   v. Separated ( )

4. EDUCATIONAL QUALIFICATION

   1. Primary ( )

   2. WASC/GCE/SSCE ( )

   3. NCE/OND ( )

   4. DEGREE/HND ( )

   5. Master Degree ( )

   6. Phd ( )

5. RELIGION

   1. Christianity ( )

   2. Islam ( )

   3. Traditional ( )

   4. Others (specify) ……

6. ETHNIC GROUP

1. Yoruba ( )
2. Igbo ( )
3. Hausa ( )
4. Others (specify) ……

7. Occupation:……

SECTION B: KNOWLEDGE ABOUT CATARACT

8. Before you came to the hospital, did you know about cataract?

1. Yes ( )
2. No ( )

9. If yes, what is your knowledge about cataract surgery?

……

……

……

10. Whom or where did you get the information from?

1. Friends ( )
2. Family ( )
3. Health Educator ( )
4. Media ( )

11. What is the local name for this condition?

……

12. Do you know anybody who has suffered from this condition?

1. Yes ( )
2. No ( )

13. Before you came to the hospital, did you notice any changes in your vision?

1. Yes ( )
2. No ( )

14. What did you do when you first noticed that you had this problem?

1. Nothing ( )
2. Visited a health centre ( )
3. Visited a herbalist ( )
4. Others (specify) ……

……

15. What do you think is the cause of this problem?

1. Cloudy/Opacity of the lens ( )
2. Witchcraft ( )
3. 111 health ( )
4. Others (specify) ……..

……

16. What is the traditional cure for this problem?

……

17. What type of drugs/herbs have you used on the eye?

……

18. Where did you hear about cataract and surgery?

1. At home ( )
2. At work ( )
3. General Knowledge information from media ( )
4. At the health centre ( )
5. Other (specify) ……..

……

19. Have you seen any patient that has undergone cataract surgery before?

1. Yes ( )
2. No ( )

20. If yes, what did the person tell you about the experience of surgery?

……

SECTION C: ATTITUDES \PERCEPTION TOWARDS CATARACT

21. After the talk at the Clinic about Health Education and cataract surgery, what is your reaction towards the procedure?

1. Positive ( )
2. Negative ( )
3. Not sure ( )

22. Were you told about the risks involved in surgery?

1. Yes ( )
2. No ( )

23. If yes, what do you think about the risks involved?

……

……..

24. Can you state two benefits of cataract surgery?

……

……..

25. Have you tried other places for help.

1. Yes ( )
2. No ( )

26. If yes, what did they do or tell you?

……

……

27. What was your family's reaction towards surgical removal of cataract?

1. Encouragement to go for it ( )
2. Discouragement against it ( )
3. Undecided ( )
4. To go Traditional ( )

28. What was your reaction towards the total cost of surgery?

1. Too High ( )
2. Moderate ( )
3. Cheap ( )

29. What was the attitude of referent groups (those that have influence) towards surgery?

1. Encouragement to go for it ( )
2. Discouragement against it ( )
3. Undecided ( )
4. To go Traditional ( )

30. Would you encourage people with cataract to go for surgery?

1. Yes ( )
2. No ( )
3. Not Sure ( )

31. If cataract develops in the other eye, would you accept surgery again

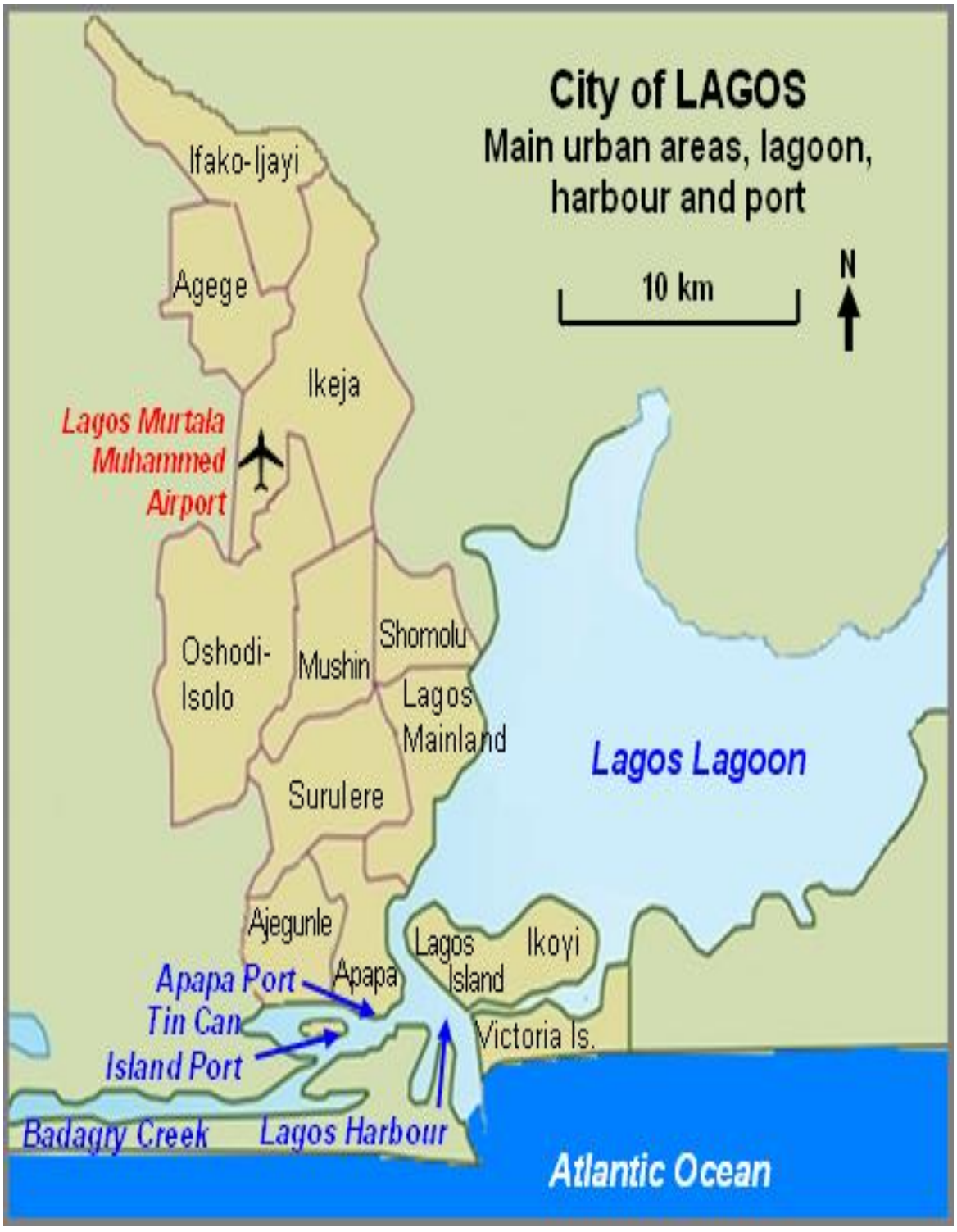
1. Yes ( )
2. No ( )
3. Not Sure ( )

32. In your own opinion, what do you think prevents people from going to Hospital to treat cataract by surgery?

……
……
……

33. Suggest ways by which eye health services in Nigeria can be improved (please list)

……
……
……



Map of Lagos |State

Source: Ministry of Land Lagos State Government (Diary, 2011)

AJEROMI-IFELODUN
LOCAL GOVERNMENT
LAGOS STATE, NIGERIA