

Barriers related to the uptake of cataract surgery and care in Limpopo province, South Africa: Professional Ophthalmic Service Providers' perspective

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Abstract

Background Studies in South Africa showed that cataract was the second leading cause of blindness and the leading single cause of severe visual impairment. People living in the rural and remote areas of the world are usually of lower socio-economic status and therefore lack the opportunity to utilize eye care services adequately which could result to lack of knowledge regarding cataract surgery. The primary aim of the current study was to increase a better understanding of eye health inequalities in Limpopo province with specific reference to cataract surgery and care. The study sought to answer a central question “What are the barriers related to the uptake of cataract surgery and care in Limpopo. Methods This study used qualitative and descriptive designs through exploring barriers related to the uptake of cataract surgery and care from professional nurses’ perspective. The target population comprised of 20 ophthalmic supportive staff. A non-probability, purposive sampling was applied to select three hospitals in which cataract surgeries are performed. All the 20 ophthalmic supportive staff purposively comprised the sample of the study. Data were collected through Focus Group Discussions. The Tesch’s principles as a guide for classifying data into themes and sub-themes applied. Ethical consideration and trustworthiness for data quality were explained. Results The study found that patient ignorance, low education and illiteracy, lack of awareness programmes, shortage of ophthalmologist and supportive ophthalmic health professionals, inadequate cataract facilities and resources lead to poor quality services in the hospitals were the major barriers in the uptake of cataract surgery and care. Conclusion People living in the rural and remote areas of the world are usually of lower socio-economic status and therefore lack the opportunity to utilize eye care services adequately. There is need to expand the awareness programmes and health education regarding prevention of the risks of blindness among the elderly in particular.

Background

Cataracts are one of the most prevalent diseases of the lens, affecting the transparency and are the major cause of reversible blindness in South Africa and globally [1-4]. Visual impairment and blindness are major health challenges in the rural and remote communities in developing countries [5]. Several authors have long observed that visual impairment and age-related eye diseases are increasing due to aging populations, increasing life expectancy and impact of risk factors such as smoking, diabetes and hypertension [3, 6]. The World Health Organization (WHO) estimates that 314 million people have visual impairment globally [7]. Of these, 269 million have low vision and 45 million are blind [7]. According to recent estimates, un-operated cataracts account for 35% of cases of blindness and 25% of cases of moderate to severe vision impairment world-wide [3].

In the United Kingdom, visual impairment affects about 10% of the population aged 65-75 years and 20% of those aged 75 years and older with approximately 3 million surgeries performed annually and numbers continuing to grow [8] and 0.57 million people suffer from visual impairment in Pakistan alone [9] whereas, the highest prevalence of blindness is in Africa [10]. As far back as 2002, WHO estimated that the unclassified prevalence of blindness in Sub-Saharan Africa is between 1% and 9% among the age

group 50 years and above [7, 11]. In South Africa, there are about 330,000 blind people and of these, 80% live in rural areas [11].

The issue about scarcity of eye services in rural areas is not peculiar to South Africa. In their paper on the utilisation of public eye services by the rural community residents of the Capricorn district, Ntsoane et al (2012) reviewed several papers on this issue covering different parts of developing countries which showed that developing countries are also affected [5, 12-15]. Apart from scarcity or non-availability, access to available eye services, including cataract surgery might be due to affordability and non-acceptability. For example, in South Africa, several factors, such as non-availability, poor knowledge of available services, cultural barriers may prevent people from using eye services [5]. Other reported barriers to increasing cataract surgery rates include inadequate commitment by hospitals or provincial managers to increase surgery numbers; insufficient access to theatre; erratic supply of surgery consumables; shortage of ophthalmic nurses; shortage of surgeons; inappropriate use of surgeons times; and theatre staff not familiar with high-volume cataract surgery [5, 11, 16].

Reference to Sweden, Smirthwaitte et al (2016) posited that although the Swedish Health and Medical Services act states that good care should be given to the entire population on equal terms, however, access to care in Sweden differs, for example due to gender and socio-economic variables [17]. The availability of highly developed surgery occurs in industrial countries while such services are lacking in developing countries including South Africa [3, 18, 19].

Cataract is a major cause of blindness in South Africa in general and Limpopo province in particular. A study carried out in Cape Town, which is an urban city, showed that cataract was the second leading cause of blindness (27%) and the leading single cause of severe visual impairment (37%) [11]. In another study conducted on the causes of visual impairment among eye clinic patients in a rural-based hospital in Mopani district, apart from uncorrected refractive errors, cataract was responsible for about 21% of the causes of significant visual impairment among the participants [16]. According to Maake (2015), after optical corrections among the participants, the main cause of visual impairment was cataract (39.5%) [16]. Although cataract is treatable by simple, inexpensive surgery, it is responsible for 66% of all cases of blindness in South Africa.

Cataract removal is the most common and successful ophthalmic surgery, however, cataract surgery poses a major economic burden and in developing countries, such as South Africa, cataract surgery either is unaffordable or inaccessible or even unacceptable [20, 21]. Limpopo province features prominently in South Africa's poverty ranking as being one of the least developed of the provinces in the country. Poverty and blindness or loss of vision are cyclically linked, with poverty increasing the risk of becoming blind and blindness exacerbating poverty through limiting opportunities to engage in income generating activities [22, 23].

Based on need, to meet the WHO's vision 2020 programme objective of making cataract surgery accessible at a rate of 2000 to 3000 operations per million people per year, the Eastern Cape province requires 17500 cataract surgeries annually [7, 11]. As at 2011, government institutions conduct maximum

of 3,000 operations annually, leaving an estimated shortfall of 14500 cataract operations per year. This annual shortfall does not address the backlog of over 35,000 cataract blind people [10].

Vision loss and utilisation of cataract surgery have important demographic and socio-economic determinants. In other words, poverty, for example, and availability, accessibility and utilization of cataract surgery services are cyclically linked, with poverty increasing the risk of inaccessibility to or non-affordability of cataract surgery and therefore increasing the possibility of becoming blind. Blindness, on the other hand, exacerbates poverty through limiting opportunities to engage in income generating activities [11, 18, 19, 24]. To date, there is no study that has explored the nature of this association among cataract patients in Limpopo province. Proper planning for Vision 2020 blindness prevention programmes in South Africa will only be possible if research evidence on the nature and extent of the problem of the major causes of visual impairment in both the rural and urban areas is known, hence the need for this type of study.

1.2 Aim of the study

The goal of the current study was to increase a better understanding of eye health inequalities in Limpopo province with specific reference to cataract surgery and care. The study sought to answer a central question “What are the barriers related to the low uptake of cataract surgery and care in Limpopo?”

Methods

This study used Qualitative and descriptive designs based on the exploring barriers related to the uptake of cataract surgery and care from professional nurses’ perspective in Limpopo province, South Africa. The target population comprised of 20 ophthalmic supportive staff, included 3 registered ophthalmic nurses and registered eye specialists. Non probability purposive sampling was applied to select three hospitals in which cataract surgeries are performed. All the 20 ophthalmic supportive staff purposively comprised the sample of the study. Data were collected through Focus Group Discussions (FGDs) for participants to respond to the central question “What are the barriers to the uptake of cataract surgery and care in the health care services?” The sample implies that three focus groups were formulated as follows: hospital A had six (6) participants; hospital B and C had eight (8) and six (6) participants respectively. Data were collected from April to November 2018. The FGDs were conducted in English language since the participants were professional nurses who trained their careers using English as official language in South Africa. Data obtained on audio-tape was transcribed verbatim, translated, coded and analysed following the central question, using the Tesch’s principles as a guide for classifying data into themes and sub-themes, as described by Creswell [25]. Field notes to capture observations that could not be captured on audio-tape, including non-verbal gestures, the interview setting and the researchers’ own impression were used.

2.1 Trustworthiness of the Study

This study used different criteria to evaluate the study's quality. The model of Lincoln and Guba was employed [26]. This model is based on the identification of four strategies for ensuring trustworthiness, namely, truth value or credibility, transferability or applicability, consistency or dependability, and neutrality or conformability [26]. Credibility was achieved through prolonged engagement with the participants, where researchers stayed in the field until data saturation occurred.

Results

Of the 20 respondents interviewed, those of age range 56-60 years had the highest number of participants (n=10; 50%), followed by those of age the group 51-55 years (n=4; 20%) and those of ages ranging between 30-35 and 46-50 who contributed 10% each (n=2;10%) while those in the age group 36-40 and 61-65 (n=1;5%) were the least groups. Most participants were female at (n=16; 80%). In terms of years of experience in eye care the majority had between 1-10 years (n=11; 55%) followed by 11-20 years and 21-30 years (n=7; 40%) combined, while the remainder (n=2; 10%) had between 31-40 years of experience.

The main theme was answered by the study question "What are the barriers related to the uptake of cataract surgery and care in the health care services"? From the data the following sub-themes emerged: Barriers related to patient ignorance and low education and lack of awareness programmes; Shortage of ophthalmologist and supportive ophthalmic health professionals; and inadequate cataract facilities and resources lead to poor quality services in the hospitals.

3.1 Emerging themes

The following themes emerged from the responses that Professional Ophthalmic Service Providers gave.

3.1.1 Barriers related to patient ignorance, low levels of education and lack of awareness programmes

Professional nurses perceived patient ignorance, low education and lack of awareness programmes in the communities on the disease contribute to poor uptake of cataract surgery and care in the rural communities. Some participants indicated that in most situations patients regard impaired vision related to old age and it is normal as one grows to gradually become blind. Participants further said that patients are not keen to visit eye care services because they would travel long distances and sometimes needing escorts. Participants felt that although the majority of patients receive social grants from the government, the money is not enough to access health services, therefore, patients place providing food as number one priority in the family. Participants perceived lack of awareness programmes in the primary health care in particular having a negative impact in the uptake of cataract surgery and care in the rural settings. They regarded the health services in cities and regional hospitals in the towns adequately resourced as compared to health services in the rural settings.

Individual participants supported by the group said:

“Lack of awareness and ignorance about the disease contribute to high rates of blindness among the elderly in the rural communities”

“Cultural beliefs that impaired vision and blindness is caused by witchcraft has negative impact in seeking eye care services”

3.1.2 Shortage of ophthalmologist and supportive ophthalmic health professionals

Shortage of ophthalmologist and supportive ophthalmic health professionals was regarded a major barrier in the uptake of cataract surgery and care. In all the three sampled hospitals participants indicated that most health professionals in particular nurses, working in the eye units are not trained eye specialists. The finding is supported by analysing the target population which comprised of 20 ophthalmic supportive staff, with only three registered ophthalmic nurses and one registered eye specialists, implying that the 16 participants were supportive ophthalmic health professionals. Participants expressed a major concern regarding shortage or absolute lack of ophthalmologists doctors in their hospitals resulting into long waiting list over 2 years and over.

Individual participants supported by the group said:

“In our province resources are not adequate as we only have one doctor for cataract surgery who caters for most of the hospitals around Limpopo province.”

“We have few doctors and equipment as well as facilities.”

“There is one ophthalmologist for a long list of patients”

“The cataract surgical list increases yearly resulting from backlog.”

“Cataract surgery is a free service to all pensioners but the wait time is a major barrier”.

3.1.3 Inadequate cataract facilities and resources lead to poor quality services in the hospitals.

Most participants raised their frustrations regarding the inadequate cataract equipment and facilities to conduct cataract surgery most importantly in the three hospitals responsible for providing the surgery and care in the study setting, the Vhembe district in Limpopo. In one particular focus group overwhelmingly participants voiced the lack of space and poor infrastructure to conduct cataract surgery and care of patients postoperatively.

Individual participants supported by the group said:

“South Africa is having poor cataract care resources, compared to other developing countries, Cataract surgery rate is slow.”

“Generally, there is lack of resources for eye care in South Africa and is like it originated back from apartheid era, however, we are not treated equal by the government. We suffer most in the remote and

rural health services”.

“Towns and cities have got human and material resources although is not enough as those centres are catering for a lot of patients”.

Discussion

The current study revealed the major barriers such as patient ignorance and low education and lack of awareness programmes; shortage of ophthalmologist and supportive ophthalmic health professionals and inadequate cataract facilities and resources led to poor quality services in the hospitals contributing to low uptake in the cataract surgery and care. These barriers in the uptake of cataract surgery and care have been reported in many studies mostly the developing and under-developing countries with a major economic burden such as South Africa [22, 23]. Countries such as Jamaica [12], Latin America and the Caribbeans [13], Nigeria [14, 27] and India [15] are similarly affected. Lack of awareness programmes reported in this study was also experienced in Aligarh in India where it was found that 92 (33%) out of 277 non-operated elderly were never consulted for impaired vision [28]. Similar findings were revealed in Sudan [29]; Central Ethiopia [30] and in Latin America [7, 31].

The current study found that there were shortage of ophthalmologist and supportive ophthalmic health professionals in the sampled hospitals. Inadequate staff mixed ratio of surgeons to ophthalmic nurses at tertiary hospital in Limpopo was found in the study by Fasasi and Ayanniyi in 2018 [32]. The authors reported that health workers were reluctant to undergo trainings related ophthalmic speciality [32]. The current study further revealed that shortage of manpower and poor referral services also added to the professional nurses' frustration. It is postulated that patients who wait more than 6 months to 2 years and over for cataract surgery may experience negative outcomes during the wait period, including vision loss, a reduced quality of life and an increased rate of falls [28, 33].

The participants in the current study linked non-utilisation of cataract care and surgical services to financial constraints. They indicated that patients had to travel long distances to access the services. Despite the free cataract services for the elderly in South Africa, patients coming from rural settings claim that they do not have money for transport to the hospitals. Although cataract surgery is one of most cost-effective ophthalmic procedures globally, cost was reported the most common barrier in other studies. Fadamiro and Ajite (2017) found that patients (49%) in Ekiti State, South Western Nigeria, raised cost as a barrier to access surgical services and furthermore the authors revealed higher proportions in other setting for instance in South India (76%) [27].

It is widely reported in literature that people living in the rural and remote areas of the world are usually of lower socio-economic status and therefore lack the opportunity to utilize eye care services adequately. This can be due to non-availability, non-accessibility, non-affordability or lack of knowledge of the available services [5]. The scarcity of eye services in rural areas not necessarily the cost to surgery, could imply that health inequality in surgical treatment is still major barrier in South Africa. Whereas, to date there are countries that have realised the “Vision 2020, THE RIGHT TO SIGHT” initiative of the WHO and

International Agency for prevention of Blindness. Various studies reported the rapid increase in the availability of quality cataract surgical services such as the United States and in Latin America, 10 countries have an increase rate that is greater than 100%, and Argentina has highest rate of 264% [15, 31].

Conclusion

Cataract removal is the most common and successful ophthalmic surgery globally, however, cataract surgery poses a major economic burden in South Africa and in Limpopo in particular. The findings of the current study are similar to other developing countries. Ignorance, lack of awareness and lack of both human and material resources were found to be the major barriers in the uptake of cataract surgery and care. There is a marked increasing prevalence of blindness in the rural settings and many of the patients are from the disadvantaged socioeconomic backgrounds. The need to increase awareness, health education, early detection and treatment and care may have impact to reduce the risk of blindness. It is evident that the vision 2020 blindness prevention programmes in South Africa is far from being realised therefore, future research beyond 2020 should focus on the nature and extent of the problem of the major causes of inequality to access to cataract surgery and care in both the rural and urban areas.

Abbreviations

FGD	Focus Group Discussion
WHO	World Health Organisation

Declarations

Ethics approval and consent to participate

The study was approved by the Ethics Research Committee of the University of Venda (Ethical clearance number: SHS/17/PDC/15/2706), Limpopo Department of Health, Vhembe District Health, and the Chief Executive Officers of all selected hospitals. Individual participants gave informed consent before engaging in focus group discussions. The purpose and objectives of the study were explained to the participants and participants were ensured that their participation is voluntary. Participants were under no circumstances coerced into participating in the study. Tape recordings as well as field notes written during interviews increased the conformability of the research. Transferability was ensured by complete description of research method, in-depth discussions of the data obtained and interpretation of the research findings in the study report. Records of patients were reviewed within the Hospital premises in the records room to ensure confidentiality. Written informed consent was sought from participants prior to interviewing them.

Consent for publication

Not Applicable

Availability of data and material

Not Applicable

Competing interests

The authors declare that they have no competing interests.

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Authors' contributions

LBK conceptualised and refined the study idea. The author further directed the project implementation, manuscript writing and sourced funding for the project, WNN, NN, JM, NR, ST, BSM, PM and TSM developed data collection tools, collected, analysed data and drafted the manuscript. All authors read and approved the final manuscript.

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