Original Article

Barriers to Free Cataract Surgery during a Surgical Outreach Camp in New Karu LGA, Nasarawa State, Nigeria

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Abstract

Aim: To determine the proportion of screened cataract patients with vision ≤6/60 that will utilize the free cataract surgical services and to identify the barriers to uptake of the free cataract surgical services. **Settings and design:** A cross-sectional descriptive study. **Materials and methods:** A cross-sectional descriptive study was carried out among 53 cataract patients with vision acuity (VA) ≤6/60 who presented at a cataract surgical outreach camp in New Karu LGA, Nasarawa State from September 10 to 14, 2013, using both quantitative and qualitative measures. **Statistical analysis used:** Data were analyzed using SPSS Version 20 using the descriptive analysis. **Results:** Six hundred and sixty-six people registered for the outreach, 552 were examined, 125 had cataract of which 53 had cataract with VA ≤6/60, and were offered the free cataract surgical service. The age range of the participants was 36 to 77 with a mean age of 54 years. Twenty-seven were males and 26 were females. Initially, 64.2% were willing to have surgery, eventually 75.5% took up the free cataract surgical services. Females, residents of New Karu LGA, the uneducated and housewives were less likely to take up the free cataract surgical services and this was statistically significant. The most common barriers identified include 41% were afraid of surgery and 26.1% had heard of a bad outcome previously following cataract surgery. **Conclusion:** There was a high utilization of the free cataract surgical service. Fear of surgery and prior knowledge on poor outcome were major barriers. Community participation played an immense role to increase uptake.

Keywords: Barriers, cataract, free, surgery, uptake, utilize

Key Messages: There was a high utilization of the free cataract surgical service. Community participation played an immense role to increase uptake. Fear of surgery and prior knowledge on poor outcome were major barriers.

Introduction

Cataract is the leading cause of blindness worldwide.[1] The main barriers to cataract surgery in Nigeria include cost, availability of cataract surgical services, poor knowledge of the disease, treatment options, and fear to mention a few.[2-10] Eye camps help to improve access to surgeries.[11] There are limited studies on barrier to cataract surgical services during surgical camps in the community, most studies are carried out in teaching hospitals or community-based hospitals.[2-10] The study aims to determine the proportion of cataract patients with vision ≤6/60 that will utilize the free cataract surgical services, identify barriers to uptake of these services and to proffer solutions towards improving subsequent free cataract surgical services. This information would help in planning subsequent eye screening and surgical outreach activities in this community by our team, other individuals, groups and the government.

Subjects and Methods

The study was a cross-sectional descriptive study. Study population was patients who had cataract with Visual acuity (VA) ≤6/60 who presented at the surgical camp in a primary health facility in New Karu LGA from September

Access this article online

Quick Response Code:

Website: www.nigerianjournalofophthalmology.com

DOI: 10.4103/njo.njo_21_21

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Received: 10 April 2021 **Revised:** 21 December 2021
Accepted: 22 February 2022 **Published:** 26 December 2022

How to cite this article: Okudo AC, Akanbi OO. Barriers to Free Cataract Surgery during a Surgical Outreach Camp in New Karu LGA, Nasarawa State, Nigeria. Niger J Ophthalmol 2022;30:92-9.

10 to 14, 2013. (Kindly note screening and surgeries were going on at the same time.)

The inclusion criteria were cataract patients with VA ≤6/60, who were above 18 years and consented to be included in the study.

Participants who did not consent to be included in the study, younger than 18 or cataract patients with VA >6/60 were excluded.

The information sheet and questionnaire were read to all cataract patients with VA ≤6/60, and patients had a one-on-one interview session lasting between 8 and 12 minutes with two trained community health extension workers supervised by the researcher.

The participants were divided into three groups:
(1) patients who consented to surgery
(2) patients who did not consent to surgery
(3) patients who initially did not consent to surgery and subsequently changed their mind and had surgery

The second part of the study was qualitative analysis. A focus group discussion was held with
(1) cataract patients with VA ≤6/60 who did not take up the surgical service,
(2) those who initially declined surgery but eventually accepted surgery, and
(3) community health extension workers.

Screening records and questionnaires were collected and data were entered and analyzed using SPSS 20 statistical (SPSS statistical software (IBM SPSS Statistics 20; Chicago, IL, USA)), software package by the researcher. The descriptive analysis was used. The Focus Group Discussion was also recorded and analyzed. The study adhered to the tenets of the Declaration of Helsinki. Ethical approval was gotten from the Federal Capital Territory Ethics and Research Committee.

Results

During the community outreach program 552 subjects were examined and their records were complete. Of the 552 participants screened, 53 participants had cataract with VA ≤6/60 and they were offered the free cataract surgery.

All 53 cataract patients with VA ≤6/60 consented to participate in the study and questionnaires were filled during the interview-based questionnaire session (response rate = 100%). There was a fairly equal distribution of males and females, majority were above 60 years (58.5%), a 1:1 ratio of those residing within and outside New Karu LGA. Majority (84.9%) were Nasarawa indigenes, 81.1% were Christians, and 81% were married. All but one (98.1%) were illiterates or had primary education. One-third were housewives and 86.8 % earned less than N10,000 or nothing monthly. There was a fairly even distribution of the participants who were accompanied to the outreach venue and those who came alone [Table 1].

Table 1: The sociodemographic characteristics of cataract patients with vision acuity ≤6/60 who were offered the free cataract surgical services

Predictor	Frequency
Gender	
Male	27 (50.9%)
Female	26 (49.1%)
Age	
<50	7 (13.2%)
50–59	15 (28.3%)
60–69	20 (37.7%)
>70	11 (20.8%)
Address	
New Karu	27 (50.9%)
Outside New Karu but within Nassarawa State	26 (49.1%)
Ethnic group	
Nassarawa Indigenes	45 (84.9%)
Hausa	3 (5.7%)
Igbo	2 (3.8%)
Others	3 (5.7%)
Religion	
Christians	43 (81.1%)
Muslims	8 (15.1%)
African tradition	2 (3.8%)
Marital status	
Married	43 (81.1%)
Single	2 (3.8%)
Widowed	8 (15.1%)
Education	
Cannot read or write	34 (64.2%)
Can read or write but no formal education	8 (15.1%)
Completed primary school	6 (11.3%)
Completed secondary school	4 (7.5%)
Completed university or any other tertiary	1 (1.9%)
Institution	0
Education	
Nonformal	42 (79.3%)
Formal	11 (20.7%)
Occupation	
Skilled	10 (18.9%)
Unskilled	20 (37.7%)
Housewife	17 (32.1%)
Retired	4 (7.5%)
Unemployed	2 (3.8%)
Income	
<10,000	46 (86.8%)
10,000–20,000	1 (1.9%)
20,000–50,000	1 (1.9%)
None	5 (9.4%)
Accompanied to the outreach venue	
Yes	27 (50.9%)
Family	22 (41.5%)
Friend	5 (9.4%)
No	26 (49.1%)
Total	53 (100.0%)

Most of the participants had visual acuity of <3/60 in the eye to be operated (Table 2).

Table 2: The objective measure of vision

Objective measure of vision	
Visual aquity of better eye	
≥6/18	24 (28.3%)
<6/18–6/60	10 (18.9%)
<6/60–3/60	10 (18.9%)
<3/60	9 (17.0%)
Visual aquity of eye to be operated	
6/60	14 (26.4%)
<6/60–3/60	11 (20.8%)
<3/60	28 (52.8%)
Total	53 (100.0%)

Table 3: The self-awareness of visual problem

Self assessment of visual problem	
Good	5 (9.4%)
Moderate	15 (28.3%)
Bad	32 (60.4%)
Very bad	1 (1.9%)
Duration of visual problem	
6–12 months	3 (5.7%)
1–3 years	24 (45.3%)
>3 years	26 (49.1%)
Patients who had seen a doctor for visual problem	
	37 (69.8%)
In the hospital	31 (58.5%)
Eye camp	6 (11.3%)
Knowledge of cataract	
Never heard of cataract	35 (66%)
Heard of cataract but cannot describe symptoms	12 (22.7%)
Can describe symptoms	6 (11.3%)
Awareness of causes of cataract	
No	45 (88.7%)
Yes	6 (11.3%)
Source of information on cataract	
Ophthalmogists or medical staff	16 (30.2%)
Family or neighbor	2 (3.8%)
Awareness of surgical benefit	
Yes	42 (79.2%)
No	11 (20.8%)
Total	53 (100.0%)

Majority said their vision was bad, 49% had visual problems for more than 3 years, 69.8% had previously seen a doctor of which most saw doctors in the hospital. There was a poor knowledge of their visual problem, as 34% had heard of cataract and only 11.3% could describe cataract and its causes correctly [Table 3].

Those initially willing to have surgery were 34 (64.2%), those who were initially unwilling but eventually had surgery were 6 (11.3%), and those who did not consent to surgery were 13 (24.5%). All those who eventually had surgery were 40 (75.5%) [Table 4].

Females, residents of New Karu LGA, those with no formal education, housewives, those who say their vision is satisfactory, were less likely to take up the free cataract surgical services and these were statistically significant.

Although patients older than 60, non-Nasarawa indigenes, Christians, who were married, earn less than N10,000, unaccompanied to venue, with visual problem greater than 3 years, those that had seen a doctor previously, those with poor knowledge of cataract and VA >1/60 were less likely to take up the surgical service but these were not statistically significant [Table 5].

The greatest barrier was fear (41.3%) followed by they had heard of someone who had bad outcome (26.1%) [Table 6].

Focus group discussions were held among three groups:

(1) Patients who turned down surgery
(2) Patients who initially turned down surgery and eventually changed their minds and had surgery
(3) Community health workers in the community who volunteered to assist during the outreach program

Focus group discussion among patients who did not take up the free cataract surgical services

There were nine participants. All respondents could not speak English, so had to be translated by a community health worker.

(a) 60-year-old female
(b) 55-year-old female
(c) 58-year-old female
(d) 65-year-old female
(e) 60-year-old female
(f) 65-year-old female
(g) 50-year-old female
(h) 65-year-old female

Table 4: The initial willingness to surgical services against those that actually came in and had surgeries

	Initial willingness to have surgery	Initial unwillingness to have surgery	Total
Eventually came in and had surgery	34 (64.2%)	6 (11.3%)*	40 (75.5%)
Did not come in for surgery	0 (0.0%)	13 (24.5%)	13 (24.5%)
Total	34 (64.2%)	19 (35.8%)	53 (100%)

Percentages were total percentage with each section of row and column done over the total of 53. *Number of patients who changed their minds.

Table 5: Factors affecting the uptake of free cataract surgical services ($N = 53$)

Characteristics		Did not take up surgical services	Took up surgical services	*P-value*	Pearson Chi-square value
Sex*	Female	11 (42.3%)	15 (57.7%)	*0.003*	8.715
	Male	2 (7.4%)	25 (92.6%)		
	Total	13 (24.5%)	40 (75.5%)		
Age	<60	3 (13.6%)	19 (86.4%)	*0.121*	2.41
	≥60	10 (32.3%)	21 (67.7%)		
	Total	13 (24.5%)	40 (75.5%)		
Address*	New Karu	12 (44.4%)	15 (55.6%)	*0.001*	11.793
	Outside New Karu	1 (3.8%)	25 (96.2%)		
	Total	13 (24.5%)	40 (75.5%)		
Ethnic group	Nassarawa Indigenes	13 (28.9%)	32 (71.1%)	*0.176*†	3.062
	Others	0 (0.0%)	8 (100.0%)		
	Total	13 (24.5%)	40 (75.5%)		
Religion	Christians	12 (27.9%)	31 (72.1%)	*0.419*†	1.405
	Non-Christians	1 (10.0%)	9 (90.0%)		
	Total	13 (24.5%)	40 (75.5%)		
Marital status	Married	12 (26.7%)	31 (72.1%)	*0.419*†	1.405
	Others	1 (12.5%)	9 (90.0%)		
	Total	13 (24.5%)	40 (75.5%)		
Education*	Formal	0 (0.0%)	11 (100.0%)	*0.04*	4.511
	Nonformal	13 (31.0%)	29 (69.0%)		
	Total	13 (24.5%)	40 (75.5%)		
Occupation*	Housewives	8 (47.1%)	9 (52.9%)	*0.016*†	6.863
	Others	5 (13.9%)	31 (86.1%)		
	Total	13 (24.5%)	40 (75.5%)		
Monthly income	≤10,000	13 (25.5%)	38 (74.5%)	*1.000*†	0.675
	>10,000	0 (0.0%)	2 (100.0%)		
	Total	13 (24.5%)	40 (75.5%)		
Accompanied to venue	Alone	9 (34.6%)	17 (65.4%)	*0.09*	2.805
	Accompanied	4 (14.8%)	23 (85.2%)		
	Total	13 (24.5%)	40 (75.5%)		
Duration of visual problem	6–12 months	0 (0.0%)	3 (100.0%)	*0.313*	3.205
	1–3 years	4 (16.7%)	20 (83.3%)		
	>3 years	9 (34.6%)	17 (65.4%)		
	Total	13 (24.5%)	40 (75.5%)		
Subjective measure of vision*	Unsatisfactory	4 (12.1%)	29 (87.9%)	*0.01*	7.272
	Satisfactory	9 (45.0%)	11 (55.0%)		
	Total	13 (24.5%)	40 (75.5%)		
Seen doctor previously	No	2 (12.5%)	14 (87.5%)	*0.299*†	1.791
	Yes	11 (29.7%)	26 (70.3%)		
	Total	13 (24.5%)	40 (75.5%)		
Knowledge of cataract	No	13 (27.7%)	34 (72.3%)	*0.317*†	2.199
	Yes	0 (0.0%)	6 (100.0%)		
	Total	13 (24.5%)	40 (75.5%)		
Awareness that eye problem can be cured by surgery*	No	9 (81.8%)	2 (18.2%)	*0.000*†	24.611
	Yes	4 (9.5%)	38 (90.5%)		
	Total	13 (24.5%)	40 (75.5%)		
VA of operated eye	<1/60	1 (9.17%)	10 (90.9%)	*0.278*†	1.787
	≥1/60	12 (28.6%)	30 (71.4%)		
	Total	13 (24.5%)	40 (75.5%)		

Percentages are row percentages. Those who say their vision is very good, good and moderate were grouped as satisfactory and those who say very bad and bad were grouped as unsatisfactory. VA: visual acuity. *Corrected chi square using fisher's exact. †Characteristics that were found to be statistically significant.

Table 6: Barriers of free cataract surgical services

Barriers	Frequency (%)
Fear	Fear 19 (41.3%)
Afraid of surgery	10 (21.7%)
Afraid of losing sight	7 (15.2%)
Afraid of death	2 (4.3%)
Heard someone else had a bad outcome	12 (26.1%)
Need approval from family	5 (10.9%)
Comorbidities	2 (4.3%)
To old	1 (2.1%)
No one to accompany or take care of them	1 (2.1%)
Would want to have surgery in another center	1 (2.1%)
Believe vision is God's will	1 (2.1%)
Have had multiple surgeries	1 (2.1%)
No time	1 (2.1%)
Remaining vision is enough to sustain daily life	1 (2.1%)
I have had a bad outcome from surgery	1 (2.1%)
Total	65 responses (100%)

Each participant was allowed a maximum of four reasons.

(i) 65-year-old male

Each respondent will be represented with the corresponding numbers.

(1) Knowledge about the cause of blindness
What is wrong with your eyes?
   (a) "Cannot see well, itching, swelling and as if something is in my eye."
   (b) " Cannot see well and itching"
   (c) "Pain and itching"
   (d) "I cannot see far and I have diabetes and hypertension"
   (e) "Eye is not working, pain, and tearing"
   (f) "Cannot see far everywhere is dark, pain, and itching"
   (g) "Cannot see far and I have been operated before"
   (h) "Itching and tearing"
   (i) "Cannot see well"

(2) What is the name of your eye problem in your language?
All the respondents were not aware of the native name of their eye problem.

(3) Knowledge on available kind of treatment
Are you aware of the available treatment option for your eye problem?
   (a) "Eyedrop and glasses"
   (b) "Medicine"
   (c) "Tablet and eyedrop"
   (d) "Doctor knows best until diabetes and hypertension is cured"
   (e) "Eyedrop"
   (f) "Doctor feels it is ok he can give me tablet or eyedrop"
   (g) "I have had surgery in the left eye and do not want in the right"
   (h) "Eyedrop and glasses"
   (i) "Glasses"

(4) Are you aware that your eye problem can be treated in the hospital?
All respondents were aware that their eye problem could be treated in the hospital.

(5) Where have you gone for care for your eye problem and what treatment was offered to you?
   (a) "I went to medical center Maraba and was referred to Garki, I was offered operation but I refused."
   (b) "I went to Maraba and was told I will need operation but I refused."
   (c) "I have not gone anywhere."
   (d) "I went to Asokoro and was offered operation but because I am hypertensive and diabetic, I refused to have surgery."
   (e) "I went to an eye camp and was offered operation and reused."
   (f) "I went to both Maraba and Karu and was offered operation but I refused."
   (g) "I went to Abuja had surgery in one eye and was given appointment for the other but when I went back the doctor was not on seat and since then I made up my mind not to accept surgery."
   (h) "I went to Gwagwalada and Asokoro where I was given medicine which made me feel better but after a while the problem came back."
   (i) "I went to Asokoro and was offered operation but I refused because I have many health problems."

(6) What are your reasons for not accepting these free eye surgeries?
   (a) "I have hypertension and diabetes and people that have these do not see after surgery."
   (b) "I am afraid that if I do this surgery I will not see again, I have heard stories of people who could not see after surgery so I want to manage my vision as I would soon die and leave this world."
   (c) "One of my sisters is sick and I am the only one looking after her, no one to look after her and me after the surgery."
   (d) "I have hypertension and diabetes and my blood pressure is very high at the moment."
   (e) "I have typhoid and I am on drugs."
   (f) "There is no one to take care of me, my daughter will be leaving soon."
   (g) "I have had surgery in one eye and my vision is still not clear and I am worried about follow-up."
   (h) "My body is sick and I am afraid of the surgery."
   (i) "I have many sickness, I do not think I am fit for surgery and I am afraid of surgery."

Focus group discussion among two participants who changed their minds and eventually came in for surgery

There were two participants:

(1) 50-year-old female

(2) 50-year-old male
   (a) Why did you initially refuse the surgery and what made you change your mind?

Respondent 1: "I personally was afraid of the surgery and said I was sick but through counseling from the community worker that came to my house and spoke to my family and myself, I eventually summed up courage to come for the surgery. I want to thank all of you because now I can see, I am so happy, and I will spread the news to everyone and when next there is an outreach you can call me to come in to testify, the community worker knows my house. People in the community knew I could not see before but now I can see."

Respondent 2: "I was also very afraid and one of my relative who is a doctor was against me doing the surgery here, he wanted me to go to Kano but eventually my son convinced me to do it here since it was free and I am happy I did it because now I can see and will tell everyone."

Focus group discussion among community health workers

There were three participants:

(1) 52-year-old female community health extension worker
(2) 24-year-old female community health extension worker
(3) 28-year-old female community health extension worker
   (a) Questions related to barriers to free cataract surgical services
      (1) Has there been any previous outreach in this environment?
      All three respondents: "Yes in 2009"
      (2) What are the possible reasons why people in this environment would not accept free cataract surgical services?
      Respondent 1: "A lot of people are afraid that they will not see after surgery. Some believe that anything that is free will not bring quality drugs or surgeries, some will reject and go to other centers where they will pay, such as Jos or Kano. Some are worried that after surgery, where will they go for check up and some have no one to look after them."
      Respondent 2: "Afraid they will not see after the surgery"
      Respondent 1: "Some are willing but others will instil fear that after two or three years you will not see again so it makes some that are willing to refuse"
      (3) Is there any reason peculiar to women in this environment refusing these surgeries as we noticed most of those who turned down the offer of free surgery were women?
      Respondent 1: "Members of their family do not counsel them well, they usually discourage them from surgery, in some instances some of the patients that needed surgery, we community health workers went to their house personally to talk to the family members before they came back for surgery. Women are easy to convince, some can easily instil fear into women especially elderly women. I noticed especially women that are diabetic turned down surgeries."
      Respondent 2: "Women are more afraid, fear of blindness they are not as bold as men"
      Respondent 3: "Most of the women that refused are the Gbayi's indigens of these community, they are usually difficult to convince. I noticed yesterday during the screening about 8 women sitting together that were counseled for surgery, were discussing amongst themselves and saying how people get blind after cataract surgery that they knew people that initially their vision will be good but after a year they will go blind and they were saying so many negative stories about surgery and eventually all of them turned down the surgery."
      "If their family members do not agree".
      "Women carry out major activities at home, so if they do surgery who will take care of them and carry out these chores at home."
   (4) Can you give solution to increase uptake of these cataract services in this community?
      Respondent 1: "If the ones that have been operated are successful and people see them walking, dancing, and carrying out normal activities that will spread the news next time."
      "Target the community leaders to come in and talk to the people during the outreach such as pastors, priest, imams, district leaders, and local community leaders."
      Respondent 2: "Counseling"
      Respondent 3: "Create awareness since surgeries are between fifty to sixty thousand in places like Kano, Jos, and they still have to pay for transport and accommodation that they can benefit from such free surgical services."

Discussion

The utilization of the free cataract surgical services was 75.5%, although initially 64% were willing to have surgery. Community participation and counseling contributed to further increase as community health workers counseled unwilling patients and their families in their homes. The role of community participation cannot be overemphasized. There was a much higher utilization rate in this study than previous documented studies such as 40% in

University College Hospital, Ibadan (UCH)[9] and in Shenyang, China[12] where 32 out of 791 eventually had surgery. The following reasons could explain the 75.5% utilization. This could be because the barrier of direct cost and distance was eliminated. This was also a surgical camp, that is, the screening and surgeries were performed simultaneously so less likelihood of delay or other external factors that can discourage or deter them. The surgeries were performed in the community than in a base hospital and the role of community health workers played in counseling families in their homes. Although the study has a small study population, and samples were collected over one outreach activity.

Despite the fact, a fairly equal proportion of males and females were offered surgery, 42.3% of the females when compared with 7.4% of the males did not take up the surgical service and this was statistically significant. This could be attributed to the fact that majority of the females were housewives, that is, 17 of 26 (65%) and will need to take permission from their husbands. From the focus group discussion, we also saw the impact of a previous bad outcome as eight women sitting together talking about their fears due to one of them having had a bad outcome previously, made all of them turn down the service. In addition, the issue of no one to look after the home or them after surgery arose. This trend was also found in other studies.[9,13] Hence we need to create more time for counseling in the camp and in their homes, alleviating fears and answering question by having a group of counselors solely for this purpose.

Contrary to normal expectation that those that reside within the LGA will take up services when compared with others, the study showed otherwise as 44.4% of the residents and 3.8% from outside did not take up the service and this was found to be statistically significant. Similar findings were reported in UCH outreach center.[9] Occupation was found to be statistically significant as majority who did not take up the service were housewives. This could be because they have to get consent from their husbands or family.

Cataract patients older than 60 years (32.3%) were more likely not take up the service when compared with those younger (13.6%) but this was not statistically significant and similar finding was reported in Ibadan.[9]

Despite the fact that the outreach eliminated the barrier of cost as the preoperation evaluation, surgeries, postoperation drugs, follow-up for 6 weeks were free, also the indirect cost of distance was reduced by carrying out the surgeries in their communities, other barriers were still found. The highest being fear accounting for 41% of the responses which comprised of fear of surgery, loosing vision, and even death. There is a need for counseling and further education on cataract as the study also showed that 89% had poor knowledge of cataract and this was associated with uptake. Even though almost 70% had previously seen an ophthalmologist or a medical staff, so there is a communication or information gap. This was also evident during the focus group discussion (FGD) and similar findings were found in a study in China.[12] The next barrier was having heard of a bad outcome. This shows the power of the word of mouth and the importance of ensuring a good outcome during community outreach surgeries by delivering quality service. As the common saying "A bad outcome can turn away 40 people or even a whole community." There is also a need to ensure good outcome, to build up the confidence, and trust in our services so people can utilize this service available at their door step. Similar findings have been reported by Fletcher *et al*.[14] Next in ranking was the need for family approval, we have to realize that accepting surgery is a family decision, and it is important to engage the family through good quality counseling.[15] This was helpful in our study and increased uptake from 64% to 75.5%. This can also be improved upon through educational campaign held before outreach activities. Patients with comorbidities are of important concern as these patients need to be properly evaluated and followed up, and their surgeries are preferably carried out in a base hospital especially if they are not controlled. Adequate counseling will help to reduce barriers such as one thinking he is too old for surgery, religious beliefs such as it is God's will, or having had multiple surgeries. Despite the fact that direct cost was eliminated and indirect cost reduced the issue of someone accompanying them or taking care of them was evident. Adequate awareness of such assistance being required should be emphasized during campaigns before outreach activities and through community participation by having volunteer community workers assisting them. This was also found to be helpful in China.[12]

Further probing during the FGD among those that did not consent to surgery was very enlightening. Almost all the respondents accepted to having poor vision but despite the fact most of them had seen doctors in the past, none of them mentioned cataract as the cause of their eye problem. They all were also not aware of the native name of their eye problem.

Almost all the respondents had sought medical assistance and were offered surgery but when answering the question on knowledge of available treatment options, only one person that had previously had surgery gave surgery as an option. "I have had surgery in the left and do not want it in the right." The rest denied being aware of surgery as an option. Additional barriers elicited from the FGD include the poor knowledge on cataract and available treatment option by cataract patient. They were also worried about follow-up; we had followed up services for 6 weeks after surgery and then they were referred to the closest secondary institution. We have to ensure patients can have access to quality service after surgery to attain good outcome and improve subsequent uptake. Issues of free services not being quality service were also brought to the fall; hence, we have to ensure quality service, good outcome, and provide adequate quality follow-up services.

Patients with good outcome also volunteered to be motivators and counselors in subsequent outreaches.

The strengths of the study include the fact that it is a cross-sectional descriptive study which included a focus group discussion. The limitations of the study were the sampling was opportunistic, study was carried out over one outreach activity, and the sample size was small, so it cannot be generalizable to the entire Nasarawa State.

Conclusion

There was a 75.5% utilization of the free cataract surgical service and community participation played an immense role to increase uptake. Females, residents of New Karu LGA, nonformal education, being a housewife, and self-assessment of good vision were all significantly associated with nonutilization of service.

Barriers identified include fear, hearing of poor outcome, family approval required, comorbidities, need for someone to take care of them after surgery, worried about follow-up services, and worry on the quality of service delivered.

Recommendations

(1) The use of patients who have good outcome from previous outreach activities as motivators and counselors during subsequent outreach activities.
(2) Dedicate a special team of community members as counselors during the outreach solely for this purpose, counseling should be both within the outreach venue and at homes with family members.
(3) Community volunteers to help take care of patients after surgery.
(4) Involve community leaders, for example, village head, elders, priest, Imam, women leaders during preoutreach campaign, and during the outreach activities (target the elderly and women groups).

Financial support and sponsorship

Nil.

Conflicts of interest

There are no conflicts of interest.

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