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**Exploring User and Provider Perspective on
Eye Healthcare Services of BRAC Vision
Centre in Rural Bangladesh**

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ACRONYMS

BBS	Bangladesh Bureau of Statistics
BDT	Bangladeshi Taka
BNBS	Bangladesh National Blind Survey
FGD	Focus-group discussion
FHF	Field Hollows Foundation
HNPP	Health Nutrition and Population Programme
IAPB	International Agency for the Prevention of Blindness
IDI	In-depth interview
II	Informal Interview
MHFW	Ministry of Health and Family Welfare
MLOP	Mid Level Ophthalmic Personnel
PO	Programme Organiser
RA	Research Assistant
RED	Research and Evaluation Division
SDG	Sustainable development goal
SS	<i>Shasthya shebika</i>
VA	Visual acuity
VI	Visual impairment
WHO	World Health Organization

ABSTRACT

INTRODUCTION

Worldwide rural people have lack of access to eye care services leading to suboptimal uses of existing services. In Bangladesh, eye care services virtually not exist in the rural area and *upazila* (sub district) level, and eye care is mostly provided in secondary level hospitals located in district towns. Therefore, the BRAC Vision Centre is the first point of eye care facility in the community that provides comprehensive eye care services provided by the vision technicians, graduated as mid-level ophthalmic personnel (MLOP). This study was performed to explore both user and provider perspective on the eye healthcare in rural community and patients perceptions on BRAC vision centre.

METHODS

The study was an explorative in nature conducted in Mymensingh, Dinajpur and Khulna district where BRAC vision centre is currently operating. Participants involved community people, patients and their close relatives, respective programme personnel, and representatives from Bangladesh National Society for the Blind Hospital. Participants were asked about eye healthcare seeking practices, satisfaction of the eye care services at vision centre, referral services, constraints and sustainability.

RESULTS

People usually received eye care services from vision centre, private chambers, pharmacy shop, private/community/national eye hospitals, traditional healers, homeopaths and eye camp. The most frequently cited

barriers for seeking eye care include cost, distance, accessibility, preference for traditional practitioners and prior experience. Over 20 of the participants and almost all of the relatives (16) expressed overall satisfaction with the service provided by the vision centre technicians. There were several reasons for dissatisfaction such as providers qualification, long waiting time for telemedicine (≥ 1 hour), price and delay in delivery (≥ 7 days) of spectacles.

CONCLUSION

Conclusion: The vision centres fulfill an essential role in delivering primary eye healthcare to the rural population of Bangladesh. However, quality assurance is the issues that need to be addressed urgently. A salient message from this study is that community based primary eye care centre like the vision centre could be sustainable through proper advertising, implementing effective eye health and awareness campaigns, full-time consultancy from the eye specialists and increasing integration with other programmes and organisations.

CHAPTER ONE

INTRODUCTION

1.1 BACKGROUND

Worldwide rural people have lack of access to eye care services leading to suboptimal uses of existing services (Zhang *et al.* 2008; Kovai *et al.* 2017). Studies on access to eye care services in developing countries show that lack of awareness, availability, accessibility and affordability of services constitute major barriers (Ntsoane and Oduntan 2010; Mehari *et al.* 2013). These barriers can result in low uptake of eye care services, which represents a challenge for the elimination of avoidable blindness in Asia and Africa. People who live in communities with inadequate and inaccessible eye care facilities tend to seek other alternatives of eye care services. In developing countries, it is likely that substantial eye care information and services are sought outside regular eye care system (Kumar *et al.* 2016).

“VISION 2020: The Right to Sight” is an international initiative launched in 1999 by the WHO and the International Agency for the Prevention of Blindness (IAPB) to eliminate avoidable blindness by 2020 and prevent the projected doubling of the burden of visual impairment between 1990 and 2020 (WHO 2007). An essential prerequisite for achieving the VISION 2020 goals is that these services are well integrated into national health systems. The Government of Bangladesh has recognised blindness as a serious social and health problem and formulated a national plan of action and also approved vision 2020.

In the South Asia, around 62 million people are visually impaired (Dandona, 2006) and 6.65 million are in Bangladesh (Dineen 2003). In Bangladesh, the prevalence rate of blindness is 1.53% among over 30 years old people, which is much more among people over 50 years old (BNBS 2003). A

survey in Bangladesh showed that blind children are about 40 thousand, where childhood cataract is the leading cause. Around 12 thousand children suffer from unnecessary blindness due to un-operated cataract, and about 1.3 million children have visually impaired due to refractive error, the large majority which is amenable to correction (BNBS 2003; BBS 1998). People with visually impaired are a great burden on Bangladesh, with an annual incidence of 130thousand new cases (Dineen *et al.* 2003).

In Bangladesh, eye care services virtually not exist in the rural area and *upazila* (sub-district) level, and eye care is mostly provided in secondary level hospitals located in district towns. According to Ministry of Health and Family Welfare (MHFW) of Bangladesh, only 141 government (71), non-government (56) and private (14) hospitals provide eye care services (MHFW 2011). In addition to that, the numbers of relevant human resources for eye care (like Ophthalmologists, MLOP, nurses) are not adequate. According to sources from Field Hollows Foundation (FHF), in Bangladesh overall 626 ophthalmologists, which is less than half required and 618 mid-level eye care personnel which is one-fourth of the required number to meet vision 2020 standards (Bilkis 2012).

Both cataract and refractive errors can be easily remedied using cost-effective interventions (Agarwal and Kumar 2011; Baltussen and Smith, 2012). Considering the unmet need for eye care in the rural community, BRAC has initiated the Primary Eye Care Services through IT-enabled Vision Centre with the aim to ensure quality comprehensive primary eye health services within reach of the poor rural community and establish a sustainable and replicable model of primary eye care centre. With the overall goal to eliminate avoidable blindness by 2020 in Bangladesh, the project has been implemented initially in three districts (Mymensingh, Dinajpur, Khulna) and scaling up in Comilla covering around 1 million population.

1.2 BRAC VISION CENTRE

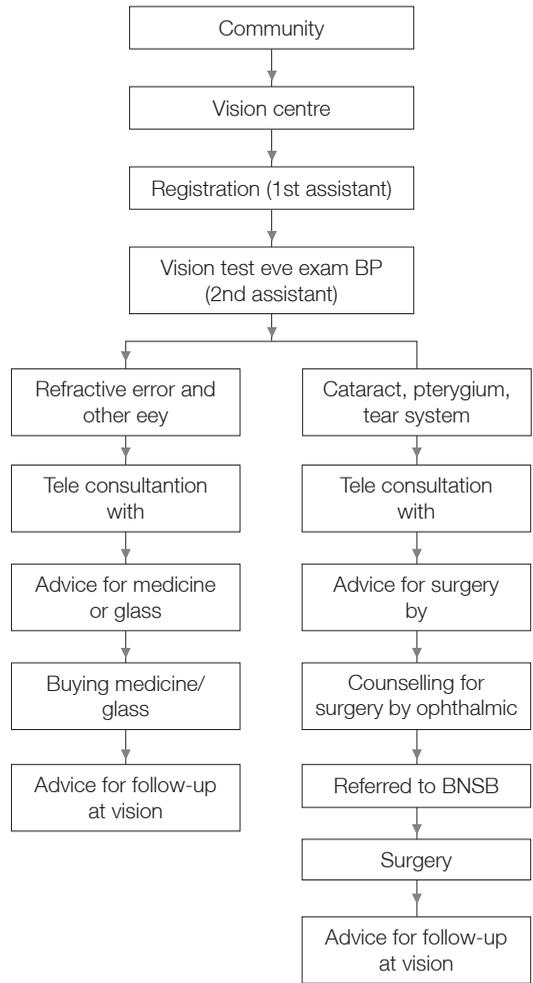
The BRAC Vision Centre is the first point of eye care facility in the community that provides comprehensive eye care services provided by the vision technicians, graduated as mid-level ophthalmic personnel (MLOP). The main objective of building eye care services is to ensure quality eye care services for the ultra poor through telemedicine technology. Not only the ultra poor but also the community people receive services from the vision centre at reasonable costs. The main function of the vision centre is identification and treatment of eye problems, refraction, preventive services, early detection, referral for surgery and post-operative follow-up.

Except for Friday, vision centres functioning six days a week from 8.00 am to 5.00 pm in a rented building with adequate space for patient consultation/registration, refraction with teleconsultation and dispensing spectacles. Essential equipment, drugs/medicines, stationeries, and furniture are available to provide eye care services to the people. The first technician registers the patients in exchange for BDT 50. The registration process is done by filling up a form using application software. The registration system at Aravind eye care, India incorporating the particulars of patients' history of eye problem and symptoms of the diseases and history of blood pressure and diabetes. Then the printed copy of the form is given to the patients and refers to the second technician for the eye examination. The reception area has a desktop computer, chairs for the waiting patients and their relatives, poster related to eye care, charges for a various eye test, treatment and surgery on the wall to increase awareness and to inform the patient about the services. The eye tests that done at vision centre are eye pressure, blood pressure, glucose, neuronal with a minimal cost. At the spectacles corner, people can buy quality spectacles of their own choice at the different price. Patients then get an eye examination, treatment; refraction from another technician seated in a separate room. All the arrangement for checking the refractive power of the lenses for vision correction is available. There is a slit lamp unit, a computer with internet access, and record keeping software is also available.

The second technician then describes the record verbally to the ophthalmologists sitting in the BNSB hospital. They are also able to fetch the patient record. The patient is then advised directly by the ophthalmologists over the video-conference. Patients then talk to the ophthalmologists about his/her problem. Analysing technician's description, medical record and patient's condition ophthalmologists suggest medicine or advice visit BNSB hospital for full treatment if required.

For tertiary level services, people are referred to the Bangladesh National Society for the Blind (BNSB) hospital in the same region where vision centre located. Patient directly meets with referral point with referral slip. Generally, vision centre refers a patient to cataract, glaucoma and ulcer problem. The representative doctors from BNSB consult with all the patients attended at vision centre through teleconference and they act as the mentor of vision centre technicians in need basis.

Figure 1.1 Logical flowchart of treatment at the vision centre



CHAPTER TWO

RATIONALE AND OBJECTIVE

2.1 RATIONALE OF THE STUDY

The study aim was to explore both user and provider perspective on eye healthcare services of BRAC vision centre in the rural community. In Bangladesh, we find several relatively novel programmes that aim to provide accessible and affordable eye care to marginalised populations (Alam *et al.* 3013). BRAC vision centre is one such programme. At the formative stage, research and evaluation division initiated this study to know the number of issues relating to the effective functioning of the vision centre, including whether the vision centre is providing accessible eye care services. This study will help the programme in intervention design, implementation, and sustainability of the Vision Care Centre. In addition, the outcome of the study can also help to guide behavioural change of communication strategies by identifying how and why people think in particular ways about eye health care. Finally, this study will aid in the design of surveys for monitoring and evaluate the success of interventions by ensuring that key problem areas were identified.

2.2 OBJECTIVE OF THE STUDY

The main objectives were to explore both user and provider perspective on the eye healthcare in the rural community. However, the specific objectives were to explore:

1. Eye healthcare seeking behaviour among community

2. The barriers to access eye healthcare services
3. Quality of care received by the patients
4. Constraints in providing eye healthcare services
5. Factors that can help to sustain the programme

CHAPTER THREE

METHODOLOGY

3.1 STUDY DESIGN AND SETTINGS

It was a qualitative study using focus group discussions (FGD), in-depth interviews (IDI), informal interviews (II), key informant interviews (KII) and non-participatory observations of the Vision Centre operations. Locations of the study were selected purposively. Those were: Dinajpur (Kahnsama *Upazila*), Mymensingh (Nandial *Upazila*) and Khulna (Dumuria *Upazila*) where the vision centres were started their operations firstly.

3.2 STUDY POPULATION

The population of interest mentioned in Table 1. The study population included patients and their close family members who accompanied during treatment time. The patients who received eye care from vision centre within one month before the interview were included as the primary target population. They were selected purposively from the vision centre register. All the patients and their details (Name, father/husband's name, and village and contact number) were recorded in this register. The secondary target populations were community people, BRAC staffs, *Shasthya shebika* (SS), Programme organiser (PO), vision centre technicians, and BNSB staffs.

3.3 STUDY TOOLS AND SAMPLE SIZE

Different tools were used for interviewing various categories of respondents including semi-structured interview guideline, observation checklist, IDI guideline, and FGD guideline. Separate guidelines for all the tools were

developed. All the guides and checklist were prepared and finalised after pre-testing in Korail slum of Dhaka city of Bangladesh. A detailed description of the study tools is given below (Table 2).

Table 1. Interviews conducted under vision study

Target group	Unit of interview
Focus group discussion	
Community people	6
Informal interview	
Staff from BRAC other programme	4
Representatives from BNSB	10
Key informant interview	
SS	6
PO	3
Vision Centre Technician	6
Semi-structured interview	
Patients relative	18
In-depth interview	
Patient	31
Total	84

Focus group discussion

FGDs among male and female community people with various age groups in the community were carried out. Objectives of FGDs were to explore eye healthcare seeking behaviour (source of treatment - where people usually goes to seek services) among the community people and the barriers to access eye healthcare services

and perceptions on the cost of eye health services among the community people. Two researchers (one facilitator and one note taker) were present during FGDs. FGDs were carried out with both groups separately. Focus group sizes ranged from six to ten lasted about one to one and half hours and took place in the yard of the participants to provide a familiar environment.

In-depth interview

Patients who received the services from VC and other eye health care centres were interviewed about their perception of services received, satisfaction and impact of care received. In total 34 respondents were interviewed as patients. These interviews took place at their home and lasted approximately 50-60 minutes.

Semi-structured interview

We considered patient relatives as 'who accompanying with the patient when he/she went for eye care services at VC or any other eye healthcare centre'. In total 18 respondents were interviewed as patients relatives. Their interviews lasted 40-60 minutes at a convenient place of respondents; either at their home or their offices.

Informal interview

Staffs of other programmes of BRAC and BNSB representatives were interviewed as the informal interviewees. Their interviews were lasted approximately 30 minutes to an hour and took place at their office.

Table 2. Types of interviews guides of relevant tools

Tools/ methods	Description of tools
FGD	Common ocular morbidity in the community people, health seeking practices, available facility about eye care treatment, knowledge and sources about vision centre, Willingness to pay, barriers and enablers to seeking eye care.
IDI	Definition of quality eye care, knowledge and sources of vision centre, treatment and care, satisfaction regarding cost, waiting time, staff attitude and behaviour, facility cleanliness, advice during discharge, barriers and enablers to seeking eye care, quality of life after receiving treatment.
SSI	Definition of quality eye care, knowledge and sources about vision centre, treatment care satisfaction in terms of cost, waiting time, staff attitude and behaviour, facility cleanliness, advice during discharge, barriers and enablers to seeking eye care, quality of life after receiving treatment.
KII	Common ocular symptoms in the community, health seeking behaviour for eye problem, willingness to pay for eye care, perception, constraint, treatment cost and sustainability of vision centre and way forwarding.
II	Perception, constraint, treatment cost and sustainability of vision centre and way forwarding.

Key informant interview

BRAC SS, PO and VC technicians were interviewed as the key informants as they mainly motivate people to take eye care services from VC. They were also asked about health seeking behaviour of the community people for their eye healthcare and factors influencing the utilisation of eye care services to triangulate the findings with FGD participants. Additionally, PO and VC technicians were asked about constraint related to VC and community, and factors that can help to sustain the programme.

3.4 DATA COLLECTION STRATEGY

Four male persons were deployed as the research assistants (RAs). They all were graduates of Anthropology with 2-3 years' experience in qualitative data collection procedure. They were responsible for conducting FGDs, in-depth interviews, semi-structured interviews and mostly observations. Key informants interviews and informal interviews were done by the authors themselves. In the field, notes were taken by the RAs during interviews. After each interview, a verbatim transcription was made by listening to the recorded interviews and field notes. Those were later translated into English by authors.

3.5 DATA ANALYSIS

All interviews and discussions were audio recorded and transcribed after getting the informed consent from the respondent. At first, each transcript was read several times to familiarise with the entire interview. The phrases used by the participants were coded on the margins of the transcripts to identify emerging themes. In this processes we have identified common responses of the respondents, elaborated the qualitative features from their narratives and responses were summed to identify the frequency. Bangla versions of narratives were then translated into English by researchers and meticulously verified.

3.6 QUALITY CONTROL/RIGOUR OF THE RESEARCH

To determine the rigour of the research, we followed Lincoln and Guba's approaches (Houghton *et al.* 2013). It includes credibility, dependability, conformability, and transferability. To get credibility, we have spent sufficient time in the field to gain a full understanding of the phenomena being investigated. We have also made triangulations to ensure credibility.

3.7 ETHICAL CONSIDERATIONS

Participants were informed about the study before conducting the interview. Verbal consent for interviews, recordings and photographs were collected and preserved from all participants. They were informed that their participation was voluntary and confidentiality of their identity and provided information will be secured throughout the research process.

CHAPTER FOUR

RESULTS

4.1 Background characteristics

Patient and patient's relatives

A total of 31 IDIs were conducted with patients. Among them, eleven were male, and 20 were female. All participating patients were between the ages of 18-75 years during the survey time. Majority of them were Muslims (24). Most of them were married (27) and the majority of them was housewives (19). Some major occupational categories were teaching (2), agricultural farming (4), business (2), student/unemployment (2) and shopkeeper (1). Education status of 30 patients has distributed as; 16 had no formal education, two were passed primary school, nine were passed secondary school, and the rest three were highly educated.

A total of 18 participants were involved as patient relatives, 18 males, and eight females. The age range of the respondents was 20-75. Majority of the respondents (9) were in the age range of 30-39 years. Nearly half of the respondents of this group were housewives (7) while the rest were involved with the different type of occupations such as the teacher, vegetable-seller, artisan, religious-leader, farmer, and village doctor etc.

FGD participants

A total of six FGDs involving 57 participants were conducted. Four FGDs were conducted with male and two with female.

Key informant

In total three POs were interviewed as key informants. Among them, two were male and a female. Their age range was between 31 to 45 years. They have three to ten years of experience in BRAC community-based programmes. All of them were married. In total six ophthalmic assistants were interviewed. Among them, five were female and a male. Their age range was between 21 to 26 years. They all have completed one-year mid-level ophthalmic certificate courses at Dhaka Islamia Eye Hospital. They were working as a vision centre technicians for as long as seven to ten months with the salary range of BDT 10 thousand to 11 thousand only. Most had no previous experience except one. Among them, forgot three to four months refresher training from Mymensingh BNSB eye hospital. Moreover, two of them got one to two months training from Aravind eye hospital, India. Among all the vision centres five technicians were unmarried. In addition, six SSSs were also interviewed as KII.

Informal interviewee

The interviews included BRAC education programme manager (1), BRAC legal Aid (1), Microfinance manager (2), BNSB coordinators (3), BNSB doctors (3), BNSB nurses (1), and BNSB staff (3).

4.2 Eye health seeking behaviour

4.2.1 General ocular symptom in the community

According to the community, various eye problems are common in the age group of 40 to 45 years (Table 4.1). Community people observed and shared that women are most vulnerable to eye problems than male. They had a clear understanding of the association of eye problems with different age groups. Such as, allergies and watering are common in the age group of fifteen to twenty. Many adults, between ages 20 to 35 years have problems seeing at near distance. Cataract, problem in eye duct (dacryocystorhinostomy or DCR) and pterygium are more common problem among elderly populations.

Table 4.1 Common ocular problems in the community

Symptoms/ Morbidities	Local terminology	Symptoms/ morbidities	Local terminology
Poor vision	<i>Chokhe na dekha</i>	Hypermetropia	<i>Kacher jinish dekhte na para</i>

[Table 4.1 conted...]

[...Table 4.1 conted]

Symptoms/ Morbidities	Local terminology	Symptoms/ morbidities	Local terminology
Itching	<i>Chokh Chulkay</i>	Discharge	<i>Ketray, athaberhoya</i>
Blurring vision	<i>Chokhe jhapsha dekha</i>	Swollen eye	<i>Chokhfolo</i>
Myopia	<i>Durer jinish na dekha</i>	Headache	<i>Mathabetha</i>
Tearing eyes	<i>Chokh diye pani pore</i>	Conjunctivitis	<i>Chokhotha</i>
Irritation	<i>Chokh Khoch-khochay</i>	Red eye/Redness	<i>Lalhojejaoya</i>
Eye ache	<i>Chokh betha kore</i>	Cataract	<i>Chanipora/ Pordapora</i>
Night Blindness	<i>Rat kana</i>	Pterygium	<i>Mangshobara</i>
Problem in Eye duct (DCR)	<i>Netro nailr shomoshya</i>	Painful eyes	<i>Chokhebyatha</i>
Eye injury	<i>Chokhe aghatpaoya</i>	Teary eye/tearing	<i>Panipora</i>
Dryness	<i>Chokhe pani joma</i>	Crossed eyes	<i>Tyarachokh</i>

Most of the patients in this study also reported at least one eye related problem about half reported a minimum of two eye related problems (Table 4.2). Within 73 of the multiple responses for the ocular symptoms the respondents reported, poor vision (15), tearing eyes (13), and blurring vision (13) were the most common. Other problems included itching (7), cataract (6), discharge (5), pain in eyes (5), red eyes (4) and so on.

Table 4.2 Ocular symptoms and their frequencies as reported by patients (multiple responses)

Ocular symptoms	Frequency (n=34)
Poor vision	15
Tearing eyes	13
Blurring vision	13
Itching	7
Cataract	6
Discharge	5

[Table 4.2 conted...]

[...Table 4.2 conted]

Ocular symptoms	Frequency (n=34)
Pain in eyes	5
Irritation	4
Red eyes	2
Conjunctivitis	1
Ptyregium	1
Eye injury	1
Total	73

Respondents reported several different ways of recognising their eye problem. The most commonly reported symptoms were reading deficiency and headache. Other symptoms such as a severe headache, sensitivity to sunlight, trouble threading in sewing needles, trouble in Kantha sewing, internet browsing, trouble while cutting vegetables and rice cleaning were reported frequently.

Majority of them believed that eye problem increase with age. Working in dust is also one of the reasons. “We do farming. It is usually common to us to get eye problem from dust and dirty farming objects” (FGD, Male, Nandail). One of the patients believed that she could not see because of her tumor operation.

4.2.2 Available eye healthcare facilities: where people go to seek services

All studied community relied on various sources. People usually sought for biomedical care from NGO or community-based eye hospital, eye camp treated by doctors and doctor’s chamber. Although most of the patients sought for eye care finally from the health facility, self-treatment, traditional healing, homeopathy, treatment from the pharmacy was found as an important source of service provider primarily. However, respondents were much concerned about the efficiency of traditional healing: “*ekhonkar dine chokher shomoshyar jony keo jharfuk kore na*”. Many people also go to pharmacies and *kabiraz* to get herbal treatment. People believed that traditional treatment is less harmful to the eyes: “We did not hear that people lost their vision with herbal treatment (FGD, Female, Dumuria)”. According to FGD participants due to low cost, they used to seek treatment from traditional healers and homeopaths.

For all the three communities, people usually took services from their nearest eye care facilities, within 10-18 kilometers of distance. People

of Nandail *Upazila* used to visit “Dr. Muqtadir Eye Hospital” (Gauripur) and Kishoreganj eye hospital due to close distance to them. The total cost of these facilities for cataract surgery was about one thousand to four thousand Taka including food, medical tests, medicines and cost for staying at a hospital.

Among all the private hospitals, Kishoreganj eye hospital was costly and mainly offers services, for the affluent family. Some people of Nandail also visit doctors’ chamber and BNSB hospital located at Mymensingh Sadar *Upazila* which is about 52 km far. They also visit to various public and private hospitals of Dhaka.

“If people have the ability then they even go to Dhaka for eye treatment. Usually, the rich people consult with their relatives and consider many things such as social status, prior experience, services of the hospital etc. However, poor people have no option. They take advice from us. And that’s why they expect our presence during doctors’ visit”(KII, SS, Nandail)

Dinajpur BRAC vision centre is located at Pakerhat a major business centre under Khanshama *upazila*. People from the Khanshama have mostly visited the Bibikanchon community eye hospital located in Vullir Bajar, due to its popularity and low cost. Some people also visit the Marium eye hospital, Saidpur, and Grameen eye hospital of Thakurgaon due to its close distance from Khanshama. Marium Eye hospital, Saidpur and Grameen eye hospital of Thakurgaon, is 30 to 40 kilometers far from Khanshamathat is near than Dinajpur BNSB hospital. Cost for cataract services of these three facilities is about BDT 2300 to 4000 only. FGD respondents mentioned that people also visit doctor’s chamber, located at Birganj, only nine kilometers distance from Khanshama *upazila*.

In Dumuria few eye health centres were frequently mentioned by the FGD participants. Among them, BNSB hospital; Addineye hospital-managed by Akijgroup located at Khudirbottola; NGO Eye hospital located at Tilok, and Jakaria hospital are most remarkable. Khulna BNSB eye hospital is usually known as Shiromani eye hospital as because it is located at Shiromoni, which is also 20 kilometre saway from Dumuria *Upazila*.

4.2.3 Health seeking behaviour of the study participants

Most of the patients had been advised by their close family members and took the decision themselves to get eye check-up. Table 4.3 indicates that in five respondents sought care from vision centre first and at the same number of patients went to the private doctor as the first approach. Four of the respondents first took service from a local pharmacy and hospital respectively. Only 12 patients reported consulting a traditional healer, homeopaths, eye camp, and community based eye hospital at first.

Table 4.3 Patients first approached for eye care

First approach	Frequency (n=31)
Vision Centre	5
Nothing	4
Doctors Chamber	4
Pharmacy shop	4
BNSB eye hospital/private hospital	4
Traditional healer/ self-treatment	3
Homeopaths	2
Eye camp	2
Community eye hospital	3

Of the 34 respondents who reported having had an eye episode of an eye disorder within two months to five years before this study were treated using multiple actions of their health seeking pathway. Only five respondents were treated using more than one action/provider/facility. Four did nothing after recognition of eye problem. Majority of the study participants sought treatment in various places before taking services from BRAC vision.

Centre including traditional healer, pharmacy shop, and doctor's chamber. Majority of the patients delayed eye

care seeking, and they reported seeking care from formal health sector as a result of a referral from their first place of care. When we asked to chronicle the places they had sought eye care, it was discovered that eye care had been obtained from multiple sources. Ten patients did not go to a medical health facility as the first source of eye care.

Instead, they used traditional/herbal care from *Kabiraz*, prayer support (*panipora*) from the priest, self-medication such as using drugs like paracetamol bought from pharmacies as their first source of eye care. Few people have still faith in homeopathy treatment due to its quick results in various health problems. On the other hand, among those who first went to either a hospital or eye camp organised by hospital/non-government organisation, about half (15) subsequently reported seeking alternative care from both formal and informal sources. This pattern of multiple cares seeking for eye care seeking behaviours illustrated in Box 4.1.

Box 1.

A CASE OF MULTIPLE EYE CARE SEEKING

Liton is 37 years old businessman who participated in this study. He has secondary education. His monthly income is about ten thousand taka. He has suffered from tearing eyes for two and half months. Upon realising that he has eye problem, he has first visited BNSB hospital located at (provide city name). He was asked for surgery but he did not prepare for that. Subsequently, he sought care from doctors at the private chamber of the same place near BNSB hospital (altogether visited doctors three times). Doctors suggested for surgery again. He was expected to relief his eye problem without surgery that's why he again waited few days. Later he went to an eye camp organised by non-government organisation. Doctors from the camp again told him to do the surgery. Then he decided to do the surgery at the private hospital. In that time he met with PO. PO motivated him to do surgery at BNSB hospital through vision centre. He was motivated as the cost of this surgery at BNSB was very low, almost half than a private hospital. At last, after two and half months he did his eye surgery at BNSB hospital.

4.3 THE BARRIERS TO ACCESS EYE HEALTH CARE SERVICES

Barriers to accessing eye care as cited by the respondents were- i) financial constraint ii) ignorance iii) long distance of eye care centre iv) unavailability and inaccessibility v) no one in the family to accompany vi) preferences for traditional practitioners vii) prior experience and viii) broker at the public facility.

As delays and barriers in seeking treatment are related, during the in-depth interviews, all of the patients were also asked whether they realised care seeking delay and what they felt was the reason behind the delay. Respondents who sought care from vision centre took more than seven months to seek care after their symptoms began. This delay in seeking treatment was found to extend as long as 20 years in some cases. The two most frequent responses were the cost of medical care, and the symptoms were considered harmless followed by fear of surgery and no one in the family for accompanying health centre (Table 4.4).

Table 4.4 Reasons for delay having eye treatment

Reasons for delay	Frequency *
Monetary problem	14
Avoidance as 'it can be done later'.	11
No one in the family for accompanying	2
Fear of surgery	2
Cannot get time to visit	1
Did not realise	1

* 31 patients were asked this question. All of them, realised they have delayed in seeking treatment at any point in time after the onset of symptom was responded.

4.3.1 Financial constraint

FGD participants and health care providers both described financial constraints as the most common challenge faced by the community for eye care.

“Actually people want to get treatment with less money. They delay or do not seek a cure and wait for searching low-cost treatment” (FGD, Male, Nandail”).

Few women having eye problem shared their experiences that, due to money constraints they were unable to seek treatment

- “I cannot spend BDT 500, that does not take treatment.”
- “My treatment was stopped due to the money constraints”.
- “Only for money scarcity I can not take any initiative for treatment yet”.
- (FGD, Female, Nandail)

Delays in seeking cure directly related to cost of treatment. One such IDI participants were talked about her realisation of delays and coping strategies “Why I made delay? Only because of money. Still, I do not have money to do my eye surgery. I have borrowed money from BRAC, Asha, and other organisations. When I decided to go to the doctor, I felt obsessed. I thought if I go to the doctor then how could I repay my loan? so I delayed. When I think that I have to buy foods (rice) for my family, then delayed again. However, I always realise that I need to save money for my eye surgery (pterygium surgery). wherever, I go, either Mymensingh or Kishoreganj, I need money”. (IDI: M02, Female, aged 34 years, Nandail).

4.3.2 Avoidance

Results from IDI and FGDs revealed that avoidance/negligence was one of the important determinants of eye treatment-seeking behaviour. Usually, people neglected their eye problem because of not perceiving it as the serious illness, and they did not take any action if the symptoms would go away. Typical responses of the IDI respondents were “waited to see” or “It will treat soon” in this regard. One of the vision centre PO said that people usually ignore their vision problem. Usually, people do not go to the doctor as long as they can see. Avoidance was also a primary reason for the delay in seeking the cure.

“After diagnosing my eye problem, it was late to treatment. I think I had to take treatment earlier. They advised me to take glasses. However, I did not do that. This was my negligency. I realised that it was the critical time to take glasses. However, still, I am not using glasses”.(IDI: K26, Female, aged 34 years, Dumuria)

4.3.3 Long distance from eye care centre

The distance to eye health facility was cited as an important determinant of care seeking of community people, especially for adults and females. Financial access was closely linked to physical access of the facility. Some people lived at far distances from the eye health centre, which provided an additional challenge. Though in three areas BNSB hospitals existed, in almost all FGD and II participants and reported being adverse to use them due to long distance.

“Mymensingh eye hospital is 50 km away from Nandail *upazila*. If they go to Mymensingh, they have to spend at least one thousand takas, in addition, but BDT 500 for the doctor’s visit and transportation cost also involved. Thus long distance and cost of treatments were the major barriers for the people of Nandail”. (II, Another programme representative, Nandail).

The similar problems also existed in Dumuria (Khulna) and Khanshama (Dinajpur). The patients who got treatment from vision centre mostly went there due to close distance and low cost. We have seen that few of our study participants did not able to manage their time to go to district level doctor.

4.3.4 Unavailability and Inaccessibility

Unavailability and inaccessibility of the healthcare sources emerged as two inseparable factors that are barriers to accessing eye care services. Most

of the respondents mentioned that there were no services available in the nearby locality. Community people also replied the same:

“Eye hospital is exceptionally essential to the people of Dumuria. There are no eye hospital or eye healthcare services here. People suffered a lot to get eye care services here” (FGD, Male, Dumuria).

A patient from Nandaillet us know another delay to get care due to not having a good doctor there. Care seeking was frequently delayed due to the accessibility issue too.

“There is no eye treatment centre here (Dumuria, Khulna). One doctor’s chamber is available here, but the doctor is not available regularly. On the other hand, I have not enough time to go to Khulna for eye treatment. When I discovered vision centre here, without any question, I checked in there”. (IDI:K26, Female, aged 34 years, Dumuria)

4.3.5 No one in the family to accompany

Though the long distance is an important factor in the places where transportation was not the problem, most women cannot go alone to the health facility. Many women do not even go out alone. Especially for the elderly and those who have no male members in the household this barrier was particularly pronounced. Even who are financially stable also faced this physical barrier to access eye health centre.

4.3.6 Preference for traditional practitioners

According to FGD participants, few community people have faith in traditional healers, and they use traditional medicines for first care of contact. Mainly traditional healers provided services for the eye problems of conjunctivitis, red and yellow eyes. Many people in the community have faith in traditional treatment. The evidence illustrated the effectiveness of traditional treatments which included a case of a three years child who actually may have serious eye problems:

“A Few days ago a baby came to us as a patient. There was a black spot in the white part of his eye. His family wanted to take him to *Kabiraj*. They thought it would be cured if they bring the baby to a *Kabiraj*. We counseled them a lot offered the baby to a doctor”. (KII, Technician, Dumuria)

4.3.7 Fear of treatment/Prior experiences

Fear of mistreatment by healthcare providers at the tertiary hospital was a recurrent reason for not seeking care presented by both the FGD participants and patients. The following narratives showed fear of eye treatment and wrong information about the eye surgery. These may some reasons for why few community people were fearful to eye surgery treatment:

“One of my relatives went there for eye surgery. After the operation, he became blind. For which my husband was not willing to do my eye operation there”.(FGD, Female, Nandail)

In many cases, the people have seen that hospitals allow patients to do the unnecessary tests. Sometimes hospital does not accept test results if it is not done by their referred centre. This experience hindered people in getting eye care from the health centre. This experience is more familiar to people who had sought care previously and were familiar with the charges of the hospital.

4.3.8 Broker at public facility

Discussions implied that health centre broker influences patient’s decision making. FGD respondents reported that because of this health centre broker, people do not want to go tertiary hospitals. It is very common for them that broker misguides people when they seek treatment at the health centre.

“What happens in the clinic... you know?..... if you go for treatment on cough, they will ask more tests. If you didn’t agree then they will offer tests with less money. For that, you need to pay something to that man. It is then difficult to understand the original prices of the tests. That is why it is problematic for us to go alone in any health centre for a good treatment”. (FGD, Male, Dumuria)

4.3.9 Decision-making

Most of the FGD participants reported that husbands/ other male members of the household were the principal decision-makers for the treatment of eye-related problems. Very few women responded in FGD sessions were found that they took decisions regarding their eye treatment themselves alone. However, the majority of the respondents firstly shared their problem with their family members and colleagues before making a treatment decision. Most of the IDI respondents reported that SS and PO had some influence in taking a decision regarding service receiving of eye care from vision centre.

4.4. COMMUNITY AWARENESS ABOUT BRAC VISION CENTRE

Community people were asked how and what they know about BRAC vision centre. Participants of FGD, IDI, and II were replied that they came to know about BRAC vision centre from various sources; e.g., billboard, signboard, leaflet, public announcement (miking), promotional activities of BRAC programme staffs, village organisation (VO) meeting, SS/SK and friends, relatives and neighbours. Relatives and neighbours were also the significant sources mentioned by the participants as they have already received services from vision centre. Still, FGD participants of Nandail have insufficient awareness about vision centre: “We know nothing about it (vision centre)”.

Services and location of vision centre have an impact on the community people. However, when they were asked about the services of the vision centre, they could not answer descriptively. The majority of the FGD respondents had insufficient knowledge about the services that were available at BRAC vision centre. Most commonly mentioned available services were about beneficiaries, the cost for registration, medicine, cataract surgery, referral, and treatment process. However, they did not respond what they mean by computer-based eye treatment. It was clear that community people did not know about ‘eye test’ such as types and reason for the eye test. Here are some common quotes from the community people that indicates their awareness about vision centre and its services:

- “Computer based eye examination and treatment’
- ‘Referral facility for complicated cases’
- ‘Low cost for cataract surgery’
- ‘BRAC opens a pharmacy for eye diseases (*chokkhu rog*)’
- ‘BRAC has eye hospital’
- ‘Services available for the poor people’
- ‘Admission fee BDT 50 at BRAC eye hospital’
- ‘Minimum cost for medicine’
- ‘Eye test is free’

These quotes are highlighted community awareness of vision centre. It was indicated that community people knew both significant positive and negative aspect of vision centre. Although, BRAC other programme representatives have a fair knowledge of vision centre activities they also do not know about the service provider, cost for eye test and surgery, referral centre, and referral process. Though BRAC other programme representatives have a fair knowledge of vision centre activities they also do not know about the service provider, cost for eye test and surgery, referral centre, and referral process.

4.5 QUALITY OF CARE AT VISION CENTRE: PATIENTS AND THEIR RELATIVE'S PERSPECTIVE

4.5.1 Meaning of quality eye care

During exploring the quality eye care services received by the patients, they were first asked how they define the “quality of eye care”. It was found that they have described as the quality of eye care services in primary five ways: (1) effectiveness of eye care, (2) technical competence of the healthcare provider, (3) availability of modern instruments and services, (4) accessibility and (5) cost of services (Table 4.5).

Table 4.5 Meaning of eye quality of care by the study respondents

Meaning of eye care	Indicator	Patients* (n=23)	Relatives* (n=13)
Availability of resources and services	Modern equipment and instrument, good environment, good medicine, good treatment, good diagnostic, providers behaviour,	17	6
Effectiveness of eye care	Positive outcome: good vision (ability to read and see clearly)	7	7
Technical competence of the healthcare provider	Providers qualification and experience	8	2
Accessibility	Quick access, close distance, access of medicine and glasses	4	2
Cost of services	low cost	3	.-

*Multiple responses counted. 13 responses were not included in this analysis from both groups (7 patients and 5 patients relatives did not response and one patient said do not know)

Availability of resources and services

Patients (17 out of 23) and their relatives (six out of 13) made decisions on quality eye care on the availability of modern instruments and services. According to their own words quality of care was where modern equipment/instruments (*chokhek ach lagaye dekhbe*, computer e *chokh dekha*), (*jontro-patithakbe/valojonro montro thaka*) and medicines and spectacles (*valooshudh thakbe*, *valo choshma thaka dorkar*) are available; have good environment (*valo sheba*) and treatment facilities (*valo chikitsa/ unnoto chikitsa dibe*, *valovabe chokh porikkha kore/ Gurutto diye dekhbe*) including

diagnostic services (*test guli valo hote hobe*) and most importantly good behavior of the service providers with patients (*babohar valo hobe/rogir jotno kore valo/kotha-bartavalo*). Here is the typical response of one patient regarding how medicine and quality of care are related:

“If they cannot provide proper medicine or intended to give a fake or incorrect (she said *veja*) medicine, then there may raise the possible risk of loss of eyes. This will cause more trouble to poor people”. (IDI:M02, Female, aged 34 years, Nandail)

According to many participants provider’s attitude and behaviour also affects the attitude of patients and their relatives. If a provider behaves well then unintentionally patient motivates to take further services.

Effectiveness of eye treatment

Patients (seven out of 23) and their relative’s (seven out of 13) perception of quality eye care mostly indicated on the outcome of the diseases/health problems. Typical responses were to indicate the effectiveness of eye treatment were, ‘*Jekhane gele chokh valo hobe*’; ‘*chokh valo hole*’; ‘*jate kajkam koira khaito pari*’; ‘*operasoner por chokhe dekha jay*’ and ‘*sheba paye shusthy hoyo*’. One of the patients defined quality eye care in this way:

“If there were no problems in the eyes after getting treatment, then if I feel comfortable then I can say it was good quality eye care, else, how to say about the good treatment. If not how can I say it is good?” (IDI, D11, Female, aged 48 years, Khanshama)

Technical competence of the healthcare personnel

Both patients (eight out of 23) and relatives (two out of 13) has identified that the quality of eye healthcare services mostly depends on provider’s knowledge and skills. According to them in the eye, healthcare centre should have good doctors (*valodaktar/oviggo daktarbanars*) who have the ability to diagnose the problem (*shomoshya bujhte parbe*) and qualified (*borodaktar lagbe*).

Accessibility

Patients (four out of 23) and their relatives (two out of 13) indicated that accessibility of eye care was an issue for quality eye care services. They defined access to quality eye care services in several ways, such as quick access in an emergency (*thik shomoye sheba paoya/jokhon tokhon sheba paoya/tatkhorik vabe jeta paoya jay*); easy access to transportation (*jatayat shohoj lovy/barir kache*); access of medicine and glasses (*oushodh paoya shohoj lovy/choshmar jony dure jaoya lagena*).

Cost of services

Only three patients perceived that low-cost eye care services are associated with quality eye care. According to the low-cost eye care facilities are helpful to the poor so that they can able to get quality services. In their words: '*Goriber jonno valo hobe*'; '*taka kom nibe*'.

4.5.2 Patients and their relative's perception of quality of care at vision centre

Based on patients perception on quality eye care we have further categorised patient, and their relatives experience on BRAC vision centres services.

Availability of services: Well behaved by the provider but lengthy service time

Majority of the patients and their relatives were satisfied with provider behaviour. Technicians and concerned PO in the vision centres sometimes welcomed patients and their attendants to offer them a seat. Majority of the patient and their relatives felt that vision centre technicians and concerned person of BNSB listened to them and treated them with sympathy. A patient's relative gave his impressions of the behavior and treatment received from the providers as follows:

"They talked and behaved well with us. Their services were good. They listened to our problem with full attention." (ID:RK17, Female, aged 38 years, Dumuria)

Technicians explained that giving a warm reception to clients was about their part of duties. Because every patient is an important source to other patients. Our observation data also revealed that both technicians motivate patients to adhere to treatment. Another way technicians and doctors behaved positively towards patients was how they addressed them and communicated with them during registration and consultations. A patient shared her impressions about doctors during teleconsultation with her: "He addressed me as 'ma'." Observation in the vision centre showed that technicians addressed patients politely.

Most of the patients and their relatives expressed their satisfaction with the explanation and guidance given to them. All most all of them got advice or counseling services from technicians regarding uses of eye drop, referral, the reason for surgery, cost of eye test and further treatment, follow-up services etc.

Service time

Majority of the patients showed their dissatisfaction with service time at vision centre. Twenty-one patients waited to get full services between 15 and 60 min in the vision centre (from entry to exit), whereas, 10/34) waited for more than 60 min. Our observation data showed patients waited between 10 and 40 min to be registered. With regards the consultation time, patients spent 20-30 min with the second technician, whereas, only 10-15 min spent at medicine corner and motivation with the first technician. Those who were satisfied perceived that this waiting time was acceptable for satisfactory services.

“As long as the technician examined, she had seen me sincerely. Firstly she became friendly with me and gave mental support before examined me with their instruments. So, although it took some time, it was acceptable”.(IDI: K26, Female, aged 34 years, Dumuria).

However, six of them experienced to wait for a long due to misbehavior and ignorance of the attendees’ too many patients at the registration desk and unavailability of BNSB doctor for teleconsultation. However, for the one patient, long waiting time was unavoidable due to the seriousness of her eye condition:

“I went there when only five to seven patients existed. My queue number was four when I was waiting there. I can remember the scenario that the technicians went to take the lunch as it was just noon. I had to wait there for two to two and half hours. I left a lot of work to do in my house, but I thought I need to take treatment of my eyes from the doctor without more delay.” (IDI: D11, Female, aged 48 years, Khanshama)

Facility cleanliness

Most patients and their relatives expressed satisfaction with the overall cleanliness of the vision centre.

Technical Competence of the health care provider: Issue of doctors unavailability

Technical competencies may be illustrated by the following descriptions of patients:

Usually, respondents could not judge the service providers qualification and technical expertise. Although, they were asked about their perception of service provider’s expertise. They believed that as they are dealing with eye problem so, they have some technical skill as a professional. Majority of the patients have faith on technicians expertise based on their previous experience in other facilities observed there. These expertise may be

illustrated by the following statement of the patient (they argue against their own opinion after they faced a real experience there):

“I felt helpful when they suggest cataract surgery (for my wife). But, when I visited another facility there, they advised both cataract and *netronali*”. Finally, we were decided to operate a surgery of her eye at the Shiromani (BNSB, Khulna) and she is better now”.(ID: RK14, Male, Dumuria)

One of the influential points of dissatisfactions were the expertise of service providers'as there were dealing with the eye trouble. Moreover, few relatives of the patients were unsatisfied with the unavailability of eye specialist in the vision centre. In his words, “If the there were a doctor, then I could feel good.” Moreover, patient's satisfaction sometimes became an important factor for their degree of recovery or cure. That is why patients never feel comfortable receiving treatment from the technicians of the eye centre moreover they became more dissatisfied.

An unpleasant instance was also noted in the study regarding the dissatisfaction issue upon the technicians. One of the patients accompanies became extremely disappointed for receiving an unacceptable service by the technician of the centre.

“My mom cannot see anything with the prescribed glasses. Because they were not measured the refraction of my mother's eyes carefully (or their refractometer was not in order or the technician was not skill to use that). Because of it's (refraction of the provided lenses were not correct and was not focused correctly to see) power was high. Moreover, she felt sick whenever she wears those glasses to find the cure. Glasses I spent a lot of my mother's treatment but all of my money was gone. I complained twice, but they ignored. There was no hope for treatment in BRAC (ID: RM03, Female, Nandail)”.

Effectiveness of eye care: quality of life after getting the services

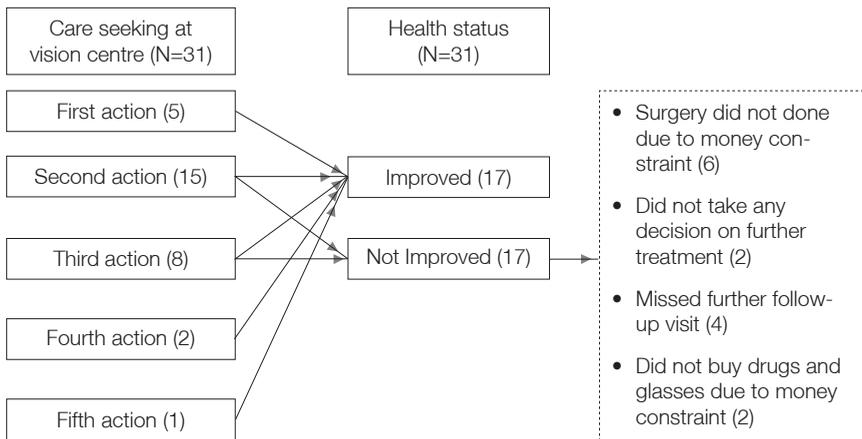
Majority of the patients and their relatives were satisfied with the services received as because they perceived their eye condition has been improved. In figure 4.1 it is observable that seventeen patients who took services from vision centre or did cataract surgery through vision centre reported improving their vision in terms of self-care, mobility and reading capacity. However, fourteen patients visited vision centre to get treatment but their eye condition was not improved due to several reasons. Among them, few respondents realised by themselves that due to not using glasses at the right time their eye problems will be increased. Those who did not arrange money for buying glasses and surgery were worried about their children's' eyes for the future life. They thought that if their eyes are not operated in time, their son/daughter might lose their vision.

“My eyes are very valuable to me. How would I survive without my eyesight if I lost it? “Doctor said my eye muscles/fat is growing up, and it will not remove in time by a surgery your vision will be very weak. How will survive without my eyesight? If it is so, then at the old age my children may not take care of me”. (IDI: M02, Female, aged 34 years, Nandail).

Another patient opined also the same

“How can I say about my eye condition after getting services from vision centre when I did not use glasses yet? What to do? I did not arrange money for buying glasses.” (ID: M02, Female, aged 34 years, Nandail).

Figure 4.1 Quality of life of the patients after getting services from vision centre



Cost of services:

Affordable for almost all but spectacles price is high

When we asked patients about their treatment cost, they mostly tell about the registration fee. In fact, the treatment cost is not only the registration fee it includes- medicine or other drugs purchase cost, cost of glasses including frame, cost of various eye test of the patients; additionally, seat rent, food cost and transportation cost of the patients and their accompanies. A large number of respondents were pleased with the expenditure of the vision centre because they thought this kind of treatment could not possible around their localities with this (low) amount of money.

“For the service holder, the eye treatment cost at the centre is not expensive. Overall this price is appreciable in our countries social status. Eye treatment only with BDT 50 is very cheap. People those are living at the periphery will not spend enough money to come here. Because for them transport cost will be high.....almost BDT 30. However, altogether a patient need BDT 100 for getting this services”. (ID: K26, Female, aged 34 years, Dumuria) However, for the poor people, even this low registration cost was not affordable:

“BDT 50 is not affordable to all; especially for those people, who work at our household. Some people even cannot arrange food regularly. It could be better if there were the discount facility for the ultra poor.” (ID: RD5, Patients relative, Khanshama).

Majority of them said that the amount of this money was in their ability. A female patient justified her treatment cost though she was dissatisfied with her condition:

“I have visited vision centre twice. In total, I paid them BDT 250. I think it is all right form. It was obviously not too much. People may usually spend BDT 1000-100,000 for their health treatment. While BDT 150 to 250 was not a big deal” (ID: D11, Female, aged 38 years, Khanshama).

Patients usually ask questions about the price of glasses and medicines. Patients say that glasses-frame prices are actually far less than vision centre. Many patients do not want to buy medicine from vision centre since 10% discounts are available at the outside.

Our analysis showed that cash savings were usually available in the family to treat an eye problem. Generally, we have seen from our IDI analyses; cash shortages mostly happened in case of buying glasses and medicines and for operating eye surgery. Those who were treated their eye were asked about the source of money they spend for. In cases of cash shortages, they adopted various sources of money. The most frequently reported strategy was borrowing money from neighbour and relatives. Relatives of patients described how his mother-in-law managed money for her cataract surgery: “Altogether the cost of the treatment was about BDT 5000. At first, she borrowed money from someone. But, after surgery within one month, she repaid her loan from her government allowance. She also does traditional treatment. So she managed little money from that source too.” (ID: RD04, Female, Nandail)

Referral support:

Active assistance and follow-up services but less inform on hospital services

Almost all patients and their relatives appreciated vision centres activities in referral services. They mostly appreciated pre-information process during community visit. On the other hand, two patient's relatives appreciated the emotional support from PO during their relative's surgery. One such respondent informed us over the phone that vision centre PO continuously supported from Nandail during her mother's cataract surgery. Another source of patient and their relative's satisfaction was about the 'follow-up' visit. But they were dissatisfied when they had to pay extra money at the tertiary hospital despite paid the full amount of money at vision centre. Few patients relative were very satisfied with the follow-up services.

"We were really happy with their attitude on the whole treatment process. After three days of surgery, they came to visit my mother-in-law at our house. They asked about the problem if any. Then they came again to take her to vision centre for follow-up after 15 days". (ID: RM04, Female, Nandail)

4.5.3 Patient satisfaction: Providers perspective

PO's and other programme staff were asked about what their perception regarding patient's satisfaction with vision centre services. Along with SSs all of the providers believed that patients are satisfied with vision centre services.

"Patient comment good about VC. Their main concern is about distance. If they go Mymensingh then it will cost a lot only for transportation. But here, at the vision centre main cost is the registration fees" (KII, SS).

According to the PO's and SSs, patients were treated politely by vision centre technicians. One SS from Nandail commented:

"I have visited several times there (vision centre) as attendance of patients. We were waiting for almost half an hour. I was annoyed but they examined very well. They took a long time for each and every patient".

Few people do not want to understand the diagnosis. They said, "you (SS) previously asked for BDT 50 only. But now, for testing purpose, it requires BDT 50 and more. How can we give it" (SS, Nandail).

Most of the technicians believed that because of financial support by them that make patients satisfied with vision centre. Most of the patients faced financial difficulties in buying glasses. It has seen that they do not have

enough money to buy glasses. Moreover, then technicians provide them additional money and help them to buy glasses. One of the technicians described how they managed patient during the time of buying glasses:

“Most of the time they bargain for BDT 10 to 20 when they buy glasses. They will not buy if we do not consider lowering the selling price. However, they got a concession, but we also subsidised from our pocket. Ultimately the patient became happy with that, and on the other hand, our reputation has increased”

Other programme staff believed that the technicians are competent and they have adequate skills. They also agreed that technicians had a positive attitude towards work because they maintained a professional behaviour with patients.

4.6 PROVIDERS CONSTRAINTS IN PROVIDING EYE HEALTH CARE SERVICES

4.6.1 Perspectives from vision centre provider

Patient did not pay full-service charge (registration fees, medicine cost, investigation cost)

Usually, patients did not want to pay the charges of full service (registration fees, medicine cost, glasses cost, investigation cost). They expected that the treatment would be free as BRAC usually provide. It was difficult to handle the patients who came at vision centre at the very early stage.

They also complained about the investigation cost. Three investigations are done to every patient after registration without extra payment. However, if the patients need to diagnosed with cataract or pterygium or duct obstruction they need to pay additional BDT 50 for each investigation. Moreover, both the patients and the provider stated that they do not want to give this extra payment.

Medicine cost at the vision centre is higher than the outside pharmacy because the outside pharmacies usually sell the medicine in 10% discount. So, the patients complained about the high price of drugs and they stated that they prefer to buy the medicine from outside pharmacy.

Some patients thought the glasses in the vision centre also cost more than outside. Another important complaint from the patient's side was that in Essential Health Care programme areas in the reading glasses programme, the glasses have been selling by BDT 150, but the vision centres pricing

the same frame at BDT 250. So that a dispute creates there, by which discourages the patients to buy glasses from vision centre. One of the PO shared her experience as the following way:

“One of our customers went to the vision centre. After examining his eyes, he has needed to take glasses. However, he did not buy glasses from the vision centre, Then he saw me in the way and expressed his dissatisfaction. The glasses bought from the EHC programme BDT 100, the price of same glasses were BDT 225 at the vision centre”.

Long waiting time for- telemedicine services

The patient has to wait for a long time, sometimes a couple of hours for teleconference because of the busy schedule of the BNSB's ophthalmologists. Long waiting time is also related to the network problem. Technicians observed that some patients also do not understand the virtual communication process with doctors. According to Vision Centre technicians, eye consultation is not organized regularly. When we asked about waiting time, in some cases, they acknowledged that the long waiting time as a source of patient dissatisfaction. One such technician said about a patient's impatient attitude regarding delayed consultation.

“Patients do not want to sit for a long time. Suppose a patient comes in the morning (8 am) if he/she needs teleconsultation we would keep him/her until 11 am.”

Another technician from Dumuria described her experience on long waiting time and said that consultation time mostly generated by the BNSB doctors so that they cannot handle the situation most of the time:

“Only for the teleconference, the patient does not want to sit for a long time. It is seen that the patient has to wait for one hour on an average. Sir (the consultant) also not interested in talking with one patient only. If the patients get annoyed, we feel very uncomfortable about it”.

Unavailability of teleconference on everyday

One of the essential components in the design of vision centre is the teleconference between the BNSB's doctors and vision centre's ophthalmic assistant, through which the ophthalmologist provides consultation regarding medicine and surgery after talking with the patients through Skype. The ophthalmologist also read the history, symptoms and test reports recorded by the ophthalmic assistant by a software. However, in the Dumuria, Khulna the teleconference takes place only three times a week. So, the patients never get the services every day completely. Moreover, the BNSB's ophthalmologists allocate time for the teleconsultation in between performing his other responsibilities in the hospital. There are some patients who never

get the consultation because of the unavailability of the ophthalmologist. Furthermore, the ophthalmologists stay in the hospital (in contact) until 2 PM, so the patients who came after 2 PM unable to receive the services as well.

Follow up- post-surgery patients

The patients were asked about the follow-up visit after surgery at vision centre. According to PO even if someone able to sees clearly after operating a surgery follow-up appointments were although important for the patients. But, they (PO) have experienced that most of the people were not very interested in a follow-up appointment.

4.6.2 Perspectives from BNSB provider

Incomplete counselling by the ophthalmic assistant

The ophthalmic assistant is supposed to counsel the patients regarding medicine, glasses, and surgery that required. Whenever a patients need surgery, they are expected to counsel the patients in regards to the cost of the surgery, the time and place they should go, what services they should expect from the BNSB regarding operation, bed, cost, investigation, and discharge. But, the ophthalmic assistants are not doing the counseling properly according to the patients and the staffs of BNSB hospitals. One of the BNSB staffs shared his experience in that way:

“The patients need to be counseled correctly that they will get either cabin or bed or floor bed according to their expenditure. But, some patients paid for floor bed, but after coming to BNSB hospital, they claim for the cabin. Moreover, we do not give free medicine in case of DCR patients after discharge which they advised intaking at home (provide free medicine only for cataract). But, the PO told the patients that we will give all the medicine free after discharge. Moreover, the patients think we are mal-practicing”.

Lack of experience regarding software of ophthalmic assistant

The ophthalmic assistant themselves and also the BNSB personnel stated that the assistants have lack of knowledge regarding software handling. One of the Technicians shared her experience in this way:

“The Aravind vision centre’s course duration is for three months, but we did the course in one month, so we have some lack of knowledge and experience”.

Irregular Internet access

In all three sites, the ophthalmologists raised the concern of irregular internet access. A lack of connectivity services during consultation was hindering teleconference services. One of the ophthalmologists stated that,

“Treating the patients by teleconference is a very wonderful idea especially a country like us where eye services are not available enough. However, due to poor internet connectivity between me and the ophthalmic assistant, misinformation may lead to a mistreatment. For this reason, it is very crucial to secure the stable internet connectivity to run the vision centre successfully”
Irregular service by ophthalmologist

As it was stated before the ophthalmologists provide their services along with their responsibilities on BNSB hospitals, and as they have a very busy schedule, sometimes the patients in the vision centre have to wait for a long to take the teleconference service. Moreover, the ophthalmologists themselves were very dissatisfied regarding this issue. One Ophthalmologist shared his personal dissatisfaction in this way:

“These people come to vision centre because they want to take the advice from us, but we could not always address everyone due to lack of available time, and this is frustrating”.

4.7 FACTORS THAT CAN HELP TO SUSTAIN THE PROGRAMME: PROVIDERS PERCEPTION

Service providers, other BRAC programme staffs, and BNSB representatives mentioned a significant number of diverse strategies to increase patient flow in vision centre and develop sustainability. These included:

Proper advertising (poster, advertisement at local radio)

BRAC other programme staffs thought that more publicity is required for vision centre's sustainability. Human Rights and Legal Aid Services (HRLS) have planned to inform people at their school and *madrasa* meeting. They also perceived that if HRLS or vision centre publicised at union Parishad then more people could take services from vision centre. Social elite people should engage with vision centre publicity. BEP manager thought that vision centre is ahead in the publicity, but more posturing can be done. Although now often being an announcement but Khulna vision centre technician thought that it needs to be increased further.

Full-time consultancy from an ophthalmologist

Full-time doctors were the common demand for improvement and sustainability of BRAC vision centre. BRAC other programme representatives also perceived that there is a need for the full-time doctors to motivate community people. Thus, it would better if a good doctor were always available in the vision centre. One respondent also emphasised on part-time senior doctors for optimum utilisation of human resources for constant quality services. According to her “If there is a senior doctor, people could get immediate advice from him/her”. According to BEP manager, an eye specialist can be placed at the vision centre once a month, and announcement can be done accordingly. She also perceived that to make the Vision Centre sustainable; patient flow needs to be increased.

Presence of an ophthalmologist at least once in a week (or biweekly) at vision centre

The vision centre providers and also BRAC other programme personnel stated that the sustainability could be ensured by the presence of an ophthalmologist in the vision centre at least once in a week (or biweekly). A respondent said:

“the patients’ flow will increase if an ophthalmologist would present in our centre once in a week and evaluate the critical patients. Sometimes we need to advise the patients to go to the BNSB for further evaluation. This makes people unreliable to us”. (Il, another programme representative)

Arranging eye camp at every month at community

In order to develop and maintain a quality and sustainable eye care services through vision centre, it is essential to attract and inform people about the services. According to the staff of vision centre and other BRAC programme, it is necessary to organise periodical outreach camp by the programme. They believed that to generate demand for the services of the vision centre community outreach would be helpful.

Establish a community-based supervision/follow-up communication system advised for surgery and post-surgery patients

One of the limitations of the patient’s treatment protocol according to our finding is not to taking post surgery follow-up. Most of the patients do not come to vision centre once their surgery has done. One of the PO suggests that the vision centres can involve SS and SK to give proper counseling regarding the importance of post surgery follow-up to solve the issues.

Refresher meeting with ophthalmologist for ophthalmic assistant

Vision centres staff perceived that monthly refresher training is necessary to update knowledge and enhance problem solving skills. Thus PO's suggested that to improve the quality of the service providers the refreshers meeting should be arranged once in a month and there should be ensured the presence of an ophthalmologist who will address their queries and give proper advice regarding the treatment and management of the patients.

Offer free service to the special population (ultra poor, mentally retarded, and disabled)

The financial condition was closely linked with treatment seeking behaviour. BRAC other programme staffs (HRLS legal Aid and BEP manager) thought that current registration cost of vision centre is appropriate, but few poor people could not afford to pay registration fees nor could they afford glasses. Thus, the price range of registration fees and glasses was not justifiable for the ultra poor. According to them, the registration fees should be BDT 20 to 30 for ultra poor. BEP manager additionally included that for those who are disabled and beggars, it is better not to take registration fee from them. However, the cost of medicines and test can be reduced at a lower cost.

CHAPTER FIVE

DISCUSSION

The study mainly intended to explore both user and provider perspective on the eye healthcare in a rural community and patients perceptions of BRAC vision centre. The study was explorative in nature conducted in Mymensingh, Dinajpur and Khulna district where BRAC vision centre is currently operating. Qualitative methods were used in the investigation with talk to the community people, patients and their close relatives, respective programme personnel, and representatives from BNSB Hospital. The study found people usually received eye care services from vision centre, private chambers, pharmacy shop, private/community/national eye hospitals, traditional healers, homeopaths and eye camp. The most frequently cited barriers for seeking eye care include cost, distance, accessibility, preference for traditional practitioners and prior experience. Most of the participants expressed overall satisfaction with the service provided by the vision centre and BNSB. From the patients perspective, there were several reasons for dissatisfaction such as providers qualification, long waiting time for telemedicine (≥ 1 hour), price and delay in delivery (≥ 7 days) of spectacles. On the other hand, from provider's perspective quality of care of the vision centre was concerned on incomplete service charge by the patients, irregular teleconference services by the BNSB hospitals, irregular internet access for teleconferences, incomplete counseling to the referral patient by the ophthalmic assistant about BNSB services etc.

5.1 EYE PROBLEM AND EYE HEALTH SEEKING BEHAVIOUR

Eye care morbidities are common among the rural population. Majority of the FGD participants have reported their or their relative's eye problem at the time

of the field study. The most commonly reported conditions were poor vision including both near and distant vision, tearing eyes, blurring vision, itching, etc. these conditions are frequently reported in other studies conducted from Bangladesh, Nigeria and Ghana (Senyonjo *et al.* 2014; Ocansey *et al.* 2014). Though it is difficult to diagnosed cataract for the general people, it has been shown that people from this study clearly responded about cataract as one of the major eye problems. However, in Nigeria study, ocular morbidity was identified by the survey team whereas in this study it was self-reported.

Various eye health care providers including formal and informal facilities were identified in three regions where BRAC vision centres are working. However, we did not assess their adequacy in providing eye care services in terms of human resources, modern eye care services and quality of care. The study has revealed various alternative sources of eye care in Khanshama (Dinajpur), Nandail (Mymensingh) and Dumuria (Khulna). It includes self-medication, traditional medication, market medicine sellers, and biomedicine services at doctors private chamber, GO, NGO or community hospitals. Many people did not seek prompt treatment for eye problems. Indeed, we find that at least four IDI patients did not seek treatment after recognising their eye problem and ignore their eye problems for a long time. This study reported that pharmacy attendants are the most common sources when people seek eye care services. This is commonly reported in the other studies (Malobika *et al.* 2015). Visiting the traditional healers or medicine seller and doing self-medication before a visit to the hospital or health centre is not particular to eye care only. In low and middle-income countries, pharmacies have been identified as an important source for medication and health advice (Senyonjo *et al.* 2014; Ahmed *et al.* 2009, Khan *et al.* 2012).). It is important to note that pharmacies are especially preferable first contact point to the low socio-economic population even those have the lack or no formal education (Ahmed *et al.* 2009; Ahmed *et al.* 2005). However, most eye care services in Bangladesh are concentrated in urban areas, which are clinically oriented and provide curative services (Khan 2000). Many people in this study first contacted with a specialised hospital, qualified doctors in private chamber or outreach camps and community-based eye care centre such as vision centre as their first choice. It indicates that people try to get best eye care services when they have ability and access. In many settings in rural Bangladesh, community accesses of services are likely to be considerably lower than in the communities described in this study.

5.2 UNDER UTILISATION OF EYE CARE SERVICES AND ACCESS TO QUALITY EYE CARE

The patient in this study had been diagnosed with various eye problems for varying lengths of time. There was an indication that the time spent living with these eye problem may have influenced how patients perceived their situation. Financial constraints and avoidance was an important reason why patients do not accept surgery or further treatment. Even we have seen that our respondents realised that they made delay in seeking care because of these same reasons. A study in Zambia also found that money, distance and fear were the main barriers that prevented the blind from seeking specialist help (Lan and Boateng 2002). Another study conducted in the urban area (Dhaka) of Bangladesh found the similar reasons for not accessing treatment for eye problem (Malobika 2015). These barriers can be allayed in different ways. The government could take the initiative to the removal of these barriers for the rural people by taking the services nearer to the patients.

Access to quality eye care remains a fundamental problem for the rural community. From this study, we found that community people of the study areas had no access to modern eye care services apart from the vision centre managed by BRAC. It can be easily understood that community people faced many barriers that have discussed earlier. An inverse relationship between distance/ travel time to health facilities and use of health services has been demonstrated to be the critical barrier to access (Peter *et al.* 2008; Black *et al.* 2004). Few patients and FGD participants reported that transport expenditure was also a serious component of treatment cost. Many other studies also pointed out that cost for surgery and transportation as major barriers to accessing eye care (Owsley *et al.* 2006; Chou *et al.* 2014; Gower *et al.* 2013; Kovai *et al.* 2007). Study participants also indicated that cost of services was not affordable to some people despite its accessibility.

5.3 PATIENT SATISFACTION AND QUALITY OF CARE

Study participants who expressed dissatisfaction with care complained about long service time for telecommunication, prices and long waiting time for delivery of glasses mostly. Increase in waiting time for telecommunication at vision centre may result in low patient flow. In India Kovai *et al.* showed that patient was less satisfied with the time spent for eye care at vision centre (Kovai *et al.* 2010). Therefore, the issue should be addressed by the programme personnel rapidly. We have seen that many patients were unable to use spectacles due to the cost of glasses. A study conducted

in Andhra Pradesh, India showed that patients are also least satisfied with the waiting time to receive spectacles from vision centre. It is indicated that many of them who are visiting at vision centre has less or limited capacity to pay for spectacles. In this regard, BRAC can offer spectacles at a subsidised price to the poorer/ low-income earner.

5.4 QUALITY OF LIFE AFTER TREATMENT

The impact on patient's visual function (VF) is related to patient perceived outcomes and has become a significant factor in the evaluation of the outcome of surgical interventions. In this study patient who had to undergo the cataract surgery achieved good vision. A study from India Nigeria reported 99.4% and 74.6% of patients respectively achieved vision after cataract surgery (Bandhu *et al.* 2016; Olawoye *et al.* 2011). Improved visual function following cataract surgery is associated with better health-related quality of life (Mangione *et al.* 1994) as it improves visual acuity (Desai *et al.* 1999). In a study in Nigeria, greater improvement was found after the cataract surgery, in mobility and social functions due to improvement in VA. Good quality cataract surgery improves the quality of life, and it should be available for the rural population (Bandhu *et al.* 2016). Our study findings indicate that if patients with cataract are encouraged and provide facilities to do cataract surgery, will restore their functional independence. However, further study is needed to measure how much improve quality of life and health related quality of life after cataract surgery.

5.5 SUPPLY-SIDE CONSTRAINT AND SUSTAINABILITY OF VISION CENTRE

In this study, vision centre staff along with BNSB's service providers and BRAC other programme staff mentioned several issues on the problems they have faced to run the vision centre and its possible solutions. Four major aspects they have been raised: 1) cost of services and incomplete payment by the patients; 2) unstable internet connections and irregular consultation by ophthalmologists; and 3) community awareness on eye care services.

In terms of access to eye care services, vision centre should create a mechanism in place to facilitate their access. In Dhaka city many eye care facilities (including optical shops) have some mechanisms in place to facilitate their access, mainly by offering free healthcare, free care on specific days, and subsidised service in hospital admission, discounted price at medicine to poor people and low income patients who are unable to pay (Malobika

2015). In case of demand generation, people who are especially struggling to come to the hospital for whatever reason should contact to aware for their need of cataract surgery.

As the ophthalmologist has to consult with several patients in the vision centre through teleconsultation, the wireless connection should be high speed. If it is disturbing then the simultaneous interaction between doctor, technicians, and patients will hamper. Therefore, for running the teleconsultation set-up smoothly IT team is prerequisite.

We have seen from this study that community people, as well as the patient, was mostly unaware of the available services of eye care centres. Some people also thought that they would not be able to afford the treatments. Increasing people's awareness along with social marketing about eye care is necessary. Being a successful social marketing, it requires careful planning. Currently, HNPP operating many promotional activities includes a poster, leaflet, meeting and so forth. This should be carefully designed so that these are appropriate for the community that HNPP want to reach. Radio *Pollikontho* could be a significant media to communicate eye care information to listeners.

5.6 STUDY LIMITATION

This study had several limitations. Since the participants had to remember past events, there was a possibility of recall bias. These were minimised by asking questions to the participants several times and reconfirming every response. In addition, interviews were conducted in Bengali and later translated into English, there was also the possibility to change the meaning of answers. Pretesting of the study tools at urban fields emerged as one of the limitation because the context was different.

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CHAPTER SIX

CONCLUSION AND RECOMMENDATIONS

6.1 CONCLUSION

The vision centres fulfill an essential role in delivering primary eye healthcare to the rural population of Bangladesh. However, quality assurance is the issues that need to be addressed urgently. The results of this study may not fit to apply to the urban communities. A salient message from this study is that community based primary eye care centre like the vision centre could be sustainable through proper advertising, implementing effective eye health and awareness campaigns, full-time consultancy from the eye specialists and increasing integration with other programmes and organisations.

6.2 RECOMMENDATIONS

This study identified the factors associated with the eye care facilities and care seeking practices and barriers, the satisfaction of rural clients with vision centre and tertiary care services. Considering the study findings, BRAC may address the following issues to strengthen eye care services.

6.2.1 General recommendation: Eye care service

- ▶ Encouraging people to take better care of their eyes. Especially, encouragement needed to older people to come for cataract surgery. Information and education materials can be produced those can be suitable for the target audience or community as a whole. Information could be on eye problems, home based eye care, eye healthcare facilities,

approximate treatment cost and so on. Entertainment education could be helpful for the patients coping with barriers especially avoidance and fear to promote preventive actions.

6.2.2 Specific recommendations: vision centre

- ▶ Proper advertising (poster, pamphlet, leaflet, advertisement at local radio) is necessary to the sustainability of vision centre. Through these materials, make sure that community people can see what the different services and their costs are, such as the registration fee, diagnostic and other compulsory tests fee, and fees for cataract surgery.
- ▶ Organise camps in different ways such as eye screening can be very helpful. It will also be beneficial to inform and attract people to ensure patient flow at vision centre as well as high volume of surgery. Simply by being present in the community in this way vision centre representatives can help aware people about the centre.
- ▶ Increasing integration with community support group and other BRAC programme. Periodical meeting with the local organisations or support group could be valuable sources for social marketing. BRAC other programme representatives should be aware of activities of vision centre. So that, even peripheral people get right message about eye care facilities and services available near to them.
- ▶ Full-time consultancy from an ophthalmologist is crucial for sustainability. As the BNSB ophthalmologists are very busy with their daily schedule, the programme can appoint one ophthalmologist who will be placed on a certain place like BRAC centre and give counseling by Skype in all three vision centres. It also can solve the issue regarding longer waiting time for teleconsultation and thus encourage patients to seek eye care from vision centres.
- ▶ Availability of services during holidays is another important intervention, which can increase the patients flow at the centre. If vision centre is open on Fridays or in other holidays at least for 2/3 hours, the working people will be benefited from it, and thus it will ensure the sustainability as well.
- ▶ The sustainability largely depends on the quality of service provided by the ophthalmic assistants. Improve software skill, counseling skill of ophthalmic assistants is mandatory, in that case, to reduce the unwanted inconvenience for both the patients and the service providers.
- ▶ As many people especially poor and elderly are not able to do surgery due to their financial disability maybe contacted and offer several (monthly/short-term/long-term/no-interest) payment options for their surgery.

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About

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The Research and Evaluation Division was established in 1975 as an independent unit within BRAC to provide research support to strengthen BRAC's multi-faceted development programmes. Although RED concentrates on BRAC programmes, its analytical work goes beyond and includes research on various development issues of national and global importance that contributes to evidence-based policy dialogue and discourse. For more information, please visit, research.brac.net

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