

Article • Awareness of and Barriers to Low Vision Services Among Eye Care Practitioners in Goa

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ABSTRACT

Background: The purpose of this study was to identify the knowledge of and perceived barriers to providing low vision services among eye care practitioners in Goa.

Methods: A pretested and predesigned questionnaire was sent to 72 eye care practitioners, which included the optometrists and ophthalmologists working in Goa, through offline and online (social media like WhatsApp, Instagram, etc.) platforms. Information was collected to understand the barriers that restrict eye care practitioners from providing low vision services.

Results: Seventy-two participants took part in this study, of which 26.39% (n=19) were ophthalmologists and 73.61% (n=53) were optometrists. From the practitioner's point of view, lack of awareness (70.83%, n=51) and training (68.06%, n=49) were the major barriers to providing low vision services.

Conclusion: A lack of awareness and training facilities among eye care practitioners acts as a barrier to providing low vision services.

Keywords: awareness, eye care practitioners, knowledge, low vision, low vision services

Introduction

The prevalence of vision impairment is constantly increasing worldwide, impacting the quality of life of people.¹ The global estimate of visual impairment is 285 million individuals, among which 246 million people have low vision and of which 22.2% of people live in India.² Data for Goa shows 18.5% of people in North Goa to be visually impaired and 4.5% to be blind.³

A person is said to have low vision when their visual acuity is $<6/18$ to light perception or when they have a visual field of <10 degrees from the point of fixation, but they use or are potentially able to use their vision for planning and/or execution of tasks.⁴ Low vision makes the individual more dependent on others for daily living activities. It also restricts social interaction. The low vision rehabilitation practitioner provides appropriate low vision devices, makes environmental modifications, provides vocational training, and makes the affected individuals aware of different government schemes, thus leading the individual to greater confidence and independence.¹ The importance of low vision care has been demonstrated in several papers and includes physical and mental stability and economic gains for the community.^{4,5}

Even though improvement is seen in quality of life, it is being observed that uptake of low vision services is still low in countries like India. This highlights that there is still a need to increase awareness.⁶ Anecdotal evidence shows that referrals to rehabilitation services are far fewer than would be expected. One of the reasons could be that the doctors are more concerned about treatment rather than rehabilitation, with the disease getting more attention than the remaining vision.⁵ A retrospective study of low vision cases in India highlights the need for up-to-date information on low vision patients in India to strengthen the infrastructure for the development of appropriate services.⁷

To understand the difficulties faced by the eye care practitioners of Goa in providing low vision services, a questionnaire-based survey was conducted

Table 1. Demographic Data of the Participants

	No. of participants (n=72)
Gender	
Male	11(15%)
Female	61(85%)
Age	
20-25	57(79.17%)
26-30	11(15.28%)
31-35	3(4.17%)
36-40	1(1.38%)
Qualification	
Ophthalmologist	19(26.39%)
Optometrist	53(73.61%)
Years of experience	
<2yrs	45(62.50%)
2-5yrs	19(26.39%)
>5yrs	8(11.11%)

to find out about their awareness of the field of management of low vision and also to find out the perceived barriers that restrict them from providing regular low vision services.

Methods and Materials

The survey was carried out after institutional ethics committee approval. This was a cross-sectional study among optometrists and ophthalmologists working in Goa to assess their awareness of and perceived barriers regarding low vision services.

A pretested and predesigned questionnaire developed by Jose et al.⁶ was used in this study. The questionnaire consisted of 24 questions focusing on awareness, knowledge, and barriers with respect

to low vision services (Appendix). Included were optometrists and ophthalmologists working in Goa who consented to participate in the study.

The data was gathered both online (via Google Forms) and offline (via physical copies of the questionnaires). The study was conducted over 5 months from November 2019 to March 2020.

The questionnaire consisted of informed consent, followed by the main questionnaire, which included 24 questions, including demographic data (7), questions based on low vision knowledge (4), awareness (3), pattern of practice (7), and barriers to the services of low vision from the practitioner's point of view (3). All of the barrier and awareness-based questions had sub-sections where the participants were asked to respond "Yes" or "No" or "Not sure." To get the fully completed questionnaire, each question, aside from the optional one, was made obligatory. With the help of e-mail, Instagram, and WhatsApp messages, the questionnaire was distributed to participants, with a few dispensed in person.

Results

One hundred eye care specialists were contacted for participation in the study. Seventy-two successfully answered the questionnaire, of which 85% (n=61) were female and 15% (n=11) were male. Mean age of the participants was 23.38 years \pm 3.49; 73.61% (n=53) were optometrists and 26.39% (n=19) were ophthalmologists. Most (94.44%, n=68) of the participants were working in government hospitals, while the rest were in private practice (Table 1).

A majority (93%, n=67) were aware of the WHO definition of low vision, and 68.06% (n=49) of the participants used WHO criteria to categorise a patient as having low vision. Only 23.61% (n=17) considered it based on the patient's needs.

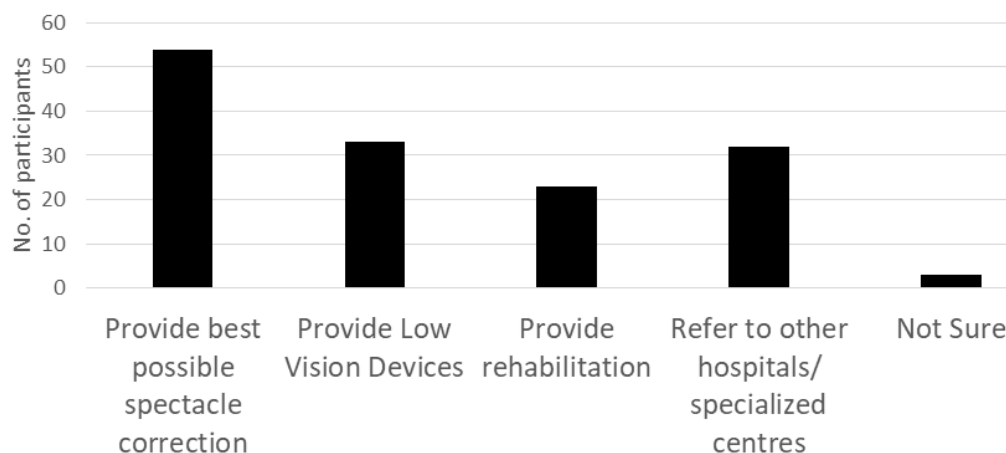


Figure 1. What do you do when you get a patient with low vision?

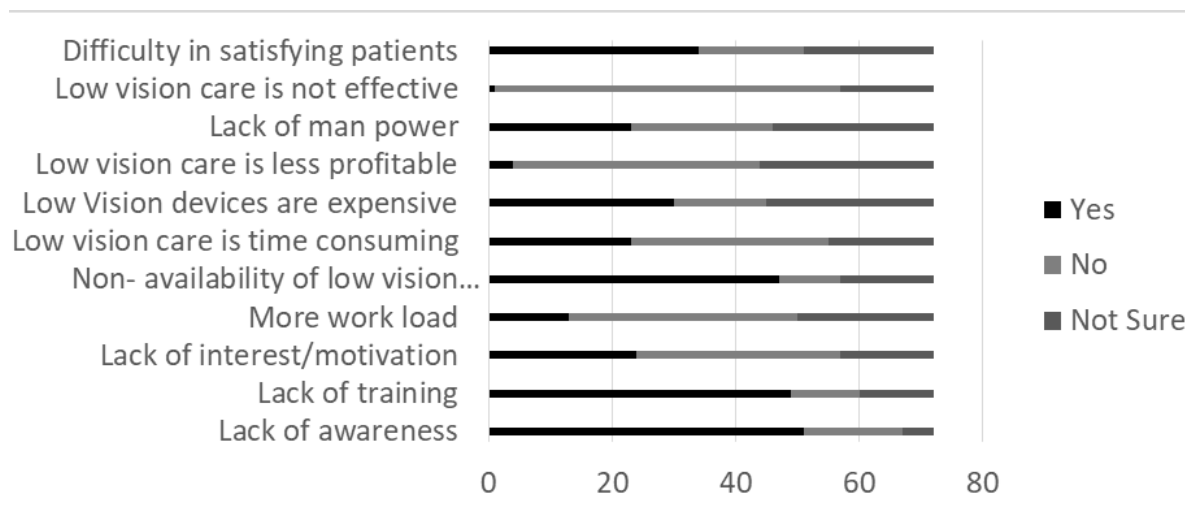


Figure 2. Major barriers that practitioners faced in their practices to providing low vision care

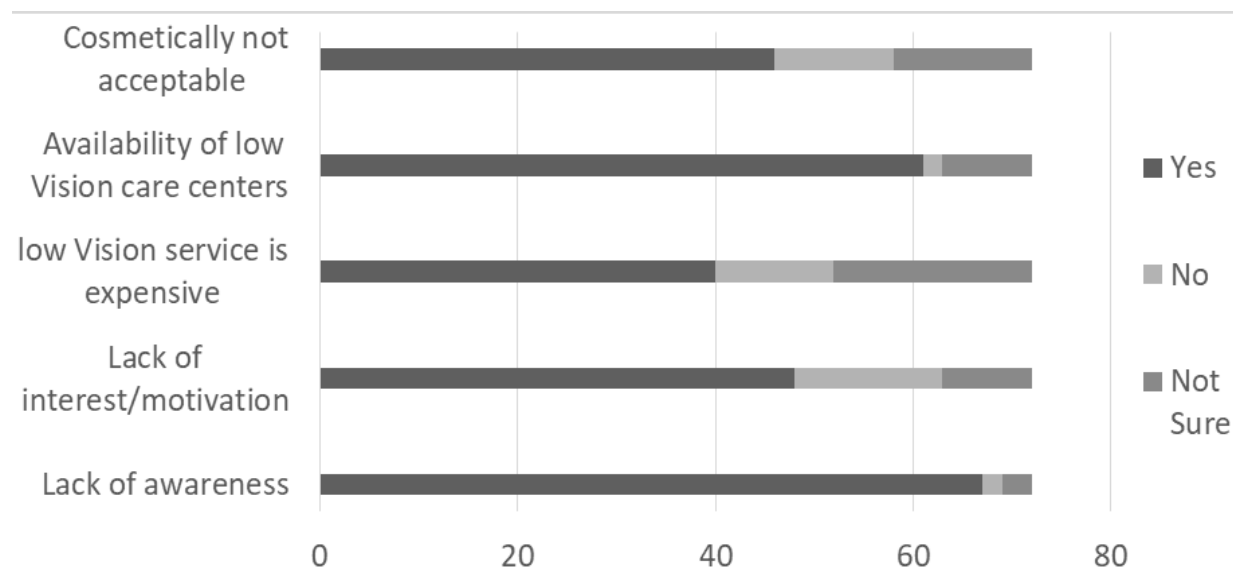


Figure 3. Barriers to patient access to low vision services

Retinal problems (63.89%, n=46) and glaucoma (56.94%, n=41) were found to be the major causes of low vision in practices in Goa.

It was found that 75% of practitioners (n=54) provide the best possible spectacle correction when a low vision patient visits their clinic, while only 45.83% (n=33), 44.44% (n=32), and 31.94% (n=23) of the participants considered low vision devices, referral to specialised centres/hospitals, and rehabilitation, respectively. Thus, less than 50% of the study participants offered low vision services in Goa (Figure 1).

Of the 45.83% participants who considered advising low vision devices, magnifiers (43%, n=42) were found to be the most commonly prescribed device, followed by telescopes (26%, n=25). Lack of awareness (70.83%, n=51), lack of training (68.06%, n=49), and non-availability of low vision devices (65.28%, n=47) were found to be the major barriers

perceived by participants in their practices (Figure 2). Lack of awareness (93.06%, n=67) and paucity of availability of low vision care centres (84.72%, n=61) were major patient barriers perceived by the study participants (Figure 3).

Fifty percent (n=36) were aware of the organisations that could provide facilities for low vision rehabilitation. About 60% (n=43) of the participants considered low vision rehabilitation to be an integration of training to use low vision devices, mobility training, adaptive training for jobs, and counselling. Sixty-three percent (n=44) were aware of concession facilities (such as educational concession, reservation for jobs, assistance for purchase or fitting of aids and appliances, etc.) available for low vision patients.

All participants agreed that low vision service delivery could be improved by creating awareness among practitioners and patients, having more

training programs, including low vision as an integral part of study curriculum, and improving the availability of low vision devices and at an affordable cost.

In our study, 94.44% (n=68) of participants showed interest in attending short-term training in low vision, but accessibility (62.50%, n=45) and lack of time (55.56%, n=40) were the major reported barriers in attending such training programs.

Discussion

To the best of our knowledge, no such research has been done in Goa previously. In Kerala, a similar survey was carried out by Jose et al.⁶ Goa ranks fifth in India with regard to welfare of citizens, particularly in the areas of health and education. Goa being a small state, it is relatively easy for its people to access the primary, secondary, and tertiary health care facilities. Goa has only one government medical college, which provides low vision training to optometrists under the newly started optometry course, but ophthalmologists do not have any specific training in low vision.

In this study, 68.05% of participants considered individuals to have low vision based on WHO criteria rather than the patient's needs. This is contrary to the research done by Jose et al., where patients' needs (48%) were considered.⁶

Retinal problems (63.89%) and glaucoma (56.94%) were found to be the major causes of low vision in our study, while microphthalmos (15.28%), microcornea (15.28%), and inability to afford any treatment (12.5%) were the least mentioned. The same observations were made in the previous studies.^{4,6,8-10} While the study done by Kovai et al. found that cataracts (47.70%) and refractive errors (41.20%) were the major causes of low vision,¹¹ refractive error's contribution to low vision was low in our study, which could be because of early detection and timely management.

Lack of awareness (70.83%), lack of training (68.06%), and non-availability of low vision devices were found to be the major barriers perceived by participants in their practices toward providing low vision services.

Globally, it has been observed that application of low vision services varies from 3% to 15%.⁴ In this study, less than 50% of participants considered low vision devices, referral to specialised centres/hospitals, and rehabilitation whenever a low vision patient visited their clinic, which is similar to a study

done by Keeffe et al.¹² In the Keeffe et al study, Australian ophthalmologists were referring the patients to low vision services but infrequently to rehabilitation services or support groups. The reasons for non-referrals in their study were availability and quality of low vision services, visual acuity limit, eye condition, patient's desire to read, motivation, age, personality, and occupation.¹² Referral criteria were also seen to be influenced by practitioners' clinical experience, working speciality, and level of interest.⁴

From a practitioner's point of view, the major barriers to patients accessing low vision services were lack of awareness (93.06%) and the paucity of availability of low vision care centres (84.72%). The results of the study done by Jose et al. also correlate with our findings.⁶ Apart from this, emotional distress and lack of family support in low vision aid clinics have been reported by Kovai et al. as two of the barriers that restrict patients from accessing the facilities.¹¹ Sarika et al. found that lack of awareness about services, compromising the visual demands, reluctance, seeking alternatives, and non-referral to low vision care services were the major barriers among patients to accessing low vision services. Non-availability of low vision devices was not found to be a barrier in this study, but cost and compliance were reported as barriers.⁴ The study by Kovai et al. done in Andhra Pradesh found that social stigma (21%), economic status (37%), and other personal reasons (42%) were the barriers in accessing low vision services.¹¹ Sivakumar et al. in India found that social stigma (41.3%) and fear of loss of employment (26.6%) were barriers.¹³

Increasing awareness about low vision services through posters, pamphlets, or television or creating counselling centres for providing knowledge and motivating patients were suggested as ways to improve patients' knowledge and uptake of low vision services by Sarika et al. in their study.⁴ The highest non-acceptance rates, for telescopes (92%) and electronic devices (89%), in a study done by Sivakumar et al. were due to barriers ranging beyond affordability and accessibility, which emphasises the need to create awareness about low vision services and their impact on quality of life.¹³ It has been documented that rather than showing biomedical indicators for improvement, patients were more interested in seeing how the services could improve their quality of life, which should be considered in providing rehabilitation services to make them more effective. It has also been observed that a

multidisciplinary rehabilitation approach shows greater improvement in people's quality of life.¹⁴

It was observed that social stigma and cost of low vision aids or treatment were the major barriers in the uptake of low vision services, regardless of the improvement in the quality of vision.^{4,10,13} To tackle this, newer innovations should be made with the focus on affordability for all low vision patients. The higher cost of devices could be tackled by covering them under different government facilities/projects or by making them available under equated monthly installments. Greater awareness should be created through conferences, posters, radio, newspapers, billboards, etc. Providing brochures containing information about low vision services, cost, and availability could be provided to patients and practitioners. The country has witnessed the positive impact of mass media advertisement in tackling issues like TB, polio, malaria, etc., which helped people to understand the cause and impact of disease and management. The authors of this study think that mass media advertisement is a good option for showcasing both the devices and how they help in changing the way of living by making individuals much more confident and independent. This concept will not only help visually impaired individuals but will also help the general public to understand the difficulties faced by the visually impaired. As the world is now becoming more social media friendly, it is the best platform for showcasing and marketing the available low vision devices and newer inventions. In waiting areas of hospitals or private clinics, videos of low vision patients using low vision devices could be showcased to show improvement in quality of life so that the stigma related to low vision devices could be lowered, resulting in an increase in uptake of those services.

For practitioners, non-availability of low vision devices, lack of training, and awareness were the main barriers in this study. This could be addressed by making the devices easily available through online portals. A medical representative or a company employee could be asked to visit all the low vision practitioners, making them aware of newer advances in low vision and also training them about usage. Conferences and competitions related to low vision could be conducted to spread knowledge and to create awareness about this topic. A website could be created wherein all of the information related to low vision services and their availability; the availability of rehabilitation centers, low vision aids, and their

prices; and facilities provided by the government in Goa to visually impaired people could be created, giving easy access to both practitioners and patients.

Conclusion

From the participants' responses to the questionnaire, we observed that awareness and knowledge about low vision services were quite good among the ophthalmologists and optometrists. However, according to the participants, patients' lack of awareness and the paucity of availability of low vision care centers hinders them from availing themselves of low vision services, while for the participating eye care specialists, lack of awareness and training facilities act as major barriers to providing low vision services.

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Appendix

Sr. no.	Questionnaire
1	How often do low vision patients visit your clinic?
2	What do you do when you get a patient with low vision?
3	Are you aware of WHO (World Health Organization) definition of low vision?
4	In your practice you consider a person having low vision based on?
5	According to you the criteria of low vision should be based on:
6	You consider a person having low vision when the best corrected visual acuity in the better eye is worse than?
7	You consider a person having low vision when his/her visual field from the point of fixation is worse than?
8	How often do you provide low vision devices in your practice?
9	What kind of devices do you provide?
10	What are the common causes of low vision that you have come across in your practice?
11	What according to you is low vision rehabilitation?
12	Do you know any organizations which provide low vision rehabilitation?
13	According to you what are the major barriers that you face in your practice in providing low vision care?
14	According to you what are the barriers to the patients to access low vision services?
15	Are you aware of any concession facilities available to low vision patients?
16	According to you what are the areas in which low vision patients are eligible to get concession?
17	According to you how can we improve low vision practice?
18	What according to you are the barriers for attending a low vision training program?