



OPTOMETRIST, A PRIMARY EYE CARE PROVIDER: AN UNDERUTILIZED AND UNTAPPED HUMAN RESOURCE IN INDIA

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ABSTRACT

Aim

The aim of this review was to elaborate upon the relevance of Optometrists in the Primary eye care services and their major role in reducing or eliminating avoidable eye related problems. Optometrists have a very crucial and pivotal role as a team member in comprehensive eye care services in India.

Material & Methods

This narrative review study was done to have a relook of the situation of Optometry profession in India and to understand the reasons of its underutilization per se. Recent peer reviewed articles/ studies were referred to ascertain the current primary eye care services status and the role of Optometrist as a primary eye care provider.

Results

Availability of eye care services at the primary level is very essential requirement in order to reduce or eliminate the avoidable visual impairment in India. The primary eye care professionals or Optometrists have a great responsibility not only to prevent but also to manage the eye related problems at their own level.

Conclusion

Although primary eye care services are meant to reduce the risk of avoidable visual impairment by preventing or by identifying causative factor on time or by increasing the health education. But, still the public awareness about eye care systems and their delivery mechanisms is not much in our country. Therefore, it is very much needed to device a policy and mechanism so that the primary eye care services can reach out to the grass root level with proper and adequate human resource utilization. This ultimate motive i.e. of preventing or reducing the burden of avoidable visual impairment from the country is easily achievable with proper utilization and engagement of Optometrists, the available trained & skilled human resource.

KEYWORDS: Optometry, Primary Eye care, Eye Health, Visual impairment, Visual disability.

INTRODUCTION

Primary eye care (PEC) services¹ provide greater opportunity to optometrists to manage more eye care problems at primary level, thus relieving lot of pressure from other eye care professionals. Research evidence suggests that optometrists involved in these services are three times less likely to make false-positive referrals.² Primary eye care activities comprise

of the following two areas of community health services³:

1. Clinical service component
2. Eye health protection and promotion component

Most of these activities are initiated and sustained by community health members themselves. The eye care professionals help the community and



complements what they do in their day-to-day activities. PEC services may also include assessments to support people with learning disabilities⁴ and post-cataract surgery follow-up care. In some areas, triage is used to identify low risk referrals and direct them back into other primary eye care practices. And it is very understandable that the delivery of the main primary eye care services are comfortably within the core-competencies of an optometrist.

Increasingly, optometrists are gaining additional qualifications such as independent prescribing (IP), and a range of University or College of Optometry higher qualifications (professional fellowships, degree and diploma) in low vision, paediatric eye care or contact lens practice, dispensing, Binocular Vision, Neuro-Optometry and others.⁵

Minor eye condition management schemes have been successful in helping to manage patients without the need for attendances at hospital and outpatient departments, or to ensure only clinically appropriate referrals are made, so reducing false positives.^{6,7,8}

Cataract referral pre-assessment has been shown to dramatically reduce the number of patients who do not want or do not need cataract surgery from attending hospital.⁹ Patient satisfaction is high as care is in their close proximity.

Role of Optometry

The optometry goes beyond the correction of refractive errors namely near-sightedness as well as far-sightedness using spectacles and contact lenses. It also includes identification, detection and monitoring and treatment of eye disease, management of paediatric and age-related ocular disorders, binocular vision problems, care of patients with low vision, offering advice on colour vision and assessing the role of vision at work and in sports.¹⁰

The need to mobilise optometry to deal with uncorrected refractive error has been accompanied by the possibility of better integration of optometry into prevention of blindness in general, with some major benefits in areas such as:

- ★ Teaching eye care personnel, especially in refraction and low vision care

- ★ Providing screening and vision care services at secondary and tertiary levels
- ★ Detection and management of potentially blinding diseases such as cataract, diabetes and glaucoma
- ★ Research into the understanding of global eye-care needs and solutions, especially in vision correction and vision care service delivery
- ★ Building economic and logistical models of self-sustainable eye-care.

As an individual, we all are well acquainted with the importance of eating healthy food (leafy vegetables, vitamins rich fruits), exercising, out-door activities and similarly we must understand the importance of regular eye checkups with your Optometrist.¹¹

Optometry as Part of the Eye-care Team

The correction of visually disabling refractive error as a component of the Global Initiative for the Elimination of Avoidable Blindness – ‘Vision 2020: The Right to Sight’ was included by the policy makers and also emphasised the need to deliver refraction services as an integral part of general health care systems and comprehensive eye-care.¹²

The need for glasses is also a public eye health opportunity not to be missed. Refractive care provides excellent access to the population for screening of more serious eye problems, such as cataract and diabetes. Primary care screening by optometrists and eye-care workers, with optometrists taking care of the more immediate interventions required, and referral for more ‘complicated’ care, is ‘classical’ health care delivery. One effective current model, developed by the LV Prasad Eye Institute in Hyderabad, India, for the efficient and cost-effective delivery of eye-care is a community eye-care ‘team’. For every 1,000,000 people the team has:

- ★ 1 Ophthalmologist
- ★ 4 Optometrists
- ★ 8 Eye-care workers
- ★ 8 Ophthalmic assistants
- ★ 16 Ophthalmic nurses.

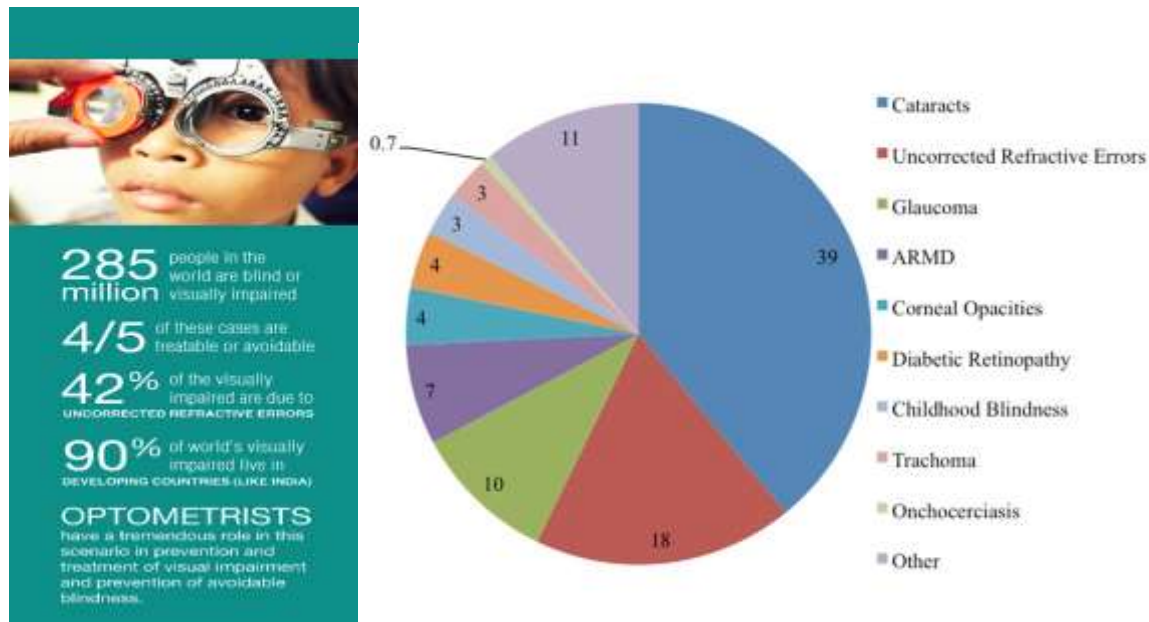


Fig.1 Global causes of Blindness

Role of Optometry Globally

The profession of optometry is a mixture of legal, educational, practice management, service delivery and public health initiatives that is unique to every country and based on culture, educational and regulatory frameworks.^{13,14} The aim of WCO (World Council of Optometry) is to promote the establishment of a common global standard of optometric care for the benefit of the public at large. Refractive error management is optometry's core business as uncorrected refractive error is the second highest cause of blindness and the main cause of visual impairment globally.^{15,16}

Optometrist Tremendous role in India

India needs approximately 115,000 optometrists to meet the demand of institutionally qualified &

clinically trained eye care professionals to reach the goal of eradicating preventable blindness by the year 2020 and more later.¹⁷ Besides, the advent of new technology in eye care, growth of super-speciality hospitals and optical and Contact Lens industry, which leads us to the facts that the demand and opportunities for optometrists is huge.

In India, optometrists play a vital role in ensuring visual comfort of millions of people who need eye care. Optometrists work every day to save many school children from visual impairment or dropping out of school by timely identifying and prescribing spectacles, help the elderly regain vision with special optical devices or timely referral for surgery, and also in rural and urban areas by identifying potentially dangerous and sight threatening conditions.¹⁸

prevention and treatment of conditions that may lead to visual loss.²¹

Components of primary eye care are:

1. Promotive
2. Preventive
3. Curative
4. Supportive
5. Rehabilitative

Primary eye care provider:

- General physicians (GPs) or Ophthalmologists
- General duty doctors at basic health units and rural health centres
- Optometrists
- Community based rehabilitation workers

In developing a primary eye care programme, emphasis should be placed on training of the above groups of workers in providing basic eye care to individuals or communities.²²

Role of Eye camps in prevention of visual impairment and avoidable blindness

Eye camp approach prevention of visual impairment as well as avoidable blindness still plays a important role in India. It is particularly more relevant keeping in view the fact that still 62.6% of blindness in India is due to cataract which can be very well cured in the eye camps.²³

Mainly two types of eye camps are:

1. Comprehensive eye care camps with 'Reach-out Approach'
2. Screening eye camps ('Reach-in Approach' with comprehensive eye care).

Many Optometry Academic as well as Clinical institutions/ Organisations/ Optometric Associations in India organize vision screening camps regionally and nationally and provide free spectacles to the needy patients and also conduct eye care awareness camps to educate and sensitize the community about the causes of blindness and other eye related problems.



Fig.3 Vision screening and eye care awareness programme

Opportunities and Challenges of Optometry in India

According to the definition of WCO, an organization which represents over 250,000 optometrists worldwide, "Optometry is a healthcare profession that is autonomous, educated, and regulated (licensed/registered), and optometrists are the primary healthcare practitioners of the eye and visual system who provide comprehensive eye and vision care, which includes refraction and dispensing, detection/diagnosis and management of disease in the eye, and the rehabilitation of conditions of the visual system".²⁴

Refractive error services provide a practical entry point into the eye health system for those requiring correction. With 88.2% of blindness avoidable in India, it is important to provide a comprehensive ocular health

examination alongside the refractive error services.²⁵

Fully qualified optometrists with a minimum of four years of degree are qualified to:

- Prescribe the latest advances in spectacle lenses including progressive, aspheric, and safety/protective spectacles based on the visual needs of the patient,
- Prescribe rigid and soft contact lenses including Ortho-keratology, frequent replacement, and extended wear contact lenses,
- Conduct complex contact lens fitting for paediatric eye conditions, keratoconus, postsurgical complications, eye trauma, and corneal ectasia,
- Prescribe vision therapy, vision training or orthoptic treatment for children with learning problems or common binocular vision disorders, including strabismus and amblyopia,



- Provide low vision and rehabilitative services—vision aids assisting visually impaired people to use their functional vision more effectively,
- Detect or diagnose ocular conditions and associated systemic health conditions, and refer them to appropriate health care professionals, and
- Offer counselling services on preventive vision care.

Optometry: Types of Practice in India

Presently in India Optometrists can do variety of Practice such as:

- ★ Solo Private Practice.
- ★ Group Practice.
- ★ Retail Optometry.
- ★ Ophthalmological Settings (as team member).
- ★ Multi-Speciality Hospital Settings.
- ★ Multi-national company (MNC) Job.
- ★ Specialization area.
- ★ Research and Academics.

Internationally, Optometry has been officially recognized in many jurisdictions.²⁶ Most have regulations concerning education and practice. Optometrists, like many other healthcare professionals, are required to participate in ongoing continuing education courses to stay current on the latest standards of care. The World Council of Optometry has a web resource that provides basic information on eye care providers for more than 46 countries.

In 2010, it was estimated that India needs 115,000 optometrists; whereas India has approximately 9,000 optometrists (4-year trained) and 40,000 optometric assistants/vision technicians (2-year trained).²⁷ In order to prevent blindness or visual impairment more well-trained optometrists are required in India.²⁸ The definition of optometry varies considerably country to country of the world.²⁹ India needs more and more optometry institutions offering four-year degree courses with a syllabus at par with those countries where optometry is statutorily regulated and well developed.

It was reported by Gogate P et. al. that poor spectacle compliance amongst school going children in rural Pune resulted in significant vision loss³⁰ meanwhile Thite N et. al. concluded that optometrists need to be more involved and focused in providing core optometry services like binocular vision, low vision, contact lenses etc.³¹

Training in India

At present, there are more than hundred institutions running optometry programmes in India. In 1958, Optometry education commenced with the opening of two schools of optometry, one at Gandhi

Eye Hospital, Aligarh (Uttar Pradesh) and another one at Sarojini Devi Eye Hospital, Hyderabad (Telangana), under the second five-year plan by Director General of Health Services (DGHS) of Government of India. These schools offered diplomas in optometry courses of two years duration validated respectively by their State Medical Faculties. Subsequently, four more schools were opened across India situated at Sitapur Eye Hospital, Sitapur (Uttar Pradesh), Chennai (Tamil Nadu), Bengaluru (Karnataka) and Regional Institute of Ophthalmology, Thiruvananthapuram (Kerala).³² AIIMS, New Delhi (in 1976) under the aegis of NPCB (National Programme for the Control of Blindness) started the very first degree (3years) programme in Optometry with the nomenclature B.Sc. (Hons.) in Ophthalmic Techniques and later on the Elite School of Optometry (ESO), Chennai established the first ever four-year degree course in 1985.

Now-a-days, academic degrees such as Bachelor of Optometry, Master of Optometry and Doctor of Philosophy (PhD) in Optometry are being awarded in India by the various universities recognised by University Grants Commission (India),³³ a statutory body responsible for the maintenance of standards of higher education. Many Institutes of Optometry (in India) have also commenced various specialty courses in Low vision, Contact lens, Binocular Vision, Neuro-Optometry, Sports vision and many more.

Optometrists across India are being encouraged to register with the various National and state level Optometry Associations till formation of statutory commission or council. Now after getting passed from Parliament followed by assent of the President on the 28th March, 2021 “THE NATIONAL COMMISSION FOR ALLIED AND HEALTHCARE PROFESSIONS ACT, 2021” was established to regulate the Optometry Profession as well as its education and development. The Optometry profession has been classified and defined as per the ISCO (International Standard Classification of Occupations) code 2267.³⁴ Still in India awareness of optometry is very poor, which is about 5% amongst the educated population of India. Following the footsteps of ‘Digital India’ & ‘Make in India’, this Legislation of Optometry is an important step from darkness to the light.³⁵

Primary eye care services of good standard need to be continued as per the law of Optometry by the Government organization as well as Optometry NGOs as these can only eliminate the avoidable blindness and visual impairment from India.

CONCLUSION

The success of primary eye care programme lies



in the coordinated teamwork. The complementary nature of the team needs to be understood and appreciated.³⁶ Task oriented training of all team members should be emphasized on the competency based skills which are necessary.

Although primary eye care services are meant to reduce the risk of avoidable visual impairment by preventing or by identifying causative factor on time or by increasing the health education. But, still the public awareness about eye care systems and their delivery mechanisms is not much in our country. Therefore, it is very much needed to device a policy and mechanism so that the primary eye care services can reach out to the grass root level with proper and adequate human resource utilization. This ultimate motive i.e. of preventing or reducing the burden of avoidable visual impairment from the country is easily achievable with proper utilization and engagement of Optometrists, the available trained & skilled human resource.

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