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Original Research Article

Assessment of visual problems in elderly in an urban slum community of Mumbai

Vinod S. Kamble*[1], Aparna Y. Takpere[2], Santosh Biradar[3], Sriniwas Reddy[3]

[1] Associate Professor, Department of Community Medicine, ESIC Medical College, Gulbarga, Karnataka, India
[2] Professor, Department of Microbiology, BLDEU's Shri B M Patil Medical College,Bijapur, Karnataka
[3] Assistant Professor, Department of Community Medicine, ESIC Medical College, Gulbarga, Karnataka, India

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ABSTRACT

Background: Visual problems in the elderly share a major portion of the disability in the elderly. Visual impairment in the elderly can interfere with daily activities tremendously leading to dependence in many things. It can also lead to accidents and falls. Hence a study was carried out in an urban slum community at Mumbai to assess the various visual problems in the elderly, its causes and the prevalence. *Methodology*: Community based cross-sectional study of the elderly persons residing in an urban slum of Mumbai. *Results:* 65.54% (426) people had visual disability. Of 426 people with visual impairment 405(95.07%) people had low vision and 21 (4.93%) were blind. It was observed that errors of refraction (63.85%) and cataract (18.31%) were the most common cause of visual impairment. Conclusion: Visual impairment and disability is a major problem of the elderly. Errors of refraction and Cataract are the major causes for this disability which can be treated, thus preventing visual handicap and dependency.

Introduction

Old age is an incurable disease. We cannot heal it but we can protect, promote and extend it[1]. In India the size of the elderly population, aged above 60 years is 7.4% of total population. It is projected to rise to 12.4% of population by the year 2026.In India about 64 per thousand elderly persons in rural areas and 55 per thousand in urban areas suffer from one or more disabilities[2].In South-east Asia, the prevalence of total disability ranges from 1.5 – 21.3% of the total population[3].Visual problems in the elderly share a major portion of the disability in the elderly. Visual impairment in the elderly can interfere with daily activities tremendously leading to dependence in many things. It can also lead to accidents and falls[4-6]. Measuring the level of disability comprehensively could help to know the burden of disability,amount of help required and the best resources needed by old people to manage disability and remain independent at the maximum[7].

Hence a study was carried out in an urban slum community of Mumbai to assess the various visual problems in the elderly, its causes and the prevalence.

Methodology

A cross-sectional study was carried out in an urban slum of Mumbai.Based on the crude prevalence rate for overall disability of 38.23% in elderly, the total sample size calculatedwas 650. After performing a pilot study, systematic random sampling was done. All the people above 60 years of age were interviewed and examined. The relevant information was collected in a pre-designed and pre-tested proforma. Data was analysed by EPI Info software and tests like proportions applied.

According to international classification of diseases established by the World Health organization (WHO), the vision of patients (best corrected visual acuity inthe better eye) was categorised into: no visual impairment (6/6-6/18), visual impairment (<6/18-6/60), severe visual impairment (6/60-

*Corresponding Author: **Dr.Vinod S. Kamble,** Associate Prof., Department of Community Medicine, ESIC Medical College, Gulbarga, India. **E-Mail:** vinod526@yahoo.co.in

3/60), and blindness (<3/60-no perception of light)[8].Visual acuity was checked using Snellen's E chart for distant vision.

Results & discussion

Of the 650 individuals examined, 287 were males and 363 were females. 561(86.31%) individuals were in the 60-74 years age group (young old), 78(12%) were in the 75-84 years age group (old old) and 11(1.69%) were in the above 85 years age group (super old).

Table1: Showing male and female distribution of the elderly having visual problems

Sex	Affected elders	percentage	Unaffected elders	percentage	Total	Percentage
Males	189	65.85	98	34.15	287	100
Females	237	79.07	26	20.96	363	100
Total	**426**	**65.53**	**224**	**34.47**	**650**	**100**

65.53% (426) people of total 650 people examined had visual disability. Visual impairment was more in females (79.07%) compared to males (65.85%). Similar results were observed in a study by J. Balamurugan *et al* where compared to men, more number of women had low vision[9].

Table 2: Showing male and female distribution of visual problems elderly interms of gradation of vision

	Males	Females	Total
A) Low vision	177(41.55%)	228(53.52%)	405(95.07%)
B) Blind	12(2.82)	9(2.11%)	21(4.93%)
Total	**189(44.37%)**	**237(55.63%)**	**426(100%)**

It was observed from the study that 405(95.07%) people had low vision and 21 (4.93%) were blind. The prevalence of blindness is (21/ 650) 3.23% and low vision is (405/ 650) 62.31%.

In a study by R. P. Wormald *et al* the prevalence of low vision was 7.7%. Hence as compared to Wormald study prevalence of low vision is very high and for blindness it is less[10].

Table no 3: Shows distribution of elderly according to reasons of visual disability

Reasons of Disability	Males	Females	Total
Errors of refraction	110(58.20%)	162(68.35%)	272(63.86%)
Cataract	34(17.99%)	44(18.57%)	78(18.31%)
Macular degeneration	6(3.17%)	8(3.38%)	14(3.29%)
Diabetic retinopathy	5(2.65%)	3(1.05%)	8(1.87%)
Paralysis	0	2(0.85%)	2(0.47%)
Congenital disability	2(1.06%)	1(0.42%)	3(0.70%)
Trauma/accident	3(1.59%)	1(0.42%)	4(0.94%)
Not known	29(15.34%)	16(6.76%)	45(10.56%)
Total	**189(100.0%)**	**237(100.0%)**	**426(100.0%)**

From the above table it is seen that majority of affected individuals had problems of errors of refraction (63.85%) and cataract(18.31%)

Gopal K Ingle and Anita Nath in their study on ocular morbidities among the elderly population in the district of Wardhaobserved that refractive errors accounted for 40.8% of ocular morbidities which is less compared to our study while for cataract it is 40.4%which is more than our study[11].

Conclusion

Visual impairment and disability is a major problem of the elderly.Errors of refraction and Cataract are the major causes for this disability which can be treated preventing visual handicap and dependency. Active screening for vision in the elderly in the community through health camps should be carried out.Social awareness and encouragement for early detection and treatment of visual problems can help to prevent permanent visual loss and improve the quality of life in the elderly.

Conflict of interest statement

We declare that we have no conflict of interest.

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