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Visual Impairment and Its Causes among elderly Women of Rural Area of Maharashtra

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ABSTRACT

Introduction: Visual impairment (VI) is a public health challenge affecting over 285 million people worldwide, including 39 million blinds. The research both from India and other parts of the world has revealed that VI increases with increasing age. It is also estimated that people aged 50 years and older comprise 65% and 82% of the total visually impaired and blind, respectively. The study is conducted to estimate the prevalence of visual impairment and its causes among elderly women of rural areas.

Material and Methods: This study is a Community Based Cross-sectional study carried out in the field practice area of the rural health training center of the Department of Community Medicine. All women (n=260) aged 60 years and above in the study area formed the study population were interviewed by the house-to-house survey. Statistical analysis was done by SPSS .17.

Results: Total out of 260 women, 212(81.53%) women had visual impairment. Out of 212 visual impairment participants, causes of low vision were 80.18% cataract, 35.37% operated cataract, 10.37% pterygium, and 2.35% any eye injury or infection.

Conclusion: Cataract is the main cause of low vision. Pterygium, eye injury, and infection also cause visual impairment.

Keywords: Visual impairment, elderly women, rural, cataract, pterygium

INTRODUCTION

The proportion of the population aged 60 and over, is also growing each year. By the year 2025, the world will host 1.2 billion people aged 60 and over and rise to 1.9 billion in 2050.[1] The population of people aged 60 years or above is likely to increase to 18.4% of the total population in India by the year 2025.[2] Percentage distribution of population in the rural area of Maharashtra, the elderly population was 10.5, male 9.8 and 11.1 female.[3] Women tend to live longer than men, in 2009 older women outnumbered older men by 66 million worldwide. With the declining mortality rates among women, the female advantage in life expectancy at birth increased from 2.8 years in 1950-1955 to 4.4 years in 2005-2010 at the global level. The share of women in the population rises significantly with age.[4]

33.07% of the elderly in India are without their life partners. The widowers among men are nearly 14.98% as against 50.06% widows among women.[5] Many studies are conducted on aged men and very few studies have been attempted on elderly women. With the emergence of the nuclear family, the family is not capable of giving protection to the aged nor does the country have resources to meet the emerging needs of the elderly. Hence, aging is becoming a social problem, particularly in rural regions. Women especially in rural areas are not more educated and not in occupations than men, which may be causing ignorance of visual impairment problems among

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them. Therefore, this study was performed especially in rural geriatric women in order to assess there one of the aspects of morbidity in terms of their visual problems.

OBJECTIVES

The study was conducted to estimate the prevalence of visual impairment and its causes among elderly women of rural areas; and also to find out the association between the sociodemographic profile of elderly women and visual impairment.

MATERIAL AND METHODS

Study Area and design: This community-based cross-sectional study was carried out in the field practice area of Rural Health and Training Centre (RHTC), which comes under the Department of Community Medicine, of the private medical college of Wardha, Maharashtra in 2015. Wardha is one of the five districts in the Nagpur administrative division of Maharashtra. Wardha district consists of eight blocks. RHTC comes under one block Out of 8 blocks of Wardha district. There is a total of 9 Anganwadi centers that comes under this block out of which 6 Anganwadi were selected for study purpose. All women aged 60 years and above in the study area formed the study population.

Sampling Method and Sample size: Among available 9 Anganwadi, 6 Anganwadi of our field practice area were selected which comes in RHTC of dept. of Community Medicine of Private Medical College. We selected all geriatric women by the house-to-house survey. Altogether 260 elderly women were enlisted taken into the study.

Inclusion Criteria: All women aged over 60 years and above who are residing in the study setting for at least 1 year and willing to give informed written consent were included in the study.

Exclusion Criteria: Terminally ill or critically ill patient or women having severe cognitive impaired were excluded from the study.

Data collection: Data was collected by using the interview method through household visits using a pre-structured & pre-tested questionnaire. The questionnaire includes Socio-demographic profile, Clinical history. Written informed consent was obtained from the respondents for participation in the study. Elderly women of 60 years and above were interviewed to collect information regarding sociodemographic characteristics and their self-perceived health Problems regarding Vision. This was followed by on the spot clinical examination. Visual acuity was tested by using Snellen.s chart.[6] Visual impairment was classified using the classification used by World Bank.[7]

Statistical Analysis: Descriptive statistics were used to display the Sociodemographic profile of the participant. Data were entered in Microsoft Office Excel and Statistical analysis was done by using descriptive and inferential statics using chi square test and software used in the analysis was Statistical Package for Social Science (SPSS) 17.0.

RESULTS

This community-based cross-sectional study was carried out in the rural area of Wardha with 260 elderly women participants.

According to age, out of 260 elderly women, 160 (61.5%) of elderly women belonged to the age group of 60-69 years, followed by 80 (30.76%) in the age group of 70-79, 20 (7.69%) belonged to 80 years and above. As per their marital status, 150(57.69%) of elderly women were married and the other 110 (42%) women belonged to the widow/ divorced/ separated/ unmarried group. The majority 205(78.85%) of elderly women were illiterate while only 55(21.15%) were literate in this study. The above study shows, 41.15% of elderly women were living in three-generation families, 36.93% lived in nuclear families whereas 20% were living alone. Only 1.92% of elderly women were living in joint or extended families.

Table 1 shows cataract is the main cause of low vision in this study. **Table 2** shows an increasing pattern of disease with age. After 80 years, 100% vision impairment. Visual impairment shows a significant association with the age of the elderly with a p-value <0.05. Table 2 shows the increasing frequency of disease with the widow or separated as compared to married. Visual impairment shows a significant association with the marital status of the elderly with a p-value <0.05.

Burden of Visual impairment was more in single elderly women than belonging to nuclear or joint families. Visual impairment has a significant association with the elderly belong to the type of family with p-value <0.05. To rule out chi square value, the singular and nuclear families were combined.

Illiterate elderly women (205) had greater morbidity than literate (55). Visual impairment was found in 83.90% illiterate and 72.72% literate elderly women.

Table 1 -: Distribution of elderly women as per morbidities (n=260)

Morbidities	Elderly women (%)
Visual impairment/morbidity	212 (81.54)
Causes of Low vision/refractive error in 212 elderly women	
Cataract	170 (80.18)
Operated cataract	75 (35.37)
Pterygium	22 (10.37)
Other (injury, infection)	5 (2.35)

Note - multiple responses

Table 2 -: Socio-demographic variables and Visual impairment among elderly women

Socio-demographic Variables	No. of Women	Visual impairment	χ2/df	P-value
Total	**260**	212(81.53%)		
Age Group (Years)				
60-69 yr	160	115 (71.87)	26.0/2	0.0001, s
70-79 yr	80	77 (96.25)		
≥80 yr	20	20 (100)		
Marital Status				
Married	**150**	114 (76%)	7.22/1	0.007, s
Widowed/ Divorced/Separated/ Unmarried	**110**	98 (89.09%)		
Type of family				
Singular	**52**	47 (90.38%)	6.29,2	0.043, s
Nuclear	**96**	76 (79.16%)		
Three Generation/ Joint	**112**	82 (73.21%)		
Literacy status				
Illiterate	**205**	172 (83.90 %)	3.60/1	0.058, ns
Literate	**55**	40 (72.72%)		

Though it has not had a significant association, it is an important observation that can be used for the planning and policymakers in order to improve the quality of life among elderly women.

In the current study according to socio-economic status, Class I/II (53) had 77.35%, class III (94) had 82.97%, and classes IV/V (113) together have 82.30 % visual impairment. 83.57% unemployed (140) and 79.16% employed (120) have visual impairment.

DISCUSSION

In the current study of 61.5% of elderly women belong to the age group of 60-69 years followed by 7.69% of >80 years. This was in accordance with the figures of census 2011[3] which showed 35.92% elderly in the age group of 60-64 years; 25.59% elderly were in the age group of 65-69 years and 11.37% elderly were in the age group of 80 years and above.

The study shows as per the marital status of elderly women, more than half were married (57.7%), followed by 42% widow /separated/divorced. This data correlates with data of census 2011[3], 49.57% of elderly women were married; 47.79% widowed; 0.44% separated, and 0.14% divorced. Similar results were in the study of Boralingaiah et al (2012)[8], Singh R et al (2013)[9].

In the present study, 41.15% of elderly women were living in three-generation families. 36.93% lived in nuclear families whereas 20% were living alone. Similarly, data of NSSO Survey on Condition of Aged (2004) shows 40% of elderly females live with their spouse (nuclear type); about half of aged women live with their children (joint type) and 7-8% live alone.[10]

In the above study 78.85% of elderly women were illiterate and 21.15% literate, Similar finding found in the study of K. Pappathi and M.A. Sudhir (2005),[11] Boralingaiah, et al (2012)[8]

This study shows 81.54% visual impairment, causes of low vision were cataract (80.18%), operated cataract, pterygium, and any eye injury or infection (Table no 1). Similarly, Prakash R et al (2004)[12] 74.5% vision problems in elderly women, 60% had cataract. Cause of diminishing vision in the elderly was cataract, refractive errors, and glaucoma. Similarly, Sumanth S. Hiremath (2012)[13] Srivastava MR et al (2013)[14] found cataract 65.16 % and 73% eye problems respectively. A study conducted by Sanjiv Kumar Barman et al (2014)[15] where eye surgeons confirmed diagnosis found cataract in 48.61% of elderly women.

Increasing pattern of Visual Impairment with age found here. These higher proportions of Visual Impairment in higher age groups may be because of a higher proportion of degenerative changes in them, as degenerative changes increase with age and make older ones more susceptible to diseases. Widowhood and living alone/without a spouse increase the financial problems and lack of family support causing unable to correct visual errors.

CONCLUSION

Cataract is the main cause of low vision. Pterygium, eye injury, and infection also cause visual impairment. Visual impairment had a significant association with aging, marital status, type of family in the current study.

REFERENCES

1. World Population Prospects: The 2002 Revision, Highlights. New York: United Nations Population Division; 2003. (ESA/P/WP. 180).
2. Sharma S.Ageing: An Indian experience. Souvenir of ANCIPS 94.1994:101-5.
3. www.censusindia.gov.in,9._Chap_2_2013.doc, Chapter – 2 Population Composition, DDW-0000C-02-fer3-MDDS.xlsx
4. Kulkarni AP, Baride JP. Textbook of community medicine. 3rd ed: Vora Medical Publication; 2006. p. 56-58.
5. Rajan SI. Population ageing and health in India. Mumbai: Centre for Enquiry into Health and Allied Themes (CEHAT); 2006. p. 7-8. Available from: http://www.cehat.org/humanrights/rajan.pdf

6. Swash M. Hutchison's clinical methods. An integrated approach to clinical practice. 21st ed: Harcourt publishers Limited; 2002. p. 46-86, 134-154, 289-302.

7. Cook J, Frick KD, Baltussen R, Resnikoff S, Smith A, Mecaskey J, et al. Disease control priority in developing countries. 2nd ed. Washington (DC): The International Bank for Reconstruction and Development and the World Bank Group; 2006. p. 954.

8. Boralingaiah P, Bettappa P, Kashyap S. Prevalence of Psycho-Social Problems Among Elderly in Urban Population of Mysore City, Karnataka, India. Indian J Psychol Med 2012; 34:360-4.

9. Singh R, Singh B, Lall BS et. al. Psychosocial problems: an issue among the elderly in Kathmandu, Nepal. Int J Health Sci Res. 2013;3(6):48-53.

10. Situation Analysis of The Elderly in India, June 2011, Central Statistics Office, Ministry of Statistics & Programme Implementation, Government of India.

11. Pappathi K, Sudhir MA.Psychological characteristics and problems of the rural aged.Research and Development Journal.January 2005;11(3):16-18.

12. Prakash R, Choudhary SK, Singh US. A study of morbidity pattern among geriatric population in an urban area of Udaipur Rajasthan. Indian J Community Med 2004; 29(1):35-40.

13. Sumanth S. Hiremath, The Health Status of Rural Elderly Women in India: A Case Study. International Journal of Criminology and Sociological Theory, November 2012;5(3):960-963.

14. Srivastava MR, Sachan B, Gupta P, Bhardwaj P, Srivastava JP, Bisht A, Choudhary S. Morbidity Status and Its Social Determinants among Elderly Population of Lucknow District, India. Sch. J. App. Med. Sci., 2013; 1(6):758-764.

15. Sanjiv Kumar Barman, Kanchan Lata, Rama Ram, Nilanjana Ghosh, Gautam Sarker, Kashif Shahnawaz. A study of morbidity profile of geriatric population in an urban community of Kishanganj, Bihar, India. GJMEDPH 2014; 3(1).