ISSN: 0975-3583,0976-2833 VOL13, ISSUE 06, 2022

A Study of Socio-demographic characteristic in Visually Impaired Individuals in Blind Institutes of Pune

Vivek Gupta[1]*, Rama Gupta[2]

[1]Assistant Professor, Department of Community Medicine, Heritage Institute of Medical Sciences Varansi Uttar Pradesh India.

[2]Assistant Professor, Department of Anaesthesia, Miilitary Hospital Kota Rajasthan

Abstract

Background: Although, some version of periodic vision evaluation is recommended by all major clinical authorities, the appropriate role for vision screening in the primary care setting has not been rigorously assessed. **Objectives:** To study of Socio-demographic characteristic in Visually Impaired Individuals in Blind Institutes of Pune: Materials and Methods: The present study was carried out among the visually impaired individuals at Technical Training Institute belong to both sexes and are aged between 18 – 40 years and The inmates of the Pune School and Home for the Blind Boys. **Results:** Age of the study subjects ranged from under 5 to 35 years with male: female ratio of 3.8:1. 91.4 percent of the subjects were Hindus, 5.9 percent of the subjects were Buddhist, 2.4 percent were Muslims and 0.3 percent were Christians. Only 1 percent of subjects were illiterate. 87.6 percent of the study population belonged to upper lower socioeconomic class IV. In this study subjects felt that their families accepted them, showed respect, love and affection. This point to the fact that majority of the blind were not neglected by members of their families.

Conclusion: Blinding conditions where immediate action can result in improved work potential, patient satisfaction, and visual functioning should be the first priority for community based blindness control programmes.

Keywords: Age, Religion, literacy, socioeconomic status, Visually Impaired Individuals, Blind Institutes

***Corresponding Author:** Dr Vivek Gupta, Assistant Professor, Department of Community Medicine, Heritage Institute of Medical Sciences Varansi, Grand Trunk Road Bhadawar Uttar Pradesh India.221311

vivekramag99@rediffmail.com, 9419292205

Introduction:

The visual acuity measurement is a component of every major vision screening guideline and can be performed in the primary care setting. However, many causes of visual impairment can be diagnosed only by persons with special ophthalmic knowledge and equipment and most treatments require special skills to deliver. Thus, effective collaboration between primary care clinicians and eye care professionals has the greatest potential to improve eye care and enhance vision and quality of life.

ISSN: 0975-3583,0976-2833 VOL13, ISSUE 06, 2022

In a significant number of cases, progression to advanced retinopathy of prematurity occurs, resulting in severe visual impairment. Thus it continues to be an important cause of childhood blindness.

Developmental anomalies are scars of embryonic and fetal diseases. Malformations of the eye constitute a special category of birth defects. Besides undesirable stigmatization leading to social and physical handicap, ophthalmologic malformations significantly interfere with the ability of the individuals to adapt to the environment. There is a paucity of Indian data related to the variety and frequency of ophthalmic manifestations in genetic disorders. However, in general, an acquired abnormality is unlikely to progress or recur in families, whereas the high risk for progression or recurrence for genetic eye diseases and the disappointing therapeutic options make genetic counseling and preventive measures mandatory in the families at risk. The prenatal identification of preventable causes is an important measure for prevention of blindness as 60 percent of visual loss is attributable to prenatal factors.

The case for elimination of preventable blindness is justified not only on humanitarian grounds but also because of its social and economic consequences. In terms of economic loses, the management of blindness is most expensive and difficult of all the causes of serious disablement. [1]

India was the first country in the world to launch a 100% public funded programme for the control of blindness. This programme has the distinction of emphasizing evidence based practice for planning and policy formulation from its very inception. [2,3] The control of blindness had been included in the 'Twenty Point Programme' due to which the National Programme for Control of Blindness had received proper attention at all levels. The effective implementation of this programme helped to relieve the miseries of a large number of people who lead a life not only enveloped in darkness but also in pity and patronage. Apart from medical causes, blindness has its roots in many social factors like ignorance, poverty, low standards of personal hygiene and inadequate health services. The prevention of blindness encompasses complex array of approaches and resources. To appreciate the phenomenon of blindness, which is responsible for so much anguish and socio-economic disaster, we need to study of Socio-demographic characteristic in Visually Impaired Individuals in Blind Institutes of Pune.

Material and Methods:

The present study was carried out among the trainees at Technical Training Institute belong to both sexes and are aged between 18 – 40 years and The inmates of the Pune School and Home for the Blind Boys are aged between 5 – 18 years. The investigator could study 150 blind individuals of 150 trainees of Technical Training Institute and at Pune School and home for the Blind Boys, 140 inmates of 150 boys could be examined. Duration of study was 01 Aug 2004 to 31 July 2005. The study was approved by Institutional Ethics Committee.

The following instruments and drugs were used during the examination of the subjects:

a) Snellen's E chart for distant vision recording.
b) Snellen's near vision chart.
c) Torch.
d) Ophthalmoscope.
e) Drosyn eye drops.

ISSN: 0975-3583,0976-2833 VOL13, ISSUE 06, 2022

Each individual was examined individually and separately. The investigator was provided with a separate room with adequate privacy at both the places of study. The rooms were adequately lighted. The anterior segment was examined using a torch and loupe and/or handheld slit lamp. The posterior segment was examined by direct and indirect ophthalmoscopy, after dilating the pupil. The WHO eye examination record for blindness was used to categorize the causes of blindness and to record findings, using the definitions in the coding instructions. [4] They were assured that the information furnished by them would be kept confidential.

In case of children, the school authorities help was taken for information's. Socioeconomic status of the subjects was assessed by the Kuppuswamy scale. [5] In case of the blind children and adult blind who were dependent on their parents, socioeconomic status of the head of the family was taken into account.

Statistical analysis: All the data was tabulated in a Microsoft excel spread sheet. Descriptive statistical analysis was done using SPSS Software. Appropriate statistical tests were used where ever required considering statistically significant level at $p<0.05$.

Results:

Age of the study population ranged from under 5 to 35 years with about 50 percent of the study population belonging to the age group 11-20 years. Two thirds of the population was aged less than 20 years and one third of the subjects were in the productive age group. Table 1

Table 1: Age of the study population

Age	Frequency	Percentage
<5yrs	1	0.3
6-10yrs	51	17.6
11-15yrs	53	18.3
16-20yrs	93	32.1
21-25yrs	76	26.2
26-30yrs	14	4.8
31-35yrs	2	0.7
Total	**290**	**100.0**

79 percent of the study population was male and the rest female thus depicting a male: female ratio of 3.8:1. Table 2

Table 2: Distribution of study population by Gender

Gender	Frequency	Percentage
Male	229	79.0
Female	61	21.0
Total	**290**	**100.0**

ISSN: 0975-3583,0976-2833 VOL13, ISSUE 06, 2022

The study population was predominantly Hindu (91.4%) with the other religions being Buddhist (5.9%), Muslim (2.4%) and Christians (0.3%).

Table 3: Distribution of the study population by religion

Religion	Frequency	Percentage
Hindu	265	91.4
Buddhist	17	5.9
Muslim	7	2.4
Christian	1	0.3
Total	**290**	**100.0**

99 percent of the study population was literate. Only 1 percent was illiterate.

Table 4: Distribution of the visually impaired by education

Education	Frequency	Percentage
Illiterate	3	1.0
Primary	88	30.3
Middle school	55	19.0
Matric	85	29.3
Senior Secondary	59	20.3
Total	**290**	**100.0**

It is evident from table 14 that 87.6 percent of the study population belonged to upper lower socioeconomic class.

Table 5: Distribution of the study population by socioeconomic class

Socioeconomic status	Frequency	Percentage
II-Upper Middle	3	1.0
III-Lower middle	15	5.2
IV-Upper Lower	254	87.6
V-Lower	18	6.2
Total	**290**	**100.0**

It is seen from the table 15 that majority of the study population was from urban areas (70%) whereas only 30 percent belonged to rural areas thus depicting an urban: rural ratio of 2.3: 1. This difference was likely to be due to better awareness, among urban population compared to rural population, of facilities available for education and training for the blind. Probably, reluctance on the part of people from rural areas to send their blind children away from home for education/ training and location of the institutes in urban areas might be also responsible for higher proportion of the study population to be urban.

the ratio of Urban: Rural study population = 2.33: 1

ISSN: 0975-3583,0976-2833 VOL13, ISSUE 06, 2022

Table 6: Urban rural distribution of the study population

Urban Rural	Frequency	Percentage
Urban	203	70.0
Rural	87	30.0
Total	**290**	**100.0**

97.2 percent of the study subjects felt that their families accepted they showed respect, love and affection. This point to the fact that majority of the blind were not neglected by members of their families.

92 percent of the blind felt that their friends accepted them, showed respect and regard and mingled freely whereas 8 percent did not feel so. 99.7 percent of the blind felt that strangers behaved with sympathy and understanding against 0.3 percent of the subjects who did not feel so.

Discussion

A similar age distribution of study population was noticed by Shashi Mehta in her study of the institutionalized blind in Maharastra. Majority of subjects in her study were also below 35 years of age; 84 percent being in the age group 6 to 25 years. [6]

However the age distribution in the present study may not be representative of that of the blind in general population. Sharma and Prasad, in their epidemiological study, reported maximum blindness in the age group 60-65 years. Blindness in the age group 40-49 years was three fold more than in the age group 0-39 years, which was the total range of age distribution in the present study (5-40). [7] Similarly Chakrabarti et al [8] and Gupta et al [9] observed higher proportion of blindness in the older age groups.

The difference in the age distribution of blindness in the general population and the present study may be due to the fact that the subjects in the present study were from the two institutes for the blind in Pune where only the blind aged between 5 years and 40 years were admitted. Hence higher proportion of blindness found in older age group in general population was not represented in the present study.

The study population of Shashi Mehta's institutionalized blind was also predominantly male which is comparable to the present study. [6] However in general population in India, a higher prevalence of blindness is found in females than in males. This has been attributed to higher prevalence of trachoma, conjunctivitis and cataract among females than in males. [10] Preponderance of male subjects in the present study may be attributed to the fact that out of the two institutes where the present study was conducted, the Pune School and home for the blind is entirely for boys. The other institute, Technical Training Institute, though admits the blind from both sexes, had only 61 females out of 150 blind persons examined. This could be attributed to reluctance on the part of the parents of the female blind to send their blind daughters away from home for education and training.

Studies of the blind by Sushma Batra[11] and Usha Bhalerao [12] also show that majority of the cases in their study population were Hindus, being a predominant religion in India.

Sharma and Prasad studied blindness in relation to religion in their epidemiological study in U.P. and found no significant difference in the prevalence rates amongst various religions. [7]

ISSN: 0975-3583,0976-2833 VOL13, ISSUE 06, 2022

The investigator came across very few studies of visual impairment in relation to education. Usha Bhalerao's study population was of the educated blind where 19 percent were educated upto high school and the rest 81 percent beyond high school. The population in study did not have illiterates because only the educated blind persons were surveyed by her. [12] Similarly the subjects in the study by Sushma Batra consisted of no illiterates, about 23 percent who had studied upto high school, and about 38 percent had studied beyond high school and the rest had not entered high school at all. [11]

It is well established fact that people of upper lower socioeconomic status have higher prevalence of blindness. [10] Sharma and Prasad, in their epidemiological study, also observed gradual rise in prevalence of blindness with lowering of socioeconomic status in general population. [7] Shashi Mehta, in her study among the institutionalized blind, found that higher proportion of her subjects belonged to lower group of socioeconomic status. [6] Findings of the present study are consistent with the observations of Sharma and Prasad [7] and also of Shashi Mehta.[6]

However, Suri et al, in their study of prevalence and causes of blindness in a rural community in U.P., reported maximum prevalence in socioeconomic class I and least in socioeconic class IV. The workers attributed this to higher life expectancy among people of higher socioeconomic status and hence more prevalence of cataract (senile) which is the major blinding cause in general population. [13] This finding was representative of one village and is not in conformity with the findings of other studies.

The findings of the present study can be compared favorably with those of the study of institutionalized blind persons by Shashi Mehta wherein, majority of the study population belonged to urban areas. [6] Similarly a survey conducted in Orissa (as quoted by WHO) in 1976 showed prevalence of blindness to be 3.6 percent and 2.2 percent in urban and rural areas respectively. [14]

However, according to National Sample Survey of Disabled persons in 1981, in India, there were estimated 553 visually disabled persons per 100,000 population in rural areas and 356 per 100,000 populations in urban areas. [15] According to the same study, in Maharashtra, the prevalence of visual disability was 528 and 307 per 100,000 populations in rural and urban areas respectively.

The findings of this study can be compared favorably with the study of the educated blind by Usha Bhalerao. Ninety nine percent of her subjects mentioned that they were given the same treatment as given to other sighted members of the family. [12]

Sushma Batra too had elicited the attitudes of the members of the families towards the blind in her social study in Delhi. [11] Her findings could not be compared with the present study as she had classified the attitude as encouraging, indifferent, overprotection and neglect. However, it may be noted that 8-12 percent of members of the families, according to her subjects, neglected the blind which is comparable to non-acceptance by various family members in the present study.

Study are comparable with the study by Usha Bhalerao. Seventy four percent of the educated blind in her study felt that their neighbors and acquaintances were helpful to them. [12] Usha Bhalerao found that Ninety nine percent of her subjects affirmed that strangers were helpful to them . [12]

ISSN: 0975-3583,0976-2833 VOL13, ISSUE 06, 2022

Conclusion: Blinding conditions where immediate action can result in improved work potential, patient satisfaction, and visual functioning should be the first priority for community based blindness control programmes. Once a person goes blind from causes like glaucoma, it cannot be reversed and therefore public health action demands identification of individuals before considerable visual impairment has occurred.

References

1. World Health Organisation Technical Report Series; the Prevention of Blindness.1973; 518: 21-7
2. Mohan M. National survey of blindness—India. NPCB-WHO report. New Delhi: Minsitry of Health and Family Welfare, Government of India, 1989; 1-43.
3. Mohan M. Collaborative study on blindness (1971–1974). A report. New Delhi: Indian Council of Medical Research, 1987; 1–65.
4. Gilbert CE, Foster A, Thylefors B, et al. Childhood blindness—a new form for recording causes of visual loss in children. Bull World Health Organ 1993; 71: 485–89
5. Kuppuswamy B. Manual of Socio-economic status scale. Manasayan, 32 Netaji Subhash Marg, Delhi-6.1981; 23-42
6. Mehta S. A study of the institutionalized blind in Maharashtra. A dissertation submitted for MS (Ophthalmology), University of Pune, 1977 (unpublished).
7. Sharma KL, Prasad BG. An epidemiological study of Blindness in Banki Block of Barabanki District (U.P.). Indian J Med Res 1962; 50: 542-65
8. Chakravorti J, Garg AC, Siddhu CMS. Prevalence and pattern of blindness in field practice area of rural health training centre. Indian J Ophthalmology 1974; 22(4): 4-8.
9. Gupta KK, Jain AM, Chandra Mahesh. Blindness in Rural India, A Clinical Study. Indian J Ophthalmology 1982; 30: 295-8.
10. Park K. Park's Text Book of Preventive and Social Medicine. 18th ed. Jabalpur, M/s Banarsidas Bhanot, 2005; 319-23.
11. Batra Sushma. Social Integration of the Blind. New Delhi, Naurang Rai, 1981;54-73
12. Bhalerao Usha. Educated Blind of Urban Madhya Pradesh (A Sociological Study). New Delhi, Sterling Publishers Private Limited, 1983; 19-24.
13. Suri NK, Mishra VN, Mathur IS, et al. Prevalence and pattern of blindness in a rural community. Indian J Prev Soc Med 1984; 15: 38-41.
14. World Health Organisation. Data on Blindness Throughout the World. WHO Chron 1979; 33: 275-83.
15. Government of India, National Sample Survey Organisation. Report on Survey of Disabled Persons, No 305. Department of Statistics, New Delhi, 1983; 13-22.