

Cataract Blindness Among Scheduled Tribes in Mysore District, Karnataka: Problems and Perspectives

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ABSTRACT In the present study an attempt is made to understand the problems and perspectives of cataract blindness among Scheduled Tribes in H.D. Kote Taluk, Mysore District, Karnataka. The members of Scheduled tribes covered in the study are Jenukurubas, Bettakurubas and Yeravas. Ten tribal settlements known as hadis were selected for the present study. These settlements are located in the fringe area of Rajiv Gandhi National Park, Nagarahole. In-depth interviews were conducted on 160 informants, 80 males and 80 females. Out of 80 females 28 were suffering from cataract blindness and remaining were healthy individuals. Out of 80 males, 31 were suffering from cataract blindness and remaining were healthy persons. In the present study the emic perspective frequently mentioned is 'not able to see properly' (126). The major signs and symptoms of cataract blindness recorded are 'foggy vision' (99), and 'abnormal muscular growth over the eyes' (62). The constraints for underutilization of eye care services among members of scheduled tribes were 'no money' (137), 'fear of surgery or treatment' (79), 'lack of information on eye care services' (61) and 'lack of family members who are willing to help the blinds to get treatment' (51). The major causes of cataract blindness recorded are 'carrying heavy load of firewood on head' (59), 'aging' (47) and 'not oiling the hair regularly' (46) according to the present study.

INTRODUCTION

Blindness, the loss of eye sight, is one of the most serious misfortune in human life. Apart from loss of functional ability and self-esteem, blindness and other related visual impairments have considerable economic significance. They lead to a greater loss of productivity, income and social dependence on others and require rehabilitative and supportive measures.

Cataract accounts for approximately 16 million cases of blindness worldwide. In most of the developing countries like India and China it accounts for approximately half of all blindness. A cataract results from a change of transparency of the normal crystalline lens in the eye. When the lens become opaque, it protects the light from entering the eye. This condition causes gradual loss of vision and blindness. Cataract may have different origins; some children can be born within it and in some cases cataracts develop after eye injuries. However, cataracts are largely related to the aging process.

The problem of blindness and its magnitude is much higher in India. Of the 31 million, India alone has 9 million blind people, which comes to more than one-third of the total blind in the world. According to a health ministry survey, prevalence of cataract is higher among women,

tribal populations and in rural areas, in contrast to industrial countries where it typically afflicts the elderly. Some 40% of the cases in India are within the productive age of 40-50 years. Bulk of curable cataract blinds resides in rural areas and is beyond the reach of the existing urban based facilities. The reasons, which are responsible for higher prevalence of blindness in India, include, lack of adequate ophthalmic personnel, lack of availability of services and lack of sources of information on eye care services. Underutilization of available manpower, imbalance in availability of eye care services in rural/urban areas, lack of knowledge and concern about malnutrition, man made blindness due to quack practice and home remedies also add to the problems in improving the conditions of the people.

Recently a study was conducted by Bhat et al. (2000) which was sponsored by Danish Assistance to the National Programme for Control of Blindness (DANPCB), New Delhi, on qualitative rapid assessment of reasons for low uptake of eye care services in three district of Karnataka. This study was mainly focussed on emic perspectives on blindness; signs and symptoms, local beliefs associated with blindness in general and cataract blindness in particular, family willingness to assist blinds to get treat-

ment, various barriers to use of eye care services, benefits and drawbacks of available services, sources of eye care information and dissemination, opinion to improve existing eye care services and also covered views on health care providers, including government hospitals, Non Governmental Organizations and private practitioners. In this study qualitative rapid assessment survey methodology was used and three districts, viz Belagum, Kolar and Chamarajanagar were selected on the basis of following one or more criteria like, low uptake of eye care services, linguistic and cultural diversity, economic backwardness and considerable population of marginal social groups such as Scheduled Castes, Scheduled Tribes and Other Backward Classes.

In each district three villages were selected based on variations in ecology, culture, language, accessibility and external influence. The trained post-graduates in anthropology were employed in the study. The purpose of the study was to uncover the culturally patterned mode of behaviour. The authors were able to record various definitions on blindness such as 'not able to see properly' 'not able to see due to *pore* (curtain) on eyes', 'defect in vision' or 'loss of vision' and 'no light in both the eyes'. Typical statements such as 'a blind experiences only darkness' and 'a blind does not see the world' were given by the blind people and other members of the family. The most common signs and symptoms recorded were 'foggy vision', 'blurred vision', 'not able to identify distant objects, persons, cattle etc'. The less frequently mentioned responses were 'double vision', 'watering of eyes', 'not able to read', 'headache', 'blurring of eyes' 'not able to see during night' etc. The local belief associated with cataract blindness were also recorded in the study. The frequently mentioned statements were 'heredity', 'sin committed in the previous birth', 'curse of a deity', 'beating the animals', 'injustice done to others'. Some of the habit related activities which influence the formation of cataract such as, 'smoking beedi or cigarette', 'chewing betelnut and tobacco', 'over exposure to smoke and heat in the kitchen', 'over exposure to sun rays', 'carrying heavy load of fire wood on head', 'lack of nutritious food', 'drinking too much tea', 'viewing television' etc were also recorded. The responses on barrier for low up take of eye care services includes 'no money', 'lack of eye care

information', 'fear of operation' etc were recorded. The study also revealed that the majority of respondents were not satisfied with existing eye care services and most of them needed proper sources of information on available eye care services. The study also uncovered the benefits and drawbacks of available services, family willingness to assist blinds to get treatment, various ways to improve eye care services and views on health care providers. Finally, the study concluded that involvement of local clubs or associations, Non Governmental Organizations, local religious leaders, famous personalities in the field of politics, films, sports and literature contribute to the success of the programmes. In addition, the role of social scientists in the eye care services were also highlighted.

A population based eye survey of older adults in a rural district of Rajasthan by Murthy et al., (2001) aimed to assess the outcome of cataract surgery in rural north west India. The study was population based cross sectional study. A total of 549 cataract-operated persons were covered. The cluster sampling method was used in randomly selecting a cross sectional sample of persons 50 years of age or older for visual acuity measurement, refraction and slit lamp and direct ophthalmoscope examination. The main outcome measured includes presenting and best-corrected visual acuity and cause of vision loss. The presenting visual acuity was less than 6/60 in the better eye in 33.7% of cataract operated persons and greater than or equal 6/8 in both eyes in 8.2%; 31.7% were bilaterally operated on. Of cataract operated eyes, 44.1% initially had visual acuity less than 6/60 and 31.5% greater than or equal to 6/18; with best correction was used in 92% of cases, and 66% had been operated on in surgery camps. The cataract surgery subjects in rural areas of India that are without adequately equipped facilities and skilled surgeons and lack of availability of intraocular lenses, are not realizing the full sight restoring potential of modern-day surgery. Emphasis is given to maintain the quality of cataract surgery outcomes in increasing the surgical volume.

A study on visual impairment and socioeconomic factors by Livingston et al (1997) provide in-depth information about socioeconomic factors associated with visual impairment can assist in the design of intervention programmes. It was a population

based study of non-institutionalized permanent residents in nine suburbs of the Melbourne metropolitan area, aged 40 years of age and older. A standardised eye examination was conducted on eligible residents which included a structured interview. The variables of the study were age, sex, country of birth, language spoken at home, education level, use of private insurance, employment status and living arrangements. A total of 3271(83%) residents participated. The participants ranged in age from 40 to 98 years; 54% were female. The results showed that age was the significant factor of visual impairment, with the mean age of people with visual impairment significantly older (75.0 years) compared with people without visual impairment (58.2 years). Of the 44 visually impaired people, 39 (87%) were aged 60 years of age and older. The results indicated that age is the most significant factor associated with visual impairment. The importance of the study include people with visual impairment were less likely to have private health insurance, with the aging of the population, the number of people affected by visual impairment will increase significantly. Intervention programmes need to be established before on set of middle age to offset the escalation of visual impairment in the older population.

Nirmalan et al., (2003) in this study on 'sex inequalities in cataract blindness burden and surgical services in south India' aimed at to determine sex inequalities in cataract blindness and surgical services in south India. The details of lens status and cataract surgery were recorded for subjects aged 50 years and older identified through cluster sampling as part of population based cross sectional assessment of cataract blindness and surgical outcomes in three districts of south India. The females were less likely to be operated on for cataract although the cataract blindness burden was higher for females. Literacy of the subject was a major predictor for being operated on for cataract. Achieving equal surgical coverage between sexes will have resulted in (25.3%) reduction of cataract blindness. The eye care programmes in this population need to be sensitized to the substantial reduction in blindness possible by achieving equal surgical coverage between sexes.

MATERIALS AND METHODS

The present study mainly focussed on the

problems of low uptake of eye care services and concept of blindness among Scheduled Tribes population in Mysore district. The study also aims at to identify the various barriers (physical, economic, social and cultural) to low uptake of eye care services with special reference to cataract blindness and its treatment.

Based on the objectives of the study an interview guide was prepared and the information was gathered by residing in the tribal settlements (hadis) and involving in the daily activities of the people. The idea was to supplement the data collected through interviews by systematic observation. This is known as participant observation, which is a unique anthropological research strategy. Though it is not an easy technique all efforts were made to implement it sincerely. In addition, the information was also collected by informal discussion and conversations, genealogical technique, formal and informal interview and case study methods were employed.

The study was conducted in the rural areas of Mysore District, especially in the H.D. Kote Taluk, the most backward taluk in the district. Ten tribal settlements known as hadis were selected for the study. These settlements are located in the fringe area of Rajiv Gandhi National Park, Nagarhole and a few settlements are located inside the national park. These settlements are selected based on the following criteria; urban influence, accessibility of eye care services, external influences were considered while selection of tribal settlements.

The three major Scheduled Tribes covered in the study are Jenukurubas, Bettakurubas and Yeravas. These Scheduled Tribes were basically food gathers and hunters. Food gathering and hunting was the first adaptation of human kind ever made. The life styles of the Scheduled Tribes are gradually changing owing to exposure to various cultures. Change in their economy, material culture, dress pattern and use of consumer goods can be easily seen. In spite of all these changes, the members of Scheduled Tribes of the region has been able to maintain their identity. Each Scheduled Tribe has its own council, which regulates its internal affairs. However it is noticed that previously elders of the tribe known as *Yejamanas* took most of the decisions regarding their own group, but now-a-days, any able bodied man who strives for the welfare of his people can be considered as a

Yejamana. Now-a-days women are also taking active part in the affairs of their community and they appear to fight for their rights. Many women among them insisted that they were the main decision-makers in their settlements today. In other words the ancient for rest dwellers are undergoing a process of transformation. The complete household census was conducted in all selected tribal settlements and 342 households were visited. The census data were analyzed for different variables like sex wise composition of population, level of education etc. The list of selected tribal settlements, number of households and sex-wise distribution of population in selected tribal settlements are given in the Table 1.

The Table 2 reveals that the educational status of Scheduled Tribes population in studied tribal settlements. There were 47.38% literates and 52.62% illiterates in the sample. Among literates 40.32% and 48.78% have received primary and higher primary level of education, respectively.

There were only 3.08% have completed SSLC in tribal settlements.

RESULTS AND DISCUSSION

The present study uncovers the people's perception towards blindness, their beliefs associated with cataract blindness in particular, accessibility of eye care services and various barriers to low uptake of eye care services among scheduled tribe population. In all 160 members of Scheduled Tribes consisting of 80 males and 80 females were interviewed.

There are only 12 informants aged less than < 30 years and majority of the informants are aged more than > 50 years. Since the study is focused on cataract problem and it is associated with age, the informant's age was also considered at the time of interview. The age-wise and sex-wise distribution of informants is given in the Table 3.

Table 1: List of studied tribal settlements (Hadis), number of households and sex-wise distribution of population.

S. No.	Name of the tribal settlements	Sex wise population distribution							
		No. of households		Male		Female		Total population	
		Nos.	%	Nos.	%	Nos.	%	Nos.	%
1.	Seegooru Hadi	53	15.50	98	13.08	121	15.32	219	14.23
2.	Udboor Hadi	45	13.16	112	14.95	121	15.32	223	15.14
3.	Hunsekuppe Hadi (A)	25	7.31	57	7.61	62	7.85	119	7.73
4.	Malada Hadi	33	9.65	68	9.08	62	7.85	130	8.45
5.	Karapura Hadi	35	10.23	62	8.28	85	10.76	147	9.55
6.	Marana Hadi	36	10.53	100	13.35	95	12.02	195	12.67
7.	Magge hadi	13	3.81	25	3.34	25	3.16	50	3.25
8.	Hunsekuppe hadi (B)	37	10.82	88	11.75	72	9.11	160	10.40
9.	Dammanakatte Hadi	30	8.77	54	7.21	60	7.59	114	7.41
10.	Sogallihadi	35	10.23	85	11.35	87	11.01	172	11.18
Total		342	100.00	749	100.00	804	100.00	1553	100.00

Table 2: Educational status of studied members of Scheduled Tribe population

Status of education	Sex					
	Male		Female		Total	
	Nos.	%	Nos.	%	Nos.	%
Literates	343	52.05	272	42.57	615	47.38
Illiterates	316	47.95	367	57.43	683	52.62
Total	659	100.00	639	100.00	1298	100.00
Level of Education						
Primary (1 st to 4 th Std.)	132	38.48	116	42.65	248	40.32
Secondary (5 th to 7 th Std.)	162	47.23	138	50.73	300	48.78
High School (8 th to 9 th Std.)	29	8.46	14	5.15	43	7.00
SSLC	18	5.25	4	1.47	42	3.58
PUC	2	0.58	-	-	2	0.32
Degree	-	-	-	-	-	-
Others	-	-	-	-	-	-
Total	343	100.00	272	100.00	615	100.00

Table 3: Age-wise and sex-wise distribution of informants belonging to studied tribal settlements

Age (in years)	Sex					
	Male		Female		Total	
	Nos.	%	Nos.	%	Nos.	%
< 30	7	8.75	5	6.25	12	7.50
30 - 50	27	33.75	29	36.25	56	35.00
> 50	46	27.5	46	57.5	92	57.50
Total	80	100.00	80	100.00	160	100.00

Table 4: Status of vision among informants belonging to studied tribal settlements

Status of vision	Sex					
	Male		Female		Total	
	Nos.	%	Nos.	%	Nos.	%
Cataract Blind	29	36.25	30	37.5	59	36.87
Operated	6	7.5	1	1.25	7	4.38
Care taker	11	13.75	19	23.75	30	18.75
Other	34	42.5	30	37.5	64	40.00
Total	80	100.00	80	100.00	160	100.00

The informants were classified based on their vision status into four categories; cataract blind, operated, caretaker and others. Out of 160 informants, 59 were suffering from cataract blindness and only 7 are operated. All of them are economically very backward and they derived their livelihood from wage labour. The socio-economic conditions of these informants are very poor. The detail statement on status of vision among informants belonging to tribal settlements are given in the Table 4.

The purpose of the study is to uncover the cultural mode of behaviour among members of Scheduled Tribes regarding attitudes, beliefs and various misgivings about cataract blindness and various barriers attached to uptake of eye care services in the district. The informants were asked to answer each research question with detail one or more responses. In addition several supplementary questions were also put to the informants to elicit more information. This technique of interview in which a number of responses are recorded is known as 'free listing' technique. The basic idea of the researcher is that the most frequently mentioned responses by the informants were the most significant indicators for the community. They may also indicate the cultural traits of the community. The data collected were triangulated with data collected by observation, focus group discussion, informal interviews and case study methods.

Blindness: Emic Definition: Majority of the informants described blindness as 'not able to see properly' (126), 'defect in vision' (42), 'both the eyes are closed' (22), 'no light in both the eyes' (16) and 'not able to see due to pore (curtain) on eyes' (13). This clearly shows the culturally significant emic definitions of blindness.

Cataract Blindness: Signs and Symptoms: The most common and culturally significant responses regarding signs and symptoms are 'foggy vision' (99), 'abnormal muscular growth over the eyes' (62), 'blurred vision' (32), 'watering of eyes' (28), 'not able to identify' (25) and 'development of a curtain (pore) over the eyes' (25). The less frequently mentioned responses are 'burning of eyes', 'multiple vision', 'not able to identify cows/cattle in the field', 'not able to insert thread into the needle', 'not able to move without the help of others', 'head ache', 'watering of eyes during cooking', 'not able to stitch old cloth'. The most culturally significant signs and symptoms recorded (1 to 6) are given in Table 5.

Causes of Blindness

a) Congenital Blindness: Congenital blindness was attributed to a number of causes, the most significant was 'curse of deity' (83), 'sin committed in the previous birth' (59) and 'heredity' (44). The less frequently mentioned responses are eye injuries during the collection

Table 5: Blindness 'emic' definitions: signs and symptoms

S. No.	Types of responses	Number of responses		
		Sex		Total
		Male	Female	
a) Blindness: Emic Definitions				
1	Not able to see properly	51	65	126
2	Defect in vision	23	19	42
3	Lack of both the eyes	10	12	22
4	No light in both the eyes	9	7	16
5	Not able to see due to pore on eyes	5	8	13
b) Cataract Blindness: Signs and Symptoms				
1	Foggy vision	48	51	99
2	Abnormal muscular growth over the eyes	33	29	62
3	Blurred vision	21	11	32
4	Watering of eyes	17	11	28
5	Not able to identify	15	10	25
6	Development of a curtain (pore) over the eyes	10	15	25
7	Burning of eyes	5	2	7
8	Double vision/ multiple vision	3	4	7
9	Not able to identify cows/ cattle in the field	5	1	6
10	Not able to insert thread into the needle	-	5	5
11	Not able to move without the help of others	5	-	5
12	Headache	3	1	4
13	Watering of eyes during cooking	-	3	3
14	Not able to stitch old cloth	-	3	3

Table 6: Causes of blindness

S. No.		Types of responses	Number of responses		
			Sex		Total
			Male	Female	
a) Congenital Blindness					
1	Curse of deity	45	38	83	
2	Sin committed in the previous birth	30	29	59	
3	Heredity	25	19	44	
4	Injuries during minor forest produces collection, agriculture or any other activities resulting in permanent visual disability	5	2	7	
5	Eye exposure to the hot sun or viewing solar eclipse	3	1	4	
b) Cataract Blindness					
1	Carrying heavy load of fire wood on head	30	29	59	
2	Aging	20	27	47	
3	Not oiling the hair regularly	20	26	46	
4	Chewing tobacco, betel nut, gutka, jarda, pan etc.,	25	19	44	
5	Less amount of blood in body	15	20	35	
6	Excessive consumption of alcohol	15	19	34	
7	Drinking too much of tea	9	13	22	
8	Smoking cigarette/ beedi	14	7	21	
9	Over exposure to smoke and heat in the kitchen	-	15	15	
10	Lack of nutritious food	5	10	15	
11	Viewing television	2	1	3	

of minor forest produces, agricultural work or any other activities resulting in permanent visual disability and eye exposure to the hot sun or viewing solar eclipse.

b) Cataract Blindness: Cataract blindness was attributed to a number of causes and the responses mentioned are more than ten. The most frequently mentioned responses are 'carrying heavy load of fire wood on head' (59), 'aging' (47), 'not oiling the hair regularly' (46) and

'chewing tobacco, betel nut, gutka, jarda, pan' etc (44). The other responses recorded are given in the Table 6.

Following are some of the responses recorded during the fieldwork which are illustrative of the cultural significance of the cataract blindness.

Bolaiah, a 65 years old man belonging to Scheduled Tribe, having lower class income, belonging to Seegooru hadi with cataract blind vision status said 'I am having fear that they

will spoil my eyes, so I don't need operation and according to my horoscope, I will die if I go to the hospital for surgery'.

Annaiah, a 68 year old man belonging to Scheduled Tribe, having lower class income, belonging to Seegooru hadi with cataract blind vision status said *'I am very poor, I don't have enough money and even I have problem to run my family. If I stay in bed for two to three days due to illness or some injuries, my family members have to borrow money from our landlords even for food. So this leads to debt under landlords. If I have to spend Rs. 500 to Rs. 600 to go to hospital our family will face debt in future'.*

Kalaiah, a 70 year old man belonging to Yerava Scheduled Tribe, having lower class income, belonging to Udbooru hadi with cataract blind vision status said *'If I wish to be operated, I need money for transport, money to get admitted at the hospital, money for food to myself and my assistance during operation and after operation I can't work as before due to weakness and even I have to take more than 50 days for recovery of my health'.*

Mallamma, a 65 year old woman belonging to Yerava scheduled Tribe, having lower class income, belonging to Udbooru hadi with cataract blind vision status said *'I am old, I don't want operation at this age, I want to die like this only'.*

Rama, a 68 year old man belonging to Bettakuruba Scheduled Tribe, having lower class income, belonging to Hunsekuppe hadi (A) with cataract blind vision status said *'See, I am counting my days, what will be the use of having an operation at this age'.*

Puttaiah, a 71 year old man belonging to Jenukuruba Scheduled Tribe, having lower class income, belonging to Malada hadi with cataract blind vision status said *'At this age, my present eyesight is enough, I don't have any ambitions or work to do at this age, this is god's wish so how can I go to the hospital?'.*

Gowramma, a 71 year old woman belonging to Scheduled Tribe, having lower class income, belonging to Malada hadi with cataract blind vision status said *'I have an eye problem, because God has desired me to live this way'.*

Kenchaiah, a 49 year old man belonging to Scheduled Tribe, having lower class income belonging to Karapura hadi with normal vision status said about his father *'what is the use of making him to see when he is going to die'.*

Putti, a 45 year old woman belonging to

Scheduled Tribe having lower class income, belonging to Maranahadi with normal vision status said about his mother-in-law *'she has become very old and giving lot of problem, what is the use of taking her to the camp and doing the surgery?'.*

Sallamma, a 43 year old woman belonging to Scheduled Tribe, having lower class income, belonging to Maranahadi with normal vision status said about his father in law *'he has become very old and so I thought that it would be of no use if I take him for treatment, he has become a burden at this old age, we think it would be better if he dies soon'.*

Barriers to Use of Eye Care Services: The most common responses for not using the existing eye care services is 'lack of money' (137). The study was conducted among members of Scheduled Tribes. They were economically backward sections of the society, this was the expected answer. Other culturally most significant responses were 'fear of surgery or treatment (79)', 'lack of information on eye care services' (61) and 'lack of family members those who willing to blinds to get treatment' (51). The other barriers recorded during the study are given in the Table 7.

Table 7: Barriers to use of eye care services

S. No.	Types of responses	Number of responses		
		Sex		Total
		Male	Female	
1	No money	65	72	137
2	Fear of surgery or treatment	40	39	79
3	Lack of information on eye care services	25	36	61
4	Lack of family members those who willing to blinds to get treatment.	20	31	51
5	Lack of interest to undergo operation in old age.	13	17	30
6	No faith in the treatment	10	9	19
7	Presence of other illness: like Asthma, Blood Pressure, Cardiovascular diseases, Diabetes etc.	3	5	8
8	Shyness among women to wearing spectacles	-	5	5

CONCLUSION

In all, data were collected from 160 infor-mants comprising 80 males and 80 females from ten rural tribal settlements known as hadis. A majority of them are socially, educationally and economically

very backward. These members of Scheduled Tribes were living in unhygienic conditions. These settlements are located in remote areas, even some of them do not have proper roads. There were 59 informants suffering from cataract blindness. There is a need of surgery for these people according to our observation. But the cataract blindness persons are unable to utilize the available services. The major constraints are their poor economic status and fear of surgery and treatment. In addition to this lack of transportation facilities, lack of proper information on eye care services etc, acts as barriers.

To overcome the problem of cataract blindness in tribal settlements the anthropological interventions are essential. If an anthropologist acts as a facilitator, who can help these people in old age to resolve the barriers, which inhibit the utilization of modern eye care services. They can regain their vision and lessen the dependence on others. An anthropologist can convince the service providers to arrange eye screening and

surgery camps in rural areas where bulk of cataract patients reside. He can also initiate a dialogue with cataract blind individuals and motivate them to regain their vision.

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