

Red-Green Colour Blindness Among the Sugalis—A Tribal Population of Cuddapah District, Andhra Pradesh

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ABSTRACT The distribution of red-green colour blindness has been studied in the Sugali tribe of Cuddapah district of Andhra Pradesh. The results were compared with neighbouring caste and tribal populations of the state.

INTRODUCTION

Colour blindness is one of the X-linked conditions which is widely used as a genetic marker in the study of human variation. The present enquiry is concerned with the assessment of the incidence of colour blindness among the Sugalis, a tribal population of Cuddapah district of Andhra Pradesh.

The Sugali is one of the largest and advanced tribes of Andhra Pradesh. They are known as Lambadi, Lambani, Banjari, Brinjari in various parts of India. They are found interspersed amidst tribal and non-tribal population and yet tenaciously maintaining their cultural and ethnic identity. They live in exclusive settlements of their own called Thandas named after headman of the group. The traditional dress pattern of Sugali is colourful and attractive and is a distinctive identity marker of the community. The Sugalis have their own dialect, and it closely resembles the Marvari language of Rajasthan, both in accent and in script. Owing to the cultural contact with the surrounding Telugu people they became bi-linguistic and could speak Telugu fluently. They present a complete picture of transition of a group of people from pastoral nomads to settled peasantry. The economic life of the people varies from agriculture, lime-selling, fire-wood selling, and agriculture-labour. They worship

all Hindu dieties and celebrate all Hindu festivals.

SUBJECTS AND METHODS

A total of 250 unrelated male Sugali residents of Bakkannagari Palli and Nelavaram Thandas in Cuddapah district of Andhra Pradesh were screened for red-green colour vision defect using a series of plates designed by Ishihara (1972). Since most of the Sugalis were illiterates, only plates 26–38 were used in testing.

RESULTS AND DISCUSSION

Table 1 shows the distribution of colour blindness among the Sugalis. It was observed that out of 250 subjects tested, 11 (4.40%) were found to be colour blind: the incidence of deutan type (green blind) being much higher (3.60%) than protan type (red blind) (0.80%). In general the percentage of deutans is twice that of protans in most Indian populations (Naidu et al., 1988).

Table 1: Incidence of red-green colour blindness among Sugalis

Number tested	Normal colour vision	Defective colour vision (red-green colour blindness)		Combined
		Protan type	Deutan type	
250	239(95.6%)	2 (0.80%)	9 (3.60%)	11(4.40%)

As for the populations of Andhra Pradesh the frequency of colour blindness among caste groups varies from 2.32% among Yadava to

4.87% among Kamma (Naidu, 1977), while among tribal groups it varies from 0.30% among Konda Reddy (Veerraju, 1973) to 3.85% among Valmiki (Rao and Reddy, 1973). The Sugalis of the present study are therefore exhibiting higher incidence (4.40%) of colour blindness in comparison with other tribal groups of Andhra Pradesh. In this respect, they are more closer to caste populations rather than the tribal populations of the state. Infact, an earlier study has also reported a high incidence of red-green colour blindness among another sample of this tribe viz., the Lambadi (3.32%; Ramachandriah, 1967). It is also observed that the incidence of colour blindness is comparatively higher among caste groups than among tribal groups and this may be attributed to the effect of relaxed selection against colour blindness in the former than the latter (Post, 1962).

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