

Distribution of the ABO Blood Groups Among the Balmiki and Khatik Harijans of Punjab

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KEY WORDS ABO Blood Groups. Balmiki Harijans. Khatik Harijans. Punjab.

ABSTRACT Two hundred Balmiki Harijans and 210 Khatik Harijans of the Punjab State (India) were examined for the ABO blood group types. The frequencies of the O, A, B and AB were, respectively, found to be 32.5, 20.0, 35.0 and 12.5 per cent in the Balmiki Harijans and 28.57, 23.81, 38.09 and 9.32 per cent observed in the Khatik Harijans

INTRODUCTION

The Scheduled Castes of the Punjab cover a wide range of groups of populations like Harijans who are either Sikhs or Hindus. In the present study only Hindu Harijans *i.e.* Balmiki and Khatik Harijans were considered. They follow and worship all the Hindu gods and goddesses with real spirit and enthusiasm. They form a significant part of the urban life, which is dependent on them for cleanliness of their dwellings, streets and work places. They also work as agricultural and industrial workers but their socio-economic status is much lower than

the other populations of Punjab. Their marriage patterns are endogamous at the caste level and exogamous at the gotra level. Child marriages are common in these communities.

MATERIAL AND METHODS

The blood samples from a total of 200 unrelated Balmiki Harijan and 210 unrelated Khatik Harijan subjects were collected at random from district Moga in the Punjab state. These were typed for the ABO blood groups using standard antisera with proper controls. The allele frequencies were calculated after Mourant *et al.* (1976).

RESULT AND DISCUSSION

The distribution of the ABO blood groups in the Balmiki Harijans and Khatik Harijans of Punjab and their comparison with other Scheduled Caste populations of the state is presented in table 1. In Balmiki Harijans, most frequently occurring blood group type was B (35.0%),

Table 1: Distribution of the ABO blood groups among the Balmiki Harijans and Khatik Harijans of Punjab and their comparison with other Scheduled Castes of the state

Population	n	% Phenotypic frequencies				Allele frequencies			Chi-square with Balmiki Harijans d.f = 3	Chi-square with Khatik Harijans d.f = 3	Reference
		O	A	B	AB	O	A	B			
Bazigars	205	28.78 (59)	27.32 (56)	34.15 (70)	9.76 (20)	.207	.252	.540	3.450	0.939	Sidhu and Sidhu (1988)
Gujars	345	34.78 (120)	28.98 (100)	27.54 (95)	8.70 (30)	.210	.200	.590	8.338	7.561	Ahuja and Sidhu (1981)
Sansis	200	35.50 (71)	20.50 (41)	36.50 (73)	7.50 (15)	.151	.265	.584	1.590	2.606	Sidhu and Sidhu (1980)
Sikh Harijans	300	33.33 (100)	20.67 (62)	35.33 (106)	10.67 (32)	.170	.263	.566	0.488	1.862	Sidhu (1995)
Chamars	300	27.67 (83)	25.33 (76)	38.00 (114)	9.00 (27)	.193	.277	.530	4.124	0.189	Sidhu (1994)
Balmiki Harijans	200	32.50 (65)	20.00 (40)	35.00 (70)	12.50 (25)	.176	.272	.552	-	2.289	Present Study
Khatik Harijans	210	28.57 (60)	23.81 (50)	38.09 (80)	9.52 (20)	.184	.277	.539	2.289	-	Present study

Figures in parentheses indicate phenotype numbers

followed by O (32.5%), A (20.0%) and AB (12.5%). In the Khatik Harijans also, blood group B was the most frequent type (38.09%) followed by O (28.57%), A (23.81%) and AB (9.52%). When compared with other Scheduled castes of the state viz., Bazigars, Gujars, Sansis, Sikh Harijans and Chamars, only the Gujars showed significant difference ($p < 0.05$) both with the Balmiki Harijans and Khatik Harijans.

REFERENCES

- Ahuja, S. and Sidhu, L.S.: Distribution of ABO blood groups and some physical traits among the Gujars of Punjab *Ind. J. Phys. Anthropol. Hum. Genet.*, 7: 93-96 (1981).
- Mourant, A.E., Kopec, A.C. and Domaniewska-Sobczak, K.: *The Distribution of the Human Blood Groups and Other Polymorphisms*. Oxford University Press, London, 2nd Edition (1976).
- Sidhu, S.: Distribution of the ABO blood groups and Rh (D) factor among the Chamars of Punjab. *J. Hum. Ecol.*, 5: 145-146 (1994).
- Sidhu, S.: Distribution of the ABO and Rh (D) blood groups among the Sikh Harijans of Punjab. *J. Hum. Ecol.*, 6: 277-278 (1995).
- Sidhu, S. and Sidhu, L.S.: ABO blood group frequencies among the Sansis of Punjab. *Coli. Anthropol.*, 4: 55-48 (1980).
- Sidhu, S. and Sidhu L.S.: Distribution of ABO blood groups and Rh factors among the Bazigars of Punjab. *Ind. J. Hered.*, XX: 19-24 (1988).