

# Variation in Taste Sensitivity Among Jalaris of Andhra Pradesh

V.L.N. Rao and G. Jaikishan

Department of Anthropology, Andhra University, Visakhapatnam, 530 003, Andhra Pradesh, India

**KEY WORDS** PTC. Polymorphism. Jalari. Andhra Pradesh.

**ABSTRACT** PTC taste variation was studied among Jalaris—a caste population of Andhra Pradesh, South India.

Sensitivity to taste phenyl-thiocarbamide (PTC) and allied compounds is a well known polymorphic trait for human variation studies and several reports are now available on this marker among tribal and non-tribal populations of Andhra Pradesh (Simmons et al., 1953; Veerajulu, 1973; Ramana Rao, 1976; Golla Reddy, 1973; Mohan Reddy, 1983; Babu and Jaikishan, 1984; Andhra University Reports 1971-1980).

The present study was carried out on the Jalaris, a fisherman community of Andhra Pradesh. Little is known about the origin and history of this caste. The Jalaris are a sub caste under the main caste of Vada, literally meaning a boatman. Socially, Jalaris occupy a low position and their language is a corrupt form of Telugu.

## MATERIAL AND METHODS

The present study was carried out on 215 Jalari (109 males and 106 females) drawn randomly from different parts of Visakhapatnam city of Andhra Pradesh. The method of Harris and Kalmus (1949) was followed for investigating the taste sensitivity of these subjects to PTC.

Table 1: PTC taste thresholds among Jalaris

| Solution Number   | <1   | 1    | 2    | 3    | 4    | 5    | 6     | 7     | 8     | 9     | 10   | 11   | 12   | 13   | 14   |
|-------------------|------|------|------|------|------|------|-------|-------|-------|-------|------|------|------|------|------|
| Males (n = 109)   | 4.59 | 2.75 | 1.83 | 0.92 | 3.67 | 6.42 | 8.26  | 21.10 | 26.61 | 16.51 | 5.50 | 1.83 | 0.00 | 0.00 | 0.00 |
| Females (n = 106) | 8.49 | 7.55 | 3.77 | 1.89 | 4.72 | 6.60 | 10.38 | 16.98 | 21.70 | 14.15 | 1.89 | 0.94 | 0.94 | 0.00 | 0.00 |
| Total (n = 215)   | 6.51 | 5.12 | 2.79 | 1.40 | 4.19 | 6.51 | 9.30  | 19.07 | 24.19 | 15.35 | 3.72 | 1.40 | 0.47 | 0.00 | 0.00 |

## RESULTS AND DISCUSSION

Results are presented in table 1. It shows that antinode falls between solutions 3 and 4 for both sexes. Among the 109 males tested, 98 were found to be PTC tasters and 11 non-tasters. Similarly, out of the 106 females, 83 were PTC tasters and 23 non-tasters. It was observed that the percentile frequency of tasters was much higher than that of non-tasters (Table 2). The sex difference in the frequency of tasters and non-tasters was statistically significant. ( $\chi^2 = 5.4350$ , d.f.1,  $p < 0.05$ ). In the total material, it was observed that 84.19% subjects were PTC tasters and 15.81% non-tasters with a frequency of 0.6023 and 0.3977 for *T* and *t* alleles, respectively. Among the non-tribal populations of Andhra Pradesh, the frequency of non-tasters ranges from 1.71% in Rellis to 66.67% in Wad Balijas. The present Jalari community with a figure of 15.81% is close to Brahmin (AU Reports, 1973) and Relli caste groups (Chandriah and Birkahadur, 1979) of the state.

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Table 2: PTC phenotypes and allele frequencies among Jalari

| Sex     | Number tested | Phenotype frequencies |             | Allele frequencies |        |
|---------|---------------|-----------------------|-------------|--------------------|--------|
|         |               | Tasters               | Non-tasters | T                  | t      |
| Males   | 109           | 89.91                 | 10.09       | 0.6823             | 0.3177 |
| Females | 106           | 78.30                 | 21.70       | 0.5342             | 0.4658 |
| Total   | 215           | 84.19                 | 15.81       | 0.6023             | 0.3977 |

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