

Some Morphogenetic Traits among the Vennekula Kshatriya of Andhra Pradesh

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ABSTRACT The Vennekula Kshatriya, an endogamous caste population living in Chittoor district of Andhra Pradesh was studied for morphogenetic traits such as hand-clasping, arm-folding and handedness. A preponderance of right hand-clasping and right handedness were observed over the left type among males and females, whereas the frequency of right arm-folding was greater only among females. The sexes fail to record significant differences. The percentage frequency of these traits have been compared and stand well within the ranges of neighbouring caste populations of Andhra Pradesh.

INTRODUCTION

Population diversity provides a unique opportunity to study the morphogenetic variation among the endogamous populations living in different geographical and ecological conditions (Bhasin and Khanna, 1994). The occurrence on the frequency distribution of genetical, morphological and behavioural traits among the people of the Indian region have been listed by Bhasin et al. (1992). Therefore, considering the dearth of data, the present study was undertaken to investigate the frequency distribution of hand-clasping, arm-folding and handedness among the Vennekula Kshatriya caste population of Andhra Pradesh.

MATERIALS AND METHODS

The sample consisted of healthy unrelated subjects of Bandapalli and Chinabandapalli villages of the Chittoor district of Andhra Pradesh. The field work for the present study was carried out among the Vennekula Kshatriya caste

population in 1985. The total number tested for the study was 215 subjects. Of which 125 were males and 90 were females aged between 15 and 64 years. To determine hand-clasping and arm-folding, the subjects were asked to perform clasp and fold their hands in natural way. The thumb in the hand-clasping and the hand in arm-folding, that occupy the upper position classified as right or left using standard methods of Weiner and Lourie (1961). These phenomenon were repeated thrice to ascertain the observation. For handedness, a person was classified as right or left depending on hand used for various activities. All the tests were performed without making the subject conscious about investigation.

RESULTS AND DISCUSSION

The percentage distribution of morphogenetic variables among the Vennekula Kshatriya shows that right type of hand-clasping (male 57.6%, and female 57.8%) dominates over the left type (male 42.4% and female 42.2%) in both the sexes (Table 1). The sexual difference is statistically not significant. The frequency of types right and left observed are stand well within the range reported for other population groups (Bhasin and Khanna, 1994 ; Yadav et al., 1994).

The frequency of left-arm-folding in males is predominates over (59.2%) right type (40.8%), while it is just the opposite in case of females (right 53.3% and left 46.7%). Inter-sex variation has been found to be statistically non-significant, suggesting similarities among them. The present study is closely related to Chamar, Kumhar and Kamboj populations of Haryana (Yadav et al., 1994).

With regard to the handedness, the frequency of right handedness is 90.4% among males and 87.8% among females. The males

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exhibit higher percentage of right handedness than their female counterparts, but the sexual differences are non-significant. However, studies from other states reveal that the frequency of right handedness in males varied from 48.0% to 100.0% and in females from 93.2% (Chetry and Sengupta, 1992) to 100.0% (Das et al., 1985; Bhasin and Khanna, 1994).

Table 1: Percentage distribution of morphogenetic traits among Vannekula Kshatriya

Sex	Number tested	Hand clasping		Arm folding		Handedness	
		Right	Left	Right	Left	Right	Left
Male	125	57.6	42.4	40.8	59.2	90.4	9.6
Female	90	57.8	42.2	53.3	46.7	87.8	12.2
Total	215	57.7	42.3	46.0	54.0	89.3	10.7
χ^2 -value		0.0008		3.3446		0.4768	
		p < 0.05		p < 0.05		0 < 0.05	

From the available studies on the Andhra Pradesh populations it can be seen that the frequency of right type of hand-clasping is the highest (69.0%) among Viswa Brahmin, whereas the lowest frequency (41.0%) is found among Yadava (Parvatheesam, 1995). Madiga (58.5% Reddy, 1984) showed the highest incidence of arm-folding, whereas the lowest (31.0%) is found in the Niyogi Brahmin (Sreenath, 1981). It is apparent from this investigation that the Vannekula Kshatriya shows homogeneity with their counterpart castes in Andhra Pradesh in respect of the hand-clasping and arm-folding traits (Raju, 1982; Parvatheesam, 1995). However, it has also been observed that Vannekula Kshatriya show significant differences with some of the neighbouring populations for hand-clasping (Gajula Balija, Viswa Brahmin and Ediga), and for arm-folding (Gajula Balija, Viswa Brahmin, Niyogi Brahmin, Madiga Pattusali and Yadava) indicating heterogenous distribution (Sethuraman, 1979; Parvatheesam, 1995).

On the whole, the frequency distribution of the various morphogenetic traits investigated are

within the broad range of variation when compared with that of Andhra populations.

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