

# Nutritional Status of the Hill Korwas of Madhya Pradesh, India

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**ABSTRACT** The present study is an attempt to assess nutritional status of the Hill Korwa tribal population of Madhya Pradesh (M.P.). The study is based on 239 unrelated individuals (136 adult males and 103 adult females) from predominated inhabited villages namely Ghatgaon and Sewari (Raipur blocks), Jori and Raghupur (Lundra-Dhorpur blocks), Raikaya (Shankargarh blocks), Ramnagar and Khala (Ambikapur blocks) of the Surguja district, M.P. The Pelidisi index indicate that all males and females have low nutritional status, whereas the Pignet index shows that 0.82%, 1.64%, 18.03%, 28.69%, 27.87% 13.11% and 9.84% males are belonging to Very Sturdy, Sturdy, Good, Average, Weak, Very Weak and Poor nutritional status groups, respectively.

Tribal groups of India, found in widely varying ecological and geoclimatic conditions with differential concentration throughout the country, constitute 7.76% of the total population (Census, 1981). They inhabit divergent physical environmental, biological, socio-cultural and economic set-ups, often lacking modern health care facilities. There are 426 Scheduled Tribes in the country (People of India, 1989) of which 74 are referred to as primitive tribal groups (Commissioner Report, 1986-87). Malnutrition has emerged as a major health problem of many tribal groups (Rao et al., 1986; Basu et al., 1989 and Sharma, 1992). In view of this and the National Health Care Policy (NHP) studies on the nutritional status of the Scheduled Tribes, Scheduled Castes and Minority Communities have assumed extreme importance. Information regarding nutritional status of primitive tribal groups is still very scanty, but they are essential for formulating nutritional programmes.

An attempt has, therefore, been made in the present study to assess the nutritional status of the Hill Korwa (adults males and females)

tribal population of Madhya Pradesh. The Hill Korwas reside in Madhya Pradesh and Bihar. In Madhya Pradesh they are sparsely distributed in Surguja (9,163) and Raigarh (5,412) districts with a numerical strength of 15,341 (including Kodakus) as per Census, 1981. The present observations show that they are in various phases of development, and for subsistence they depend upon agriculture, occasional hunting and collection of forest products.

## MATERIAL AND METHODS

A total of 136 Korwa adult males and 103 females were randomly chosen, from the predominantly Hill Korwa-inhabited villages, for body weight, height vertex, sitting height and chest circumference measurements. The villages are Ghatgaon and Sewari (Raipur blocks), Jori and Raghupur (Lundra-Dhorpur blocks), Raikaya (Shankargarh blocks), Ramnagar and Khala (Ambikapur blocks) of Surguja district, Madhya Pradesh. Regarding body build assessment, two indices, i.e. Pelidisi or Von Porauest Index (c.f. Masoon, 1931) and Pignet Index (c.f. Haque, 1989), have been calculated using appropriate measurements. The average height and weight of adult males and females were also calculated showing the means and standard deviations.

## RESULT AND DISCUSSION

The results show that the average height is 156.77 cm and average weight 48.43 kg males, and 146.39 cm and 38.73 kg, respectively for females (Table 1). The Pignet Index shows that 50.82% males have

Table 1: Average weight and height of the Korwa adult

| Sex     | Total No. | Height<br>vertex (cm) | Body<br>weight (kg) |
|---------|-----------|-----------------------|---------------------|
|         |           | Mean±S.D.             | Mean±S.D.           |
| Males   | 133       | 156.77±5.89           | 48.43±4.84          |
| Females | 103       | 146.39±4.94           | 38.73±5.70          |

malnourished status (Table 2) and the Pelidisi Index shows that 100% males and females have the same (Table 3). To sum up, the body build of Korwa adult (both males and females) is found to be unsatisfactory.

Table 2: Nutritional status according to Pignet (body build) Index\* of the Hill Korwa adult (males)

| Class                  | Total No. | Per cent |
|------------------------|-----------|----------|
| Very sturdy (up to 10) | 1         | 0.82     |
| Sturdy (10-15)         | 2         | 1.64     |
| Good (16-20)           | 22        | 18.03    |
| Average (21-25)        | 35        | 28.69    |
| Weak (26-30)           | 34        | 27.87    |
| Very Weak (31-35)      | 16        | 13.11    |
| Poor (36 & above)      | 12        | 9.84     |
| Total                  | 122       | 100.00   |

\* Stature - Chest circumference in cm + Weight in kg

Table 3: Nutritional assessment according to Pelidisi (Von Porauest) Index\* among the Hill Korwa (males and females)

| Category                                         | Total No.<br>of males | Per cent | Total No.<br>of females | Per cent |
|--------------------------------------------------|-----------------------|----------|-------------------------|----------|
| —Distinctly low state of nutrition (up to 92)    | 133                   | 100.00   | 103                     | 100.00   |
| —State of mild under nutrition (92.1 to 95)      | —                     | —        | —                       | —        |
| —Normal state of nutrition (95.1 to 100)         | —                     | —        | —                       | —        |
| —Midly over weight (100.1-105)                   | —                     | —        | —                       | —        |
| —Distinctly over weight or obese (105.1 & above) | —                     | —        | —                       | —        |

\*  $\frac{1}{3}10 \times \text{Weight (gm)} / \text{Sitting height (cm)} \times 100$

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