PRINT: ISSN 0970-9274 ONLINE: 2456-6608
DOI: 10.31901/24566608.1992/03.03.11

JOURNAL OF
HUMAN ECOLOGY

J. Hum. Ecol., 3(3): 231-233 (1992

Anthropometric Assessment of Nutritional Status of Kamars - A Primitive Tribe of Raipur District, Madhya Pradesh

P. Vijay Kumar and Mitashree Mitra*
School of Studies in Anthropology, Ravishankar University Raipur, Madhya Pradesh 492 010, India

KEY WORDS Anthropometry. Kamar. Primitive Tribe. Raipur. Madhya Pradesh. Malnutrition.

ABSTRACT Kamar is one of the six identified primitive tribes of Madhya Pradesh. Nutritional anthropometric survey was conducted on 196 preschool Kamar children in 42 villages of Raipur district during 1989-1990. The nutritional status of more than 90% of the children was found to be malnourished as evaluated by anthropometric measurements and reflected by age independent and age dependent indices, suggesting that preschool children need better health care among the Kamars.

INTRODUCTION

In the field of anthropology, anthropometric assessment of nutritional status (nutritional anthropometry) is widely acceptable and well recognised at population level for evaluating the magnitude of malnutrition. The relevance of such assessments for guiding public health welfare programmes, specially in tribal populations with inadequate nutrition and high infant mortality rate, is pointed out by many investigators. In tribal communities, the preschool children (children below 5 years of age) are specially vulnerable segment of population and are particular victims to malnutrition which in turn is responsible for high childhood morbidity and mortality. There is a paucity of data on nutritional anthropometry for preschool children on various populations of our country, particularly for tribal children and the need for such data has been emphasized in the interest of tackling malnutrition. Therefore, anthropometric data have been collected to ascertain the health condition and nutritional status of Kamar preschool children of Raipur district.

Kamar is one of the six identified primitive tribes of Madhya Pradesh (M.P.) with a population of only 19,500 in M.P. and 14,015 alone in Raipur district (Census, 1981). They are regarded as probably the earliest inhabitants of the district on the basis of culture, state of economy and tribal tradition (Gazetteer of India, M.P., Raipur, 1971). Kamars are very shy people and they reside in small villages, living in small huts, generally away from the main roads, surrounded by undulating terrain, thick forest and depend almost entirely on natural resources for their subsistance. Kamar tribe is endogamous and their social organization is based on totemic exogamous clans. Shrouded in magico-religious beliefs and taboos, Kamars are highly conservative in their attitude towards modern medicine. In addition, low literacy (2.21%), inadequate nutrition, inhospitable environmental conditions such as very poor sanitation and personal hygiene and the lack of safe drinking water have added impact on morbidity and mortality profile and on their health status. Use of family planning methods is totally banned by the Government in Kamars due to their less population growth rate, which is almost stagnant since 1911. 'The Kamar Development Project' was established in 1982 by the State Government for their socio-economic development and special schemes were prepared for the welfare and upliftment of the Kamar tribe. Gariaband tahsil

of Raipur was selected as head quarter of the Project in 1984 and Gariaband, Mainpur, Chhura and Nagri Blocks were pooled with the Project and declared as 'scheduled area'. The Kamar Development Agency estimated the total number of Kamars as being 13,500 in these four Blocks, which is 3% of the total Scheduled tribe of the district. Keeping the above observations in view it is felt that the need and requirement of the hour is to undertake the anthropometric study on Kamar preschool children which would be helpful for tackling the problem of malnutrition and for developing effective health care guidelines for them.

MATERIAL AND METHODS

Anthropometric survey was conducted on 196 Kamar preschool children (101 boys and 95 girls) residing in 42 villages of Raipur district during the months of May to July 1989 and February to July, 1990. Standard techniques and equipments were employed for recording nutritional anthropometric measurements as recommended by Jelliffe in 1966. In the absence of any authentic written record all possible efforts were made to arrive at the correct age of the children by making use of all available conventional tools and cross - checked from the various available sources. As the Government is paying keen attention to this lesser known tribe therefore, the members of the Project are also personally involved with the Kamar people and keep personal information of the Kamar families. These members had helped us to ascertain the correct age of the children in most of the cases. Though attempt was also taken to estimate the age from their dental state but it was impossible due to unhygienic situation and inadequate nutrition prevalent in this group, which marred the observation. In the present report age dependent and age independent criteria are evaluated for the assessment of nutritional status. The indices suggested by Jelliffe (1966), Rao and Singh (1970), Kanawati and McLaren (1970), Waterlow (1972), Ghosh and Tejaswini (1976) and Waterlow et al. (1977) were followed for grading of malnutrition. The Harvard Growth standard (Stuart and Stevenson, 1959) was used as reference. Many investigators have used these indices in their investigations to evaluate the extent of malnutrition successfully.

RESULTS AND DISCUSSION

The analysis of age dependent criteria reveal that according to weight for age a majority (165 children *i.e.* 84.18%) on grading (Jelliffe, 1966) was found to be severely malnourished and mid upper arm circumference (Ghosh and Tejaswini, 1976) detected 178 children (90.82%) to be malnourished. The analysis of age independent criteria reveal that weight for height (Waterlow, 1972) detected 133 (67.86%) children to be severely malnourished. The ratio of weight and height square (Rao and Singh, 1970) detected 115 (58.67%) children to be severely malnourished. Mid upper arm circumference and head circumference ratio grading (Kanawati and McLaren, 1970) estimated 163 (81.63%) children to be severely malnourished. The index of Waterlow et al. (1977) using weight for height and weight for age diagnosed, only 2.55% children to be in normal nutritional state. The nutritional status of more than 90% of the children was found to be malnourished as evaluated by anthropometric measurements and reflected by the above indices.

Our earlier studies (Kumar et al., 1989, 1990) clearly indicate that the diet of the Kamars appears to be unsatisfactory in all respects. The consumption of various nutrients except iron is much below the recommended allowance. Personal hygiene is almost non-existent among them. Environmental sanitation is a far cry. Extreme poverty and ignorance are responsible for this. Another study (Kumar et al., 1991) reveals that infant mortality constitute the major bulk of postnatal mortality. It emerges conclusively that malnutrition is a

serious public health problem among Kamar children which is mainly due to non-availability of food and all these observations suggest that preschool children need better health care among the Kamars.

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