



## INTAKE OF PROTEIN IN TRIBAL ADOLESCENT GIRLS OF GADCHIROLI DISTRICT OF MAHARASHTRA

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Communicated : 14.01.2024

Revision : 26.01.2024 & 03.02.2024

Published : 31.05.2024

Accepted : 22.02.2024

### ABSTRACT:

The term 'adolescence' represents a hyper anabolic phase of growth, mediated by hormonal factors and characterized by peak velocities of growth. It is also a crucial phase of growth since it offers the second and last chance for the catch up with the growth in the life cycle of girls. Tribal population constitutes about 8% of the total population of India. They are at higher risk of under nutrition because of their dependence on primitive agriculture practices and uncertainty of food supply. The Madia of Gadchiroli in Maharashtra district is found in the same localities as Gond proper and there dialects are almost identical. Nutritional pattern in these years may be considered to be significant as it influences growth and reproductive maturation. The majority of girls selected in the study were 16 years old. The study was carried out in the area of Protein intake; significantly high percentage (49.8%) of adolescent girls from the Gond-Madia community was underweight. The protein intake of adolescent girls was 40.9gm/d significantly lower than the RDA for protein; however, after providing the nutrition related training, the girls indicated remarkable improvement by consuming more protein. Significantly high percentage of the people from Gond-Madia tribe is illiterate. After imparting nutrition education and supplementation there is remarkable change in their nutrient intake.

**Keywords:-** Adolescent girls, protein intake, Gond Madia.

### INTRODUCTION :

Adolescence a period of transition between childhood and adulthood is a significant period of human growth occurs with unique changes during this phase of life. The health of adolescence scattered global attention in the past decade. In terms of the gender-related development index, India ranks 99 among the 130 countries included in the index (UNDP 1995). Gender inequality begins even before birth and is consistently adverse throughout the life of the Indian women more than one way. Adolescent constitute over 21.4 % of the population in India. This period needs special attention. Poor nutritional status during adolescence is an important determinant of health outcomes, especially for the females. The inadequate nutrition leads to underdevelopment such as short stature in adolescents. As health systems have accepted life-cycle approach, the proximity

to biological maturity and adulthood may provide final opportunities to implement certain activities designed to prevent adult health problems. Hence the present study was undertaken to study the nutritional status of adolescents in rural area of Gadchiroli. (Deshmukh et al; 2006). Tribal population constitutes about 8% of the total population of India. (Rao et al., 2006a). They are at higher risk of under nutrition because of their dependence on primitive agriculture practices and uncertainty of food supply (Rao et al., 2006b). In general, tribal communities in India are neglected, discriminated in terms of income distribution and social status, which tend to have higher rates of undernutrition (Bisai and Mallick, 2011; Chakrabarty and Bharati, 2008). Recognizing these problems, the Government of India has been implementing several programs for overall development of the tribal communities (Rao et al., 2006). In spite of vulnerable segment

of population, adolescent girl of many indigenous communities have suffered higher degree of undernutrition (Rao et al., 2006a; Bisai and Mallick, 2011; Sil et al., 2011) and not received adequate attention. They are at higher risk of undernutrition because of their dependence on primitive agriculture practices and uncertainty of food supply (Rao et al., 2006b). In general, tribal communities in India are neglected, discriminated in terms of income distribution and social status, which tend to have higher rates of undernutrition (Bisai and Mallick, 2011; Chakrabarty and Bharati, 2008). Assessment of nutritional status is considered as a measure of health and it is necessary for planners to understand the food and nutrition situation among tribal population for upliftment of these vulnerable groups. Materials and Method Gadchiroli is one of the districts of Maharashtra in India. The study was carried out in the year 2011. The target population was 98 Gond madia adolescent girls of Gadchiroli, in the age group of 16 year. The selected adolescent girls were briefed on the objectives of the study and all of them gave consent to take part in the study. The anthropometric measurement included body weight. Weight was measured with the subject standing and wearing light clothes to the nearest 0.1kg using an electronic scale. Height is measured as standing height without boot or chapel wore by the subject. Protein intake was calculated. Precise information of food consumption pattern of the subjects was gathered through 24 hours recall method using an interview schedule. Intake of nutrient was computed using the values given in the nutritive value of Indian foods (Gopalan et al. 2001). The collected data were processed and statistically analyzed. 'Z' test was used for analyzing the data.

#### OBJECTIVES

1. To enlighten some of the selected relevant aspects of the nutritional status of tribal adolescent girls of Gadchiroli district.

2. To understand the problems encountered by adolescent girls about food and nutrition

#### MATERIALS AND METHOD :

Gadchiroli is one of the districts of Maharashtra in India. The study was carried out in the year 2011. The target population was 98 Gond madia adolescent girls of Gadchiroli, in the age group of 16 year. The selected adolescent girls were briefed on the objectives of the study and all of them gave consent to take part in the study.

#### RESULTS AND DISCUSSION :

The nutrient in food enable the cell in our bodies to perform their necessary functions. This describes how the nutrients in food are essential for our physical functioning. Nutrients are the nourishing substance in food that are essential for the growth, development and maintenance of body functions. Therefore it is necessary to know the food habits of individual. In view of the importance of these parameters data was collected from the adolescent girls belonging to Gond-Madia tribe of Gadchiroli and the results are presented in following table 1.

Table 1 Shows result of protein consumption of adolescent girls of Gond-Madia community of Gadchiroli District. On the basis of the statistical analysis of the collected data, it was observed that mean protein intake of adolescent girls belonging to 16 years was 40.9±4.8 gm . Subsequent to this, the protein value observed was compared with the standard value (as given by Indian Council of Medical Research i.e. ICMR, RDA). Hence, it is concluded that the protein intake of the adolescent girls belonging to Gond-Madia tribe is remarkably less than the desired RDA Like other nutrients, consumption of protein is also very important. Previously, Wait(1973) had stated that in general the adolescent girls consume a significantly ( $P < 0.05$ ) less quantity of protein than boys. Similarly, Rayan et al. (1984) while studying nutritional status in six villages of Southern India reported that the average protein intake of the adolescent girls exceeded the values

of RDA. They also found that majority of them were non-vegetarians and consumption of animal foods was less. Moreover, Sarupriya and Mathew (1988) observed that the intake of proteins by the adolescents from the village Gogunda of Rajasthan was much higher than that of RDA for that of same age. Furthermore, it has been reported that the amount of protein in the diet varies according to the total amount of cereals consumed. Sarojini and Vijayalaxmi (1989), conducted a study on food and nutrient intake of adolescent girls and concluded that there is deficit in consumption of proteins as well as green leafy vegetables and fruits in the diet of adolescent. More recently, Ghosh (2014) has reported that protein intake of the adolescent girls belonging to the Santhals, a tribal community of west Bengal, India is also significantly lower than the desired intake. However, Menon et al., (2014) have reported that the adolescent girl of the Ramtek Tahsil of Nagpur district also reported that along with protein the iron deficiency is also prevalent. Similarly findings are also reported by Kotech et al., (2009). Thus, in the present study, there appears to be the food consumption pattern, which is a determinant of the protein consumption amongst the adolescent girls belonging to Gond –Madia tribe of Gadchiroli District. These results emphasize that the situation of adolescents belonging to different tribes is grim and needs urgent attention so that they can live a better life.

#### CONCLUSION :

As the study conducted it is found that the tribal adolescent girls who were of 16 years age group is significantly less nutrient content than the desired as recommended by ICMR. Along with remarkably under weight. Hence, it is concluded that tribal adolescent girls need adequate diet.

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**Table No.1 Mean daily protein (gm) consumption of Tribal adolescent girls of Gond – Madia Community of Gadchiroli District.**

Age (years)		N	Mean	SD	S.V.	% Deficit	Min.	Max.	MD	't'	P
16	Pre	98	40.9	+4.8	55.5	26.2	33.0	45.1	14.5	29.5	<0.05
	Post										