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Research article

## NUTRITIONAL STATUS OF TRIBAL CHILDREN IN ANDHRA PRADESH

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### ABSTRACT

**Context:** Tribes constitute separate socio-cultural groups, having distinct customs, traditions, marriage, kinship, and property inheritance systems. They live largely in agricultural and pre-agricultural level of technology. Their dependency on nature and impoverished economy bear effect on the nutritional status different compared to the general population. **Aims:** To study the prevalence of malnutrition in the under-five years age group tribal children in the three regions of Andhra Pradesh and compare the same with national statistics. **Methods and Material:** A cross sectional survey was carried out to assess the nutritional status of under-five age group children in three Integrated Tribal Development Agency (ITDA) blocks of Andhra Pradesh. **Results & Conclusions:** Based on the WHO Child Growth Standards, the prevalence of malnutrition was lower in the AP tribal blocks than the national averages among tribal populations, but higher than the overall national and state averages.

**Keywords:** Nutrition, Scheduled Tribes, Wasting, Stunting, Underweight.

### INTRODUCTION

The Tribal Population in India is 8.6 percent according to 2011 census.<sup>1</sup> Tribes constituted separate socio-cultural groups having distinct customs, traditions, marriage, kinship, property inheritance system and living largely in agricultural and pre-agricultural level of technology. Their dependency on nature and impoverished economy may affect the nutritional status as compared to their counterparts in the general population. Young children in India suffer from some of the highest levels of stunting, underweight, and wasting observed in any country in the world, and 7 out of every 10 young children are anaemic.<sup>2</sup> The percentage of children under age five years who are underweight is almost 20 times as high in India as would be expected in a healthy, well-nourished population and is almost twice as high as the average percentage of underweight children in sub-Saharan

African countries. Near about fifty percent of the children under the age of five years in India are moderately or severely malnourished. The prevalence of under nutrition is more in vulnerable groups like Tribal population. While Andhra Pradesh harbors nearly 9 percent of the Indian Tribal population, there are limited studies on the nutritional status of Tribal Children in Andhra Pradesh. Hence a study was contemplated to assess the nutritional status of Tribal children in Andhra Pradesh.

#### Objectives

1. To study the prevalence of malnutrition in the Under-Five years age group tribal children in the three regions of Andhra Pradesh.
2. To compare the nutritional status of tribal children in Andhra Pradesh with that of national statistics.

## METHODS AND MATERIAL

**Study Design:** A large community based, cross sectional study was conducted in 2007 to assess various health indicators in tribal blocks of Andhra Pradesh. The current article is an extract from this study. The study was planned to cover three Integrated Tribal Development Agency (ITDA) blocks one each in Rayalseema, Telangana and Coastal area to cover all the three regions of the state of Andhra Pradesh. Three ITDA blocks were selected including, Srisailam ITDA project (21 villages; Rayalaseema region), Bhadrachalam ITDA project (25 villages; Telangana region), and Rampachodavaram ITDA (19 villages; Coastal region).

In each of the selected ITDA blocks 1000 households were covered thereby a total of 3000 households were covered with 5% as attrition rate to accommodate the locked houses and also migrated population. The target was to cover over 10,000 populations. The villages were listed out in cumulative order as was provided by the tribal welfare department and among them villages were randomly selected to cover the 1000 households.

Clearance from Institutional Ethics Committee was obtained. All children less than five completed years of age were included in the study with the informed consent of the mother. A pretested questionnaire was used to interview the mothers and record the Child's anthropometric data. The questionnaire included variables of demography, gestational history, birth history, immunization status, feeding history and clinical findings apart from Height/Length, Weight and Mid Arm circumference. Standard procedures were followed to measure Weight and Height/Length of the child. WHO Child Growth Standards<sup>3,4</sup> were used for assessment of nutritional status of the children.

A stunted child<sup>4</sup> has a height-for-age z-score that is at least 2 standard deviations (SD) below the median for the WHO Child Growth Standards. Chronic malnutrition is an indicator of linear growth retardation that results from failure to receive adequate nutrition over a long period and may be exacerbated by recurrent and chronic illness. A wasted child<sup>4</sup> has a weight-for-height z-score that is at least 2 SD below

the median for the WHO Child Growth Standards. Wasting represents a recent failure to receive adequate nutrition and may be affected by recent episodes of diarrhea and other acute illnesses. An underweight child<sup>4</sup> has a weight-for-age z-score that is at least 2 SD below the median for the WHO Child Growth Standards. This condition can result from either chronic or acute malnutrition, or both.

## RESULTS AND DISCUSSION

A total of 1,013 Tribal children under five years of age were surveyed. Of these 544 were boys and 469 girls. Among the 1,013 tribal children who were assessed for malnutrition, 489 (48.27 %) were stunted, 239 (23.59 %) wasted and 490 (48.37%) underweight as per WHO Growth Standards.<sup>4</sup> The Prevalence of stunting was 49.50 percent in Bhadrachalam, 51.21 percent in Srisailam and 48.66 percent in Rampachodavaram. The prevalence of wasting was 23.08 percent in Bhadrachalam, 24.06 percent in Srisailam and 23.37 percent in Rampachodavaram. The prevalence of underweight was 48.16 percent in Bhadrachalam, 49.23 percent in Srisailam and 47.13 percent in Rampachodavaram (Table 1).

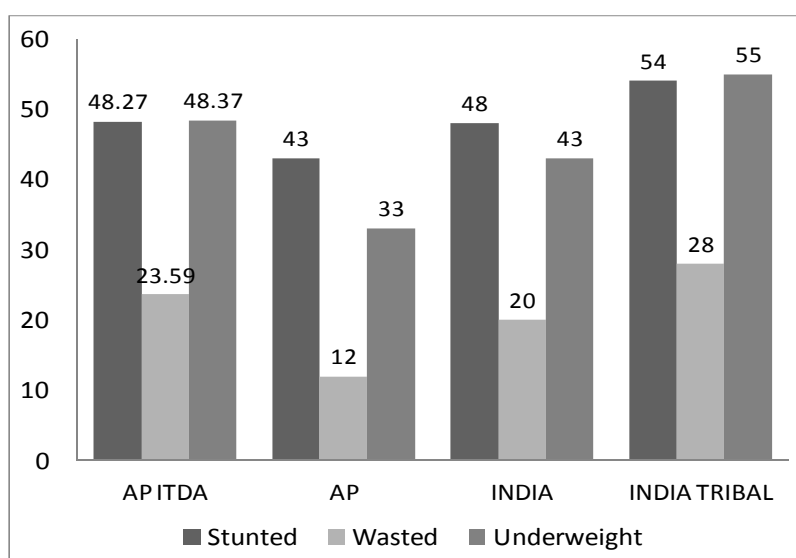
The prevalence of stunting (height-for-age) in the tribal children of Andhra Pradesh (48.27 percent) as assessed by the current study is similar to that of the national average of 48 percent. But it is much lower than the national average of stunting among the scheduled tribes of 54 percent as found in National Family Health Survey (NFHS -3).<sup>2</sup> Whereas it is higher than the overall prevalence in Andhra Pradesh of 43 percent as found in NFHS-3<sup>5</sup> (Fig 1).

The prevalence of wasting (weight-for-height) is 23.59 percent in the current study which is more than overall percent of India (20 percent) or Andhra Pradesh (12 percent). But lesser percent are wasted as compared to a national average of wasting among the scheduled tribes of 28 percent as found in NFHS-3.

The prevalence of underweight (weight-for-age) in the current study was 48.37 percent which is higher than the overall average of the country (43 percent) and AP state (33 percent). But it is lower than the prevalence of underweight among the tribal children of India (55 percent).

**Table 1 : Prevalence of Under Nutrition Among Under Five Age Group Children in Three ITDA Blocks Of Andhra Pradesh**

POPULATION	Sample	Stunted		Wasted		Underweight	
		N	%	N	%	N	%
<b>AP (TRIBAL)</b>							
Boys	544	260	47.79	129	23.71	263	48.35
Girls	469	229	48.83	110	23.45	227	48.40
Pooled	1013	489	48.27	239	23.59	490	48.37
<b>Bhadrachalam</b>							
Boys	163	80	49.08	38	23.31	78	47.85
Girls	136	68	50.00	31	22.79	66	48.53
Pooled	299	148	49.50	69	23.08	144	48.16
<b>Srisailam</b>							
Boys	252	130	51.59	61	24.21	124	49.21
Girls	201	102	50.75	48	23.88	99	49.25
Pooled	453	232	51.21	109	24.06	223	49.23
<b>Rampachodavaram</b>							
Boys	129	62	48.06	30	23.26	61	47.29
Girls	132	65	49.24	31	23.48	62	46.97
Pooled	261	127	48.66	61	23.37	123	47.13



(All values in percentages)

**Fig1: Status of Under-Five Child Nutrition: Current Study & NFHS-3**

## CONCLUSION

Malnutrition continues to be a persistent public health problem in India and more so among the Scheduled Tribes of the country. While the indicators of malnutrition among the under five tribal children in the current study done in Andhra Pradesh are better than the country figures, they are much higher than the

national averages of tribal populations. With a wide cultural diversity among tribes, like in AP, efforts to identify food taboos and fads and addressing the same through ICDS support may help in the long run to bridge the gaps.

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