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Traditional Nutritional Practices among Tribal Women in Andhra Pradesh: A Cultural Insight

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Abstract
For humans, a healthy diet includes preparation of food and storage methods that preserve nutrients from oxidation, heat or leaching, and that reduces risk of food borne illnesses. India has high rate of under nourished population with marginal improvement in situation in last 25 years. The prevalence of underweight, stunted and wasted is higher in tribal and rural areas than urban. The progress on other parameters of the nutritional status such as level of anemia in population groups and birth weight of newborns is also slow in the tribal community. India had a series of initiatives and programmes since independence which focused on improving nutritional status of the population. Malnutrition refers to deficiencies, excesses or imbalances in a person's intake of energy and/or nutrients. 'Under-nutrition'- which includes stunting (low height for age), wasting (low weight for height), underweight (low weight for age) and micronutrient deficiencies or insufficiencies (lack of important vitamins and minerals). There has been some progress on improving nutritional status of tribal population in India. A few measures taken are integrated health and nutrition initiatives with closer collaboration of ITDA, health, women and child development and education departments. Diversification of supply of food under government programmes including more nutritious items such as millets, eggs, milk, soyabean and nutrient rich fresh foods and promote nutrition garden concept.

Key Words: adult, anaemia, children, food, gender, government, nutrients, tribal, women

Introduction

Majority of the tribal children who are below 6years were formed to be undernourished and having nutritional deficiencies like anaemia, B complex, vitamin C, calcium deficiency. Majority of the pregnant and lactating women were formed to be underweight and anaemic few months were having calcium deficiencies as well. The adolescent girls were found to be anaemic and underweight irrespective of genders. The elderly persons were also suffering with nutritional deficiencies and health problems. It was found that weaning foods are given to the young children only after 1 year of age till then the child is completely breast feed. Majority of the tribal women do not have the knowledge of the types of foods to be given to the young children, the food that is cooked for the family is being fed to the children no special foods are given.

The consolidated data of nutritional status indicated that following inferences:

1. Majority of the tribal families do not consume milk and milk products which is related to their cultural factor not taking the milk from the cattle in a group which is leading to protein and calcium deficiency.
2. It was found that the consumption of green leafy vegetables was minimum to meal in their daily diets.
3. Majority of the tribal families grow vines and tubers in their backyards and consume the same every day.
4. The diet consumption of the tribal families comprises of cereals and pluses based. Millets consumption is minimum to nil. Though the tribal families grow finger millet, the consumption is limited to found in few age groups.
5. It was found that the children are not given any home cooked snakes and have the habit of having the processed foods from local markets which are not safe and hygienic.
6. The tribal families have the habit of straining the pattern from the cooked rice and it is fed to the cattle. Majority of them do not have the knowledge of healthy cooking practices minimizing cooking nutrient losses.
7. The cooking oil used in the tribal families was palm oil, sunflower oil, besides using locally extracted oil from mahuva plant seeds.
8. It was found that tribal families minimum of dry fruits that is cashew. Though the tribal areas grow cashew orchards all the produce is sold without givingimportance to the family consumption.
9. The carrot and beetroot consumption was also found to be very less.
10. Lactating mothers are given gongura, palak, longbeans, brinjal, milk, groundnut and jiggery, chekki, eggs, chicken, ragi malt, guava, coccinia.
11. Only when any family member is sick and notable to consume rice, chapathis made with wheat flour are given.
12. Starch rich foods like colacasia, cassava, sweet potato, potato all consumed most of the time, other vegetables include long beans, brinjal and ladies finger.

13. Majority of the people eat guava and cluster apple among the fruits.
14. Comparatively non-vegetarian foods are taken in more quantity that the vegetables and greens

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The tribal people are known for their culture and traditions. Majority of the tribal population have rich indigenous technical knowledge which they apply for their day to day life. Though there is information available on nutri rich foods and importance of balanced diets through local Anganwadi centers of ICDS project, tribal families are reluctant to follow due to illiteracy and ignorance. But changes are being observed due to repeated orientation and awareness programmes on health and nutrition especially to the vulnerable groups. There is a need for innovative approaches to create awareness about the importance of balanced foods and nutritional status of children in their local language through folk arts and street plays. Tribal diets need to be enriched with nutria-rich foods. This is possible only when their farming systems change to meet the nutritional needs of tribal families.

Tribal women's food habits vary by tribe and region, but here are some common characteristics:

a) **Starchy foods**: Rice is a common staple food, and maize and wheat are also eaten.
b) **Pulses and dals**: These are eaten twice a week.
c) **Vegetables**: These are eaten daily, but are often cut into large amounts of water and then drained, which can cause a loss of vitamins and antioxidants.
d) **Cooking methods**: Open pan cooking is common, which can cause a loss of water-soluble and heat-liable vitamins.
e) **Seasonal foods**: Fruits and vegetables are eaten when they are available in the forest or field.
f) **Milk and milk products**: These are rarely consumed.
g) **Sugar**: This is rarely consumed.
h) **Ghee and oil**: Consumption is often poor.
i) **Food preparation**: Food is often cooked and eaten in private due to the belief in evil spirits.
j) **Food taboos**: Some foods, like fish, chilies, full liquor, and papaya, are tabooed during pregnancy.
k) **Food for the sick**: The sick are often deprived of food initially to help them recover.
l) **Food for new mothers**: Coconut and desi ghee are often given to new mothers for a few days after delivery.
m) **Food for post-partum recovery**: Boiled local chicken curry with garlic, pepper, and salt is often eaten for the first one to two months after delivery.
n) Tribal food consumption patterns are linked to nature and socio-economic practices. There are times when food is abundant, and other times when there is extreme deprivation.

Methods

It is a cross-sectional study conducted in Prakasam district among the reproductive age group tribal women. The study was conducted during the period from April 2024 to October 2024. Sample size was calculated as 225 based on the prevalence of malnutrition as 64% as reported by previous studies.[3] Multistage simple random sampling technique was applied to select villages. In the first stage, 3 Community Health & Nutritional Centres were selected randomly among the six CHNCs in ITDA Seethampeta division. In the second stage, 3 PHCs were selected from each selected CHNC. In the third stage, one village was selected from each PHC. A house to house survey was conducted to interview 25 women in reproductive age group in each village. In case of less populated villages/ small hamlets where 25 women could not be covered, the subsequent hamlet/village was included for the study.

Written Permission was obtained from ITDA Additional District Medical and Health Officer (DM and HO) for conducting the study and taking help from the PHC staff. Help of Local Multi-purpose Health worker Female (MPHW-F) and Accredited Social Health Activist (ASHA) was taken for identification, initial contact and for translation of conversation where ever required.

Tribal women in reproductive age group (15-49 years) available at home at the time of study and those who were willing to participate were included in the study. Pregnant and lactating women and those women with chronic infectious diseases were excluded from study. A prior consent was taken from selected women and a pre- tested semi structured schedule was used to collect the information. Economic classification was done based on guidelines of Planning Commission of India.

As there is no separate definition for tribal area, definition of rural area had been applied to tribal area. Continuous earning capacity of the family throughout the year was enquired. If the family had opportunities for 5 days work per week throughout the year, without any break in any season, summer, rainy or winter seasons, then the family considered as it had continuous earning capacity throughout year.

Anthropometric measurements such as height and weight were measured and body mass index was calculated. According to the WHO classification of BMI, study subjects were categorized as Underweight (<18.50),

Normal (18.50- 24.99) and Over weight (≥25.00). Based on the additional cut-off points, women in the normal range were again classified in to two categories such as class 1 (18.50-22.99) and class 2 (23.00 -24.99) and women in pre-obese category were also classified as pre- obese class 1 (25.00-27.49) and pre-obese class 2 (27.50- 29.99). Pallor was observed by examining the conjunctiva of study women in day light. MS Excel 2007, SPSS trail version-21 software's were used for statistical analysis. Chi-square test was used to test the significance of results.

Results

Table 1: Socio demographic profile of tribal women.

Age groups	Number (%)n=225
15-30	169 (75.1)
31-49	56 (24.9)
Education	Number (%)n=225
Illiterate	135 (60)
Literates	90 (40)
Occupation	Number (%)n=225
Unemployed / Housewives	63 (28)
Working women	162 (72)
Type of Family	Number (%)n=225
Nuclear family	144 (64)
Joint family	81 (36)
Marital status	Number (%) n=225
Married	217 (96.4)
Unmarried	8 (3.6)
Number of children	Number (%)n=225
<2 children	169 (75.2)
>2 children	56 (24.8)
Religion	Number (%)n=225
Hinduism	177 (78.7)
Christianity	48 (21.3)
Economic status	Number (%)n=225
Above Poverty Line	132 (58.7)
Below Poverty Line	93 (41.3)
Continuous earnings throughoutyear	Number (%)n=225
Present	64 (28.4)
Not Present	161 (71.6)
Debts	Number (%)n=225
Yes	80 (35.6)
No	145 (64.4)

The anthropometric measurements of the tribal women inthis study reveals that there is deficit in both weight and height as compared to the standards. The Indian Council of Medical Research (ICMR) has set a standard of 151 cms as average height for Indian women and 55 kg as average body weight for Indian reference women. However the mean height among the study population was found to be 147.95 cm and the mean weight was 45.01 Kg which shows the tribal

women were shorter by 2% and have a deficit of 18.16% in their weight as compared to the average Indian women. This finding is consistent with that of other studies such as Ghosh et al., and Kupputhai, U et al. In contrast to these findings various studies conducted in Andhra Pradesh as well as in different settings have reported the mean height to be higher ranging from 152 cm to 160 cm. This difference may be due to the ethnic variation as there was a representation of tribals from different regions in some studies. As per the anthropometric measurements, it was found that majority were in normal category, very less. Around one fifth of the women were in moderate to mild categories which suggests that any further nutritional deficiency may lead to severe deficiency. Contrasting findings have been reported by various studies conducted in different parts of the world. Very high prevalence of thinness was reported in some Indian studies.

Conclusion

Even though tribals worldwide have similarities in several aspects, there may be difference in the dietary intake, (the quantity and quality of diet) and genetic variation of the indigenous groups may influence their BMI status. It is also observed that studies in the past have shown a higher the prevalence of underweight compared to the recent findings including the present study, suggesting an improvement in the nutritional status in the past decade. A significant difference in the BMI status is found between women of different age groups. In present study, it is observed younger women were having better nutritional status as compared to older women in the age group of 31-49 yrs. In contrast Bose et al has reported a lower nutritional status in terms of BMI among young tribal women. Studies have shown that among tribal families around 70% of the monthly income is spent on food. Continuous earnings throughout the year and debt free condition of the family provide the women as well as the family the opportunity of having nutritious food thus having better BMI. The same is reflected in our study as continuous earnings throughout the year and debt free condition of the family have been found to be having significant influence on BMI. The prevalence of anaemia in the current study population was 60.9%. This finding was higher than the national average prevalence of anaemia in reproductive age group women according to NFHS-3 i.e 55%. Sree Lakshmi PR et al., and Srinivas BM et al., reported a high prevalence of anaemia in tribal women in their studies than the current study result, whereas Ramachandra Kamath et al., reported a low prevalence of anaemia in tribal women when compared to the present study result.

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