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A comparison study between nutritional status of rural women of coastal Andhra and Telangana

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Abstract

India is a country with different geographical and climatic conditions. Majority of population in India live in rural areas. Women are socialized to be self-sacrificing from childhood onwards to give first and take only if somebody chooses to give or if there is something extra to give. Telangana and Coastal villages are having different food habits and different geographic situations. Majority of Telangana rural women they prefer to take millet based food along with Dhal and vegetables, most of them can't effort non vegetarian food items in their daily food intake. It was also noticed in food survey that coastal people include non-vegetarian food including dried aqua products and milk and milk products in high amounts compare to Telangana families. This study was conducted in united Andhra Pradesh in two villages one from Telangana and one village from Coastal Andhra with 30 thus making to a total of 60 rural women. A schedule was used to collect data by following anthropometric measurements such as height & weight were measured and Body Mass Index (BMI) was calculated. From all age groups it was showing that Telangana rural women were fit with normal weight and coastal women also fit. But in overweight category and obesity₁ category coastal respondents were in danger zone.

Keywords: Anthropometric measurements, Body Mass Index, Obesity, Rural women, Nutritional level

Introduction

India is a country of rich natural resources and talented human resources and yet its dream of becoming self-sufficient and considered as a 'developed country' rather than a 'developing country' seems a distant reality due to the complexity of its problems. Rural Indian women are extensively involved in agricultural activities. However, the nature and extent of their involvement differs with the variations in agro production systems. The mode of female in agricultural production varies with the landowning status of farm households. The patriarchal system prevalent in India (except in one state) makes women the worst victims of poverty as their multifaceted responsibilities include that of a care taker, giver and a protector. This is truer among those women belong to the low socio-economic groups in urban slums and rural areas. Based on this background this study was conducted for the rural women. A total of 60 rural women were selected as the sample for the study both from Telangana and Coastal Andhra.

From the findings it was proved that based on BMI levels majority of Telangana women were under nourished status in all age groups when compare to Coastal Andhra. Although it appears that, nutrient deficiency in calories, proteins and fats appears to be low in Coastal region, if we consider micro nutrient most likely that the region may be better of considering the high proportion of fruits, vegetables, milk and meat products in the diet compared to Telangana.

Methodology

Explorative Research Design was used for the present study. From Coastal Andhra, Krishna District and from Telangana Nizamabad Districts were selected randomly from united Andhra Pradesh. Bairapur Village from Birkur Mandal and Tallapalem Village from Bandar Mandal were selected. From each village, thirty rural women were selected based on various age groups, which formed a total of 60 rural women as sample respondents. A pre-tested semi structured questionnaire was administered to the selected women respondents from each household to elicit information regarding their family, education, occupation and socioeconomic status. Anthropometric measurements were taken by using Chatillon weighing scale, anthropometric rod and fibre glass tape by standard techniques (Agarwal, 1992) ^[1] and compared with NCHS (1977) ^[5] standards. Body mass index was calculated using height weight data and women were classified into different degrees of nutritional status using the cutoff levels suggested for Asian women (IOTF/WHO, 2000) ^[2]. Analysis of Anthropometric Measurements Many formulae have been proposed to describe the way in which weight varies

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with height during growth. Body Mass Index (BMI) – Weight/Height² was independent of age group. The samples were then categorized under undernourished, normal, overweight and obese using WHO classification given in Table 2.1.

Table 1: Nutritional status based on WHO and Asian criteria values

Nutritional Status	WHO criteria BMI cut - off	“Asian criteria” BMI cut - off
Underweight	<18.5	<18.5
Normal	18.5-24.9	18.5-22.9
Overweight	25- 29.9	23- 24.9
Pre-Obese	--	25-29.9
Obese	≥30	≥30
Obese Type 1 (obese)	30-40	30-40
Obese Type 2 (morbid obese)	40.1-50	40.1-50
Obese Type 3 (super obese)	>50	>50

Source: <https://truweight.in/blog/health/indian-bmi-calculator-men-women.html>

Results and Discussion

Comparative picture of the nutritional status between Coastal rural and Telangana rural women of Andhra Pradesh was obtained as given below:

Comparison of Nutritional Status between Coastal Rural Women and Telangana rural women based on anthropometry data in 21-30 years’ age group.

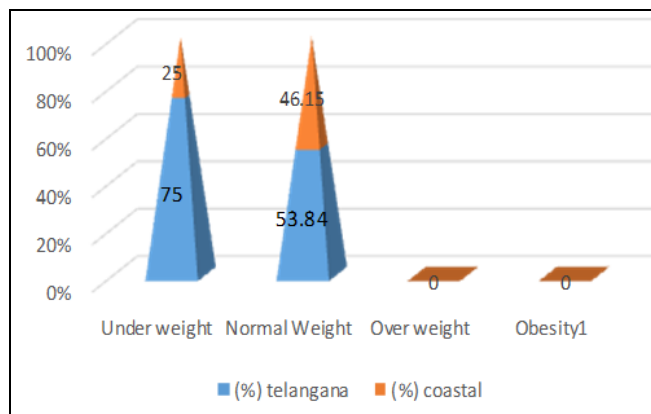


Fig 1: Distribution of data differences between Telangana and coastal rural women- 21-30 years.

From the obtained results in above figure on BMI levels of women, majority of Telangana women were under nourished status with 75% followed by coastal women with 25% of underweight respondents. Nearly half of respondents under this age group belongs Telangana area were fit with normal weight. It may be due to the reason of most of the Telangana people prefers millet based diet and very limited availability of non-vegetarian food in a rural area when compare to coastal areas. Udaya Lakshmi and Babitha (2014) [7] found in her study that the normal BMI of the rural women were 9 (15%), 28 (46.5%) were above normal, 19(31.5%) were overweight and 4(6.5%) were below normal. The mean BMI of the subjects was 22.49 i.e. above normal.

Comparison of Nutritional Status between Coastal rural women and Telangana rural women based on anthropometry data in 31-40years age group

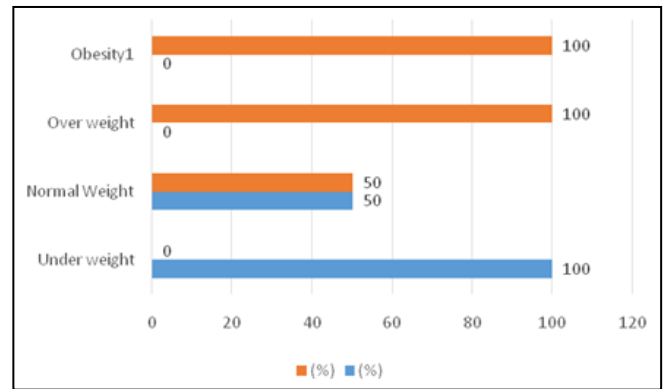


Fig 2: Distribution of data differences between Telangana and coastal rural women-31-40 years.

From the research findings based on BMI levels majority of Telangana women were underweight status with 100%. Half of respondents under this age group belongs Telangana area were fit with normal weight. These results were matching with the results of Nagamani (2014) [6] that the rural forward caste women were better in all the anthropometric measurements than compared to rural Scheduled Caste women but both were deficient with the ICMR standard reference values. Coming to the overweight and obesity 1 categories coastal women were in danger zone with 100%, the reason might be lack of proper knowledge on balanced diet and essential nutrients another reason is coastal people prefer for dried aqua products which are very high in nutritional amounts like protein, fat, and salts. These results were quite opposite to the results of Megha Mittal (2013) [4] that more than 50% of the samples fell under normal BMI range, i.e. 18.5-24.99, 25% were underweight having a BMI 0.85 WHR indicating increased health risks for women due to excess fat in the abdominal region.

Comparison of Nutritional Status between Coastal Rural Women and Telangana rural women based on anthropometry data in 41-50years age group

From the obtained findings based on BMI levels majority of Telangana women were under nourished status with 100%. 42.85 of respondents under this age group belongs Telangana area were fit with normal weight and coastal women also fit with 57.15%. Coming to the overweight category coastal women were with 83.33%. and obesity 100% coastal respondents were there in this danger zone.

Table 2: Comparison of Nutritional Status between Coastal rural women and Telangana rural women based on anthropometry data in 41-50 years age group

Category	Frequency		Percentage(%)	
	Telangana	Coastal	T%	C%
Under weight	3	0	100	0
Normal Weight	3	4	42.85	57.15
Over weight	1	5	16.66	83.33
Obesity1	0	2	0	100

Now a days watching T.V for prolonged hours and lack of proper body activity is one of the major reason for the obesity.

Comparison of Nutritional Status between Coastal rural women and Telangana rural women based on anthropometry data in 51-60years age group

From the findings of Table 3 it was proved that based on BMI levels majority of Telangana women were under nourished status with 100%. More than half of respondents under this age group belongs Telangana comes in normal weight.

Coming to the overweight and obesity 1 categories coastal women were in danger zone with 100%. Generally aged people will not have much interest on their diet. Rural people don't know about geriatric nutrition. So there is chance for such outcome of our study on this age group.

Table 3: Comparison of Nutritional Status between Coastal rural women and Telangana rural women based on anthropometry data in 51-60years age group

Category	Frequency		Percentage (%)	
	Telangana	Coastal	T%	C%
Under weight	1	0	100	0
Normal Weight	8	4	66.66	33.33
Over weight	0	3	0	100
Obesity1	0	1	0	100

Conclusion

The anthropometric measurements indicate the body's responses to dietary intakes. While the height is affected by long term changes in diet, weight is one which dwindles due to the periodical dietary and environmental changes. Food expenditure diversity across regions brings out interesting results showing greater diversity across sea-coast and Telangana. In this context the choice of fish to other non-vegetarian foods may be attributed to the fact that people with a high level of concern for health are likely to make several consistent lifestyle choices, which include regular exercise and reasonable food selection. Millets are free of gluten unlike rice and wheat; have low glycemic index. Urban influence is more in life style of rural women in Coastal Andhra, when compare to Telangana rural women, ultimately which resulted in their BMI levels. Which showed results in overweight and obesity 1 categories coastal women were in danger zone with 100%.

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