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Reforming Beliefs

FOOD AND HEALTH STATUS OF SCHEDULED TRIBES IN VISAKHAPATNAM DISTRICT OF ANDHRA PRADESH

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ABSTRACT

Ecologically, the tribal households are far from homogenous; they display a diversity of high order. The areas of tribal concentration have been generally described as the forest and hilly areas of the country. Their ignorance and the long- sightedness of the money lenders play with the tribal lives. With less income they take less nutrient food and it leads to health problems among scheduled tribals. This paper addresses the food and health status of scheduled tribes in the study area. Expenditure on food takes the major share of expenditure followed by paying interest on loans and medical care. The average intake of food items in the sample population of Visakhapatnam District is not up to the suggested level. This malnutrition may be one of the causes for their high disease prevalence in the study area. The disease prevalence rate for females in the total sample is around 28 per cent. Malaria and general fevers are widely prevalent in the study areas. Most of the scheduled tribes do not agree to take modern medicine (Allopathy), and they are reluctant to accept it. Most of the women did not consult doctors when they need. In this regard, the government should initiate the tribals the importance of the medical care.

Introduction

In the traditional caste system (Varna vyavastha), the Indian society has been divided into four groups, known as castes, on the basis of occupations. But, in the modern Indian social system there are two more marginalized caste groups namely, Scheduled Castes (SCs) and Scheduled Tribes (STs). Even today, widely pervasive reality in respect of

tribal communities in India is that most of them are geographically isolated, economically weak, socially ignorant, politically indifferent, culturally rich, behaviorally simple, trustworthy and leading their life in the lap of nature.

Low agricultural production and lack of an appropriate food distribution system are the reasons for low levels of the nutritional status. In addition to the low agricultural production, the nutritional status of the population is to be viewed as the problem of poor quality of food intake due to low literacy and lack of awareness. Food consumption expressed in kilocalories (kcal) per capita per day is a key variable used for measuring and evaluating the global and regional food situation. Shortage of food and nutrient inadequacies leads to ill-health of the tribal people.

In India there are 573 scheduled tribe communities. In Andhra Pradesh dwell 33 of them. In India, the president is empowered by the constitution to declare a community as a scheduled tribe community.

The growth rates of scheduled tribe population in Andhra Pradesh are 5.47, 2.24, 6.50, 2.79 and 3.01 for the years 1951, 1961, 1971, 1981, 1991 and 2001 respectively. Except 1961 and 1991, the decadal growth rate of tribal population is more than the growth rate of general population. From 1951 to 2001 the tribal population has increased by five times but for the general population it is only 1.5 times.

In Visakhapatnam, the growth rate of tribal population from 1981 to 2001 is 57 percent. For Andhra Pradesh and India this is 58 and 63 percent respectively. This indicates that growth rate of tribal population in Visakhapatnam is less than that of state and national average respectively.

The share of tribal population in the total population of Visakhapatnam increased marginally from 13.74 to 14.55 from 1981 to 2001, the same for Andhra Pradesh and India stands at 5.93 to 6.59 and 7.6 to 8.20 respectively.

The Data and Methodology

The primary data comprise of collecting information from the selected sample tribal households in the tribal areas of Visakhapatnam district of Andhra Pradesh by way of

canvassing a structured schedule among them. In addition, the secondary data are also taken from the Chief Planning Officer of Visakhapatnam District. The primary data has been collected during the month of June and July of 2007.

A sample of 138 households is selected for the study. A Multi-stage random sampling technique is employed to select the sample households. In the first stage, Visakhapatnam District of Andhra Pradesh has purposively been selected for the study. Then, Anantagiri Mandal was selected from the district. In the third stage, four villages from the mandal were selected. They are Damuku, Ananthagiri, Chilakalagedda and Khambhavalasa. In the fourth stage, all the tribal households in the sample villages were interviewed with a pre-prepared schedule.

This paper deals with the food and health status of Scheduled Tribes in the sample households in the study area.

Table-1 explains the size and the average size of the family. Majority of the sample households at the aggregate and random levels are in the region of three to six members per household. The overall sample population lies at 583 persons for 138 families making the average size of the family to be 4.22 members for a family.

Table-1: Distribution of the sample households on the size of their family

Size of the family	No. of households	Per cent
1	1	0.72
2	16	11.59
3	27	19.56
4	43	31.16
5	21	15.22
6	22	15.94
7 &Above	8	5.79
Total Households	138	100.00
Total Sample Population	53	
Average Size of the family	4.22	

Table-2 denotes the gender wise classification of the total sample population and sex ratio. In the study area, out of the sample population of 583, 293 persons are males and the remaining 290 are females, pegging the sex ratio of 990 females per 1000 males. Although it is less, it is better when compared to the national and state average of the sex ratio. In the child sex ratio it is recorded at 1080 and it is a positive sign.

Table-2: Gender Wise Classification of the Total Sample Population

Gender	Total Sample Population	Per cent
Male	293	50.26
Female	290	49.74
Total	583	100.00
Overall Sex Ratio	989.70	
Child Sex Ratio	1080	

Table-3 gives the specific age and gender classification of the total sample population. Out of the total sample population (583 persons), majority of the population (69%) is under the category of productive age group i.e., 15 to 59 years, while the unproductive categories i.e., below 14 years and above 60 years comprises 27 and 4 per cent of the total sample population respectively. The analysis indicates that the population under the productive age group and under the below 14 years age group is very high and in the category of above 59 years is 4 per cent.

Table-3: Age Specific and Gender Specific Classification of the Total Sample Population

Age Group	Total sample population					
	Male	**Per cent**	**Female**	**Per cent**	**Total**	**Per cent**
0-14	75	25.60	81	27.93	156	26.76
15-59	203	69.28	198	68.28	401	68.78
60+	15	5.12	11	3.79	26	4.46
Total	293	100.00	290	100.00	583	100.00

Estimates of Caloric Levels of Food

A calorie is the unit of heat necessary to raise the temperature of one kilogram of water by one degree centigrade. For calculating the families with per head calories, different food items are taken in to consideration. In this regard not every family may take each item daily but the average intake is calculated by taking the average figure of the items used by the particular group of population. The items taken into consideration are cereals, pulses and nuts, green leafy vegetables, roots, tubers and other vegetables, milk, sugar and jaggery, and the edible oils. For this, their average daily consumption levels in grams and average daily expenditure on food items is collected from the sample households. Then the data per hundred grams of each and every food item consumed by the tribal people are averaged by the above given items taken from the Indian Council for Medical Research bulletin on " The Nutritive Value of Indian Foods and The Planning of Satisfactory Diets'-Sixth Edition.

Neelakanta Rath and V.M Dandekar are the first to start calculation of the poverty ratio based on the per capita intake of the calories, based on the average intake chart provided by the Council. In the same way the study has taken, some of the items consumed in grams by the tribal people into consideration and then calories were been calculated by the intake of every family. Then as per the norms of the Council, 2400 calories are taken as minimum calorie intake for a healthy rural individual male. Based on that, the families are divided into two categories on their per capita intake of calories taking into consideration of the given minimum intake.

Table-4 brings out the classification of the sample households in the sample area based on their per capita intake of calories. This can define the households under the poverty line. With regard to the study area, out of the sample households of 138, around 41 percent of the households are above the poverty line; as such, their per capita intake of calories is above 2400 calories. In addition to this, the households below poverty line are of 59 percent. This indicates the aggravated situations in these areas.

This denotes that starving situations prevailing in these areas. As per the latest NSSO surveys and estimations the nearly 26 percent of the total population of India stands below the poverty line. However, in these areas the persons below the poverty line stands

at three times the figure of the national estimate. This indicates the situation prevailing in these areas. These areas are filled with poverty, ignorance and illiteracy. Therefore, the government and the respective authorities should take some measures in this regard. The politicians' policy of distributing money to the households during the elections is not of any use to the intended persons. The government should concentrate on income generating schemes to implement in these areas.

Table-4: Families with Per Head Calories

Calories	No. of households	Per cent
< 2400	82	59.35
≥2401	56	40.58
Total Number of Households	138	100.00

Table-5 brings out the average per capita gram wise intake of different food items and the suggested composition of a balanced diet. The data are provided in grams. The composition of balanced diet is taken from the Bulletin of Indian Council for Medical Research- 'The Nutritive Value of Indian Foods and the Planning of Satisfactory Diets'. In our study, the average intake of food items is given above. In no way they are comparable to the balanced diet. They are comparable only in roots and other vegetables like tubers. In all the items, they are lagging behind. Owing to lack of nutritional food, they have less immunization power. Therefore, they are falling prey to the epidemics prevailing in these areas. The cause for this debacle is only one, lack of sufficient income for their maintenance. The government should concentrate on income generating alternative schemes in this regard.

Table-5: Average Intake of Food Items by an Adult in the Sample Population (in Grams)

Food Item	Quantity in Grams	Suggested composition of Quantity in Grams
Cereals	335	400
Pulses	50	85
Green leafy Vegetables	42	114
Roots and Tubers	80	85
Sugar and Jaggery	25	57
Milk	39	284
Edible oils	22	57

Table-6 brings out the classification based on average annual expenditure per capita in the sample population. This shows their standard of living. Many a number of variables denote the tribal people's backwardness in their endeavour. The items taken into consideration are food, education, medical care, paying interest for loans and the other items of expenditure. The reference year is 2007 with regard to the Visakhapatnam district, per capita expenditure on food is 1522 rupees and then comes interest and the medical care issue, and the next follows. It is understandable that, even though they are spending less, due to improper utilization of the available facilities, they have to spend a lot on medical provision.

This table is to indicate their average pattern of expenditure on their provisions. In this regard, the government should motivate them on the facilities provided to them on several aspects and to provide alternative income generation activities to get supplementary income which will go a long way in solving their food and other problems as well.

Table-6: Average Annual Expenditure per capita in 2007 On Several Items

Items of Expenditure	Average annual expenditure (Rs.)
Food	1522
Education	103
Medical Care	259
Paying for Loans	324
Others	257

Table-7 brings the classification of the households based on their annual expenditure on food. In this, the expenditure is fixed in three ranges. The information is provided for the year 2006. In this regard in the Visakhapatnam District, majority of the families are in between the ranges below Rs10,000/- per annum. This indirectly states that this much expenditure is the total of their earnings. Majority of the sample households is under the hand to mouth earning. This may be the main cause for the high rate of disease prevalence in these areas. Therefore, the measures of the government intended for the welfare of the scheduled tribes should concentrate on income generation schemes.

Table-7: Distribution of the sample households on their Annual Expenditure on food for the year 2006

Range (in Rs.)	No. of Households	Per cent
≤ 4000	45	32.61
4001 to 10000	81	58.70
≥ 10001	12	8.70
Total	138	100.00

Table-8 brings out the classification of the sample households based on the age, sex and morbidity data. The disease prevalence rate for the age groups is also presented in the table. The disease prevalence rate is high among the vulnerable groups like children, women and elder people. At the aggregate and individual levels, we can observe that women are the main victims of diseases in these regions.

Table-8: Distribution of the infected population on the basis of their Age and Sex

Range of age (in years)	Diseased persons			
	Male	Per cent	Female	Per cent
0-14	19	27.94	18	21.95
Disease Prevalence Rate	25.33		22.22	
15-58	45	66.18	59	71.95
Disease Prevalence Rate	22.17		29.80	
59&above	4	5.88	5	6.10
Disease Prevalence Rate	26.67		45.45	
Total	68	100.00	82	100.00
Disease Prevalence Rate	23.21		28.28	

Table-9 brings out the classification of the sick persons based on their gender and the type of disease from which they suffered from. In this area majority of people, there is a wide

spread of malaria attack and the others followed with lack of sufficient nutritional food and timely medical provisions, leading them to starve and wait for the outside help.

That is the main reason for taking only some diseases in this regard. With regard to the study area, out of the disease affected persons in the reference period, 46 persons suffered from general fevers and 102 persons suffered from malaria, viral fevers and some of its perpetuities, only two persons suffered from other diseases, such as gastric problems and others. Out of the 102, malaria affected persons; nearly 60 percent are women, the vulnerable section in the society. So, the government should take some pro-active measures in this regard, such as, enlightening them on hygienic surroundings and drinking boiled water and using the modern medicine. In the process of data collection, it is observed that majority of the tablets given are simply set-aside in the house, and are not used for the intended purpose.

Table-9: Distribution of the afflicted population based on Sex and Type of Disease

Gender	Type of Disease			
	General fever	**Malaria**	**Others**	**Total**
Male	26	42	--	68
Female	20	60	2	82
Total	46	102	2	150

Table-10 brings out the gender differential classification of the disease-affected persons in the sample households based on whether they consulted the doctor or not. In the tribal areas due to the inaccessible terrain and the non-supporting atmosphere, many of the government doctors do not wish to serve in these areas. Owing to ignorance many a number of tribals believe in the traditional medicine, that too the private and unqualified doctors who take up that activity for their employment, take huge amounts of money and make the tribals believe that super natural elements are the cause for the disease. Mean while, the disease becomes severe and leads to death of the person.

With regard to the sample area, out of the affected 150 persons, 34 percent of them did not consult the doctor. In that, 43 per cent are males and the remaining 57 percent are females. In this regard, it is observed that there exist the gender-differences in consulting

the doctor. At this out set, it is imperative to understand that due to lack of sufficient money or due to ignorance they are unable to obtain proper medical attention to get rid of the disease. Therefore, the government should initiate proper measures in this regard. Proper motivational programmes are the need of the hour. If the tribal people approach the doctor, he or she may obtain proper medical attention for the disease. On the other hand, if the affected tribal people, by lack of money cannot reach or approach the doctor, in some particular seasons, the government should allow them to reach the hospital free of cost.

Table-10: Distribution of the patients on the basis of Sex and consulting a doctor

Gender	Consultation of Doctor		
	Yes	No	Total
Male	46	22 (43)	68
Female	53	29 (57)	82
Total	99	51 (34)	150

*Figures in the parenthesis indicate their percentage with their totals.

Table-11 brings out the gender differential classification of the disease-affected persons based on the question of what type of doctor they consulted. The doctors are taken into two categories, government doctor and private doctor. As already explained, the tribal people approach the traditional superstitious healers and the unqualified doctors, who play with their lives. In this context, it is imperative to study the type of doctor they consult, when they are sick. In our study, it is understood with a glance that majority are approaching the traditional and unqualified natural healers. In our study, out of the 150 affected persons, 99 consulted the doctor. In this way, they themselves are allowing others to take them to the deathbed. The government should encourage the tribal people to go for modern medicine through all the available media. The private doctors should be discouraged in the sense they have to be replaced by experts from outside or train the local educated youth in this regard in providing timely help and also to motivate the tribal to take modern medicine. This can go a long way in solving most of their problems. Instead of serving the scheduled tribes in the interior regions, the majority of the government doctors

prefer to quit the job. Therefore, the government should take stringent action against the doctors who are reluctant to work in remote areas. It should also provide the scheduled tribes with anti-biotic; safe drinking water and free ration in the lean seasons so that they may not be afflicted with diseases.

Table-11: Distribution of the patients on the basis of Sex and Type of Doctor Consulted

Gender	Type of Doctor consulted			
	Government Doctor	Private Doctor	Not consulted Doctor	Total
Male	13	33	22	68
Female	19	34	29	82
Total	32	67	51	150

Table-12 brings out the gender differential classification of the disease-affected persons based on the amount of expenditure incurred in the process of getting rid of that disease. In our study, out of the 150 affected persons, 99 consulted the doctor, majority of them incurred expenditure more or less Rs.1, 000/-. Moreover, it is strange to see the persons who incurred more than Rs.1, 000/-. As a whole, it has been understood that the female's medical expenditure is too high.

The government is providing medicines at free of cost. The government should initiate educating the tribal people in this regard. Corruption is prominent in each nook and corner of society. However, extending it to the tribal areas and using it on the illiterate and ignorant people is cynical. Their ignorance in this regard is playing perpetual role. From the above analysis it can be observed that many a number of tribal patients are approaching the traditional and private healers without any knowledge and qualification. In the mean time the latter making money on this indigenous people. The measures meant for the tribals should have the motivational programmes at the core, and then only they can succeed in their intention.

Table- 12: Distribution of the diseased persons by their Sex and Expenditure Incurred

Gender	Medical Expenditure by diseased persons (in Rs.)				
	100 to 500	500 to1000	1000 & above	NA*	Total
Male	21	19	6	22	68
Female	20	20	13	29	82
Total	41	39	19	51	150

*Not applicable – Those who does not consult Doctor.

Table-13 brings out the classification of the sample households based on their expenditure on the medical care. Medical care is necessary in these inaccessible areas. People in these areas suffer from many a type of epidemics and are prone to diseases because of the atmospheric conditions and bad hygiene.

In our study, about 75 per cent of the sample is spending much amount for the maintenance of their lives. That too, the remaining persons who do not spend are because of lack of money but not lack of sickness. Over the years, it is interesting to see the number persons spending more money on medical care. Again, it is also disheartening to see more number of households expending more money for the sake of their health.

In this regard, when asked for their immediate needs many voted for the providing of hospitals. This indicates that many are in need of health facilities. When visited the areas, much sophisticated medicines are provided for the tribal people, but due to the inaccessible terrain and lack of financial assistance and that much motivation in using the modern medicine, they are starving, in the sense this is due to the working of vicious circle of poverty. Therefore, it is advised that those measures that are intended for the welfare of the tribes must start with the motivation of their opinions with regard to the development.

Table-13: Distribution of the sample households on their Annual Expenditure on Medical Care in 2006

Range (in Rs.)	No. of households	Per cent
0	23	16.67
1 to 50	42	30.43
500 to 2500	63	45.65
2500 to 4000 and above	10	7.25
Total	138	100.00

Conclusions

In the study 58.70 percent of the sample households are spending around Rs. 4,000/- to Rs.10, 000/- on food. Most of the families are spending the major portion of their income on food. More than 38 percent of the sample households are spending more than Rs.500/- on medical care. This may be a cause for the tribal indebtedness. As most are spending 100 percent of their incomes on food for the remaining necessities, they are approaching private moneylenders for credit. As most are spending on health care, this may throw light on the disease prevalence in these areas. As explained earlier, most of their incomes are spent on food and for other necessities they have to approach and stay in the clutches of private moneylenders. Expenditure on food takes the lion's share of expenditure made by the sample households and followed by paying interest on loans and medical care. More than 59 percent of the sample households intake of calories is less than the stipulated level in our study area. The average intake of food items in the sample population is not up to the suggested level. This malnutrition may be one of the causes for the high disease prevalence in the study area.

The disease prevalence rate for females in the total sample is around 28 per cent. That is for every 100 females in the society of scheduled tribes 28 are affected with diseases. But this for males is 23 percent; even this is more when compared with the general population. The disease prevalence rate is high among the children and elders. Malaria and general fevers are widely prevalent in these sample areas. Out of the 150 persons, 102 are affected by malaria. In this aspect females too are worst hit. Most of the

scheduled tribes do not agree for modern medicine, and they are reluctant to accept it. In this regard, it is observed the existence of gender differentials in consulting a doctor. Most of the women did not consult a doctor when necessary. Most of the sample tribal households are approaching the private unqualified doctors when they are sick. In this regard the government should initiate motivational programmes elucidating the importance and usefulness of modern medicine.

References

1. Ali A (2003) "Health status of tribals in India "Published in Adak (ed) "Demography and Health profile of the tribes", Anmol Publications, New Delhi.

2. Anima Guha (1986) "Folk Medicine of Boro – Kacharis "Published in "Tribal Health: socio cultural dimensions" edited by Chauduri et al, Inter India publishers, New Delhi.

3. Bairathi Shashi (1991) "Tribal Culture, economy and health "Rawat Publishers, Jaipur.

4. Gopal Rani K (1996) "Tribals and their Health Status", APH Publishing corporation, New Delhi.

5. Hema malini (2005) "The sensitivity of disease incidence in the tribal zones of Visakhapatnam district" Published in Dr BS Vasudeva Rao (Ed) "Tribal Developmental Studies" Associated Publishers, Ambala Cantonment, Ambala.

6. Kupputhai U and Mallika N "Nutritional status of adult women belonging to Khond, Gadaba and Porja Tribes of Andhra Pradesh." The Indian Journal of Nutrition and Dietetics 1993: 30:173-179.

7. Mittal PC and Srivastava S (2006) "DIet, Nutritional Status and Food related traditions of Oraon Tribes of New Mal (West Bengal), India. Rural and remote health (Online), Available from Http://.rrh.org.au

8. Rao KM et al (2003) " Socio, demographic and nutritional status of tribal population of Madhya Pradesh" Published in Adak (ed) "Demography and Health profile of the tribes" , Anmol Publications, New Delhi.

9. Ranjan A (2003) " Health and Nutritional status of tribal Population in jhabua and Dhar Districts of Madhya Pradesh" Published in Adak (ed) "Demography and Health profile of the tribes" , Anmol Publications, New Delhi.

10. Reddappa L (2005) "Agricultural Development in Tribal Areas of Andhra Pradesh" Paper Published in "Tribal Developmental Studies " Edited by Dr B.S Vasudeva Rao, Associated Publishers, Ambala cantonment, Ambala.

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