

Nutritional security along with Food security: A major need in tribal areas

Ashis Kumar Sinha, Research Scholar, Jharkhand. India

ABSTRACT

Nutrition is prime concern of all living organisms for their growth, development and maintenance of the body. Human beings need a wide range of nutrients to lead a healthy and active life; derived through the diet which they consume daily. Food contains various substances that are required for growth, development and maintenance of the body are called 'nutrients' includes proteins, carbohydrates, fats, vitamins and minerals. The amount of each nutrient that is required by human depends upon their age and physiological status. Adults need nutrients for maintaining constant body weight an ensuring proper body function, while infants and children who are growing rapidly require nutrients not only for maintenance of body functions but also for growth. Thus infants and children require respectively more nutrients than the adults. In special physiological conditions like pregnancy and lactation, adult women need additional nutrients to meet the extra demand of fetal growth and maternal tissue expansion in pregnancy and milk secretion during lactation.

Key Words : Tribes, Nutrition, Food Security, Health, Nutritional security

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Introduction

Health is one of the major problems among the tribal people. The risk is increasing day-by-day, with extensive deforestation, frequent climatic calamities and the change in the traditional economy.

As per various surveys, Tribal people in India account for the highest incidence of health problems including malnutrition, diarrhea, and malaria. The tribes depend on the forest for well over 30 per cent of their food and forest products , which are essential for their life support.

It is worth mentioning that, the tribes across the country mostly live in isolation in forests and hilly terrains and have their own way of living and socio-cultural activities. Existence of tribal communities is threatened after country's developmental projects deprived them of their land, water, forest and other natural resources.

Indian Tribes

A tribe is viewed, historically or developmentally, as a social group existing before the development of, or outside of, states. Many anthropologists used the term tribal society to refer to societies organized largely on the basis of kinship, especially corporate descent groups.

Some theorists hold that tribes represent a stage in social evolution intermediate between bands and states. Other theorists argue that tribes developed after, and must be understood in terms of their relationship to, states.

'Tribe' is a contested term due to its roots in colonial anthropological foundations and the connotations that these hierarchical definitions have. It is common practice to use alternative terms like 'ethnic group', or nation.

India has the largest concentration of tribal people anywhere in the world except perhaps in Africa. The tribals are children of nature and their lifestyle is conditioned by the Eco-system. India, with a variety of ecosystems, presents a varied tribal population throughout its length and breadth.

The problems of Indian tribes are manifold, 'Malnutrition' is one of the major ones among these. During the recent past years there have been many malnutrition related deaths reported in the tribal communities across India, mostly in parts including Jharkhand, Bihar, Rajasthan, Odisha, Chhattisgarh and Madhya Pradesh.

The high number of these deaths and the continuity proves that the tribal communities are more exposed to food insecurity and child malnutrition in these states.

DISTRIBUTION

The areas inhabited by the tribal constitute a significant part of the under developed areas of the country. The tribal lives mostly in isolated villages or hamlets. A smaller portion of their population has now settled in permanent villages as well as in towns and cities. On the whole, as per rough estimates, the prominent tribal areas constitute about 15 percent of the total geographical area of the country

There are 533 tribes (with many overlapping types in more than one State) as per notified Schedule under Article 342 of the Constitution of India in different States and Union Territories of the country with the largest number of 62 being in the State of Orissa.

Among the notified tribes, some groups are still at most primitive stage. They continue to live in isolated areas and practice either primitive agriculture or no agricultural practice and most of them are still in food gathering stage with almost stagnating population. Such groups are 75 in numbers; named as Primitive Tribal Groups (PTGs).

ECONOMIC STATUS

The majority of tribal constitute the labour work force though their participation in works is declining, but not steadily. More than half of the rural tribal population is found to be below poverty line as per latest survey available with Ministry of Rural Development (1993-94).

However, there is a perceptible declining trend in persons from tribal communities below poverty line. The per capita income of tribal continues to be one of the lowest in the country and their alienation from their own land continues.

As on January 1999, the tribals were alienated from 9,17,590 acres of tribal land and only 5,37,610 acres of such land was restored as per latest statistics published by the Ministry of Rural Development.

Nutritional Needs :

Understanding of the nutritional needs of adult humans is important not only because the healthy people are more productive in all spheres of life but also contribute to the national economic growth as well. Healthy people are also capable of producing healthy progeny too who, in turn, will grow up to become future healthy adults.

The nutritional status of adults is an index of nutritional status of a community and by comparison with normal or standards can bring out nutritional deficiencies in population due to either inadequate or inappropriate diet or due to ecological, ideological, socio-economical or epidemiological factors.

Individuals differ in their morphology because of their differences in genetic make up and, therefore, carry various metabolic activities at different rates.

Similarly, some individuals may need more nutrition while the others need less to achieve similar activities and working efficiency. The nutritional needs for energy expenditure vary with age, sex, weight, body proportions, hormonal and physical activity of an individual.

The present study found that, Nutritional security along with Food security has a major need in tribal areas.

In Jharkhand the tribal communities form a hefty chunk of the total population of country. This paper is an endeavor to understand the need of nutritional security along with food security among the Indian tribes.

Objectives of the study

- ▶ To understand the nutritional problems faced by the tribal people in Eastern India
- ▶ How to address their health issues, nutritional needs and increase their life span.
- ▶ To draw attention of the government towards the nutritional needs of the tribal people.

Geographical area covered

Different tribal villages in the hilly terrain of Jharkhand, Chhatisgarh, Odisha and West Bengal including Ayodhya Hills and its surrounding tribal villages.

Work plan –

Research was carried out by personal visit and observations, questionnaire, interviews and conversations with different tribal people residing in the hilly terrains across the Jharkhand.

Besides the tribal people's opinion and comments, many earlier research reports, as well as views of educationalists, professors, head of departments of the concern subjects, particularly of anthropologists have been taken into consideration during this study and research.

A literature survey was also carried out on the study area before the field work started.

Most of the works are based on the field studies. Information on the tribal issues, needs and demands were collected during the study and survey of different Asur's villages across the Jharkhand.

During field work, interviews were also conducted.

Research Methodology

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A literature survey was carried out on the study area before the field work started. Most of the works were based on field study. The present work is the outcome of extensive study and survey of different tribal villages of Jharkhand, West Bengal and Odisha to collect information on the nutritional needs of tribes. During field work, interviews were conducted.

A.) Primary Data

Primary data was collected by

- Schedule
- Personal visits
- Observations
- Questionnaire
- Interviews and
- Conversation with different tribal peoples.

B.) Secondary Data

Secondary Data was collected from various Books, Journals, Newspapers, Magazines, Internet (including other electronic and print devices), Case study, Government records and non government organizations records.

Relevant information was extracted after processing and analyzing the recorded data as well as information's.

Significance of Research

India is an amazing amalgamation of various races and cultures, with a landscape as diverse as its population. Between 60 and 70 million Indians are tribal people. Outside the north-eastern region many face conditions ranging from deprivation to disintegration, and a relentless assault on their land, resources, culture and civilization.

Its' worth mentioning that, Tribes— India's poorest people live in the richest areas- their conditions continue to be the weakest. Mining has made the

government richer but the people of the region poorer. Usually the first targets of land grab, displacement or development in the manse for globalization, urbanization, industrialization and mining tribal people in this country.

Not only the primitive tribes but other tribal people are also under stern threat from existing model of developmental in the country; need to jointly fight against the forces that exploit the natural resources for economic growth.

Limitations of the study

Though every effort was to make it an objective study, bias at the end of the respondents cannot be ruled out.

Expected Contribution from the Study

This research will help us to understand the various issues of Asur tribes which are still exploiting them especially in Jharkhand and suggest measure to eliminate the middle men from the system by establishing direct channel between the government and the tribal. Research study would help in effectively eliminating their issues and also help us to identify the areas of further policy reforms for strengthening their socio-economical conditions.

Research would also help us to map the gap between government schemes for the upliftment of tribals and their successes ratio, especially in Jharkhand. It also highlights the role of media in bridging this gap. It will help us to explore possibility to bring tribals in the main stream of the society earliest.

JHARKHAND AT A GLANCE

Jharkhand— the 28th state of India was craved out from Bihar on 15 November 2000, covers of the forest zones of Chotanagpur plateau and Santhal Paragna. It is bounded by Bihar on the North, Orissa on the South, Chhattisgarh on the west and West Bengal on the East.

Jharkhand covers 79.70 lakh hectares area with a population of 329.66 millions (as per provisional Census 2011) , with a a large Tribal population (26.3 %). Followed by Chattisgarh, Jharkhand is the leading producer of mineral wealth in the country, like Uranium, Mica, Bauxite, Granite, Gold, Silver, Graphite, Magnetite, Dolomite, Fireclay, Quartz, Fieldspar, Coal, Iron and Copper including others.

Government schemes failed to facilitate tribal development

Despite the Government's sturdy initiatives and projects to eradicate the socio-economic problems of the tribes, development is a far cry in several tribal villages. Many anthropologists and social workers feel that many Government schemes have failed to facilitate tribal development. "The policy framed by the successive Governments have not taken into account the life style and culture of the primitive tribal groups," said Dr P Dash Sharma, a retired professor of Anthropology department.

Notably, Jharkhand State was formed for the welfare of people of the region, especially the tribals but the declining population of Primitive Tribal Groups (PTGs) is struggling for their existence.

The paradox is that though most of the Chief Ministers of Jharkhand, so far, were tribals, little has been done for the development of tribal population, particularly the PTGs. Though tribals have been given numerous rights and concessions under various statutes of Central as well as State Governments but they remain deprived of the benefits arising out of such statutory provisions due to their ignorance and apathy of enforcing agencies.

Even after enactment of Panchayats (Extension to Scheduled Areas) Act, 1996 the tribes were not getting its benefits due to lack of awareness about it.

Results and Discussion

The study found that 'Malnutrition' is one of the major constraint among the tribes. The risk is increasing day-by-day with extensive deforestation, frequent climatic calamities and the change in the traditional economy. During recent past, there have been many malnutrition related deaths reported in the tribal communities across the country, including Jharkhand, Bihar, Rajasthan, Odisha, Chhattisgarh and Madhya Pradesh. The increasing number of deaths among these people on a continuous basis proves that the tribal communities are more exposed to food insecurity and child malnutrition in these states.

The state governments, in stead of owning responsibility for these deaths, have been blaming them for their food culture and living styles and have been, accusing the members of these communities that they are superstitious.

The principal food among the tribals is rice, maize, millet, seasonal fruits including others though they are fond of ragi gruel. They prepare a concocted material which is known as "Madia Paje". It is made from grounded rice and millets that are kept overnight for fermentation, after boiling and vegetables, cereals, fish are added to develop taste.

Liquor (Mahua) forms one of the most important constituent of their daily diet which is also taken by women as well as children too. They are addicted to liquor, consumption of such alcoholic drinks aggravates liver diseases prevalent amongst them due to endemicity of malaria; causes hepato-splenomegaly (enlargement of liver and spleen). Cirrhosis of liver found to be common among the tribals.

The non-vegetarian foods such as pigs, mutton, chickens, fish, crabs, field rats are taken as and when available. They take goat and pork meat, though irregularly. These animals are not slaughtered in hygienic or healthy conditions.



In their daily diet, fats and proteins are inadequate; this leads to various types of deficiencies. Inferior diet, semi-starvation and unhygienic living conditions give rise to several diseases. Their farm produce suffices for hardly 5-6 months requirements; for remaining 6-7 months every year, they have to depend upon wild roots, fruits, flowers and

leaves of wild plants. Fruits such as mango and jack fruit provide food to tribals for about 1-2 months. Food values, and harmful effects, if any, of these wild items of forests are unknown; they may cause several types of allergies and physiological impairment.

Tribals have their dwelling on the hill-top, sub-mountainous region or barren land which is deprived of iodine, resulting in iodine deficiency. This leads to various iodine deficiency disorders.

Slash and burn type of shifting cultivation resulted in considerable degradation and shrinking of forests. The disappearance of wild life in turn has deprived them of their traditional sources of proteins. Such deficiencies, both qualitative and quantitative, have resulted in under nutrition and malnutrition.

Consumption of Food by Birhor tribe: A Study

Birhors— a nomadic forest primitive tribe; their life span or life expectancy is significantly low and they are on the verge of extinction. Illiteracy, poverty,



malnutrition, lack of proper health, hygiene, bad food habits, irrational beliefs including many more are the factors which aggravated their nutrition, disease as well as health status.

In spite of cultivation and hunting, these families now go to market also. A basic calculation has been made to find out the quantity and amount of purchasing of food to find out the amount of money they spend on food materials.

During study at 50 birhor families in Chordaha birhor tanda under Hazaribagh district it was found that average 35 kgs of rice actually was consumed by each of the families (average 5 members in each family) purchasing from the open market.

The survey shows that on an average , 35,000 grams rice is consumed by every family (of five persons) per month , which works to be 233 gms per person per day.

The study also found that there are days when there is no food, as they have no work to earn money. Even children are forced to sleep with empty stomach at night, leading to starvation deaths among children .

The soaring of the prices of rice and grains for the last few years have affected their capacity to procure food from the market, thus threatening their food security. Due to this, some of the tribal communities have left their village looking for food and employment in the towns. Some of them have to migrate to neighboring districts to look for a new job every year. Tribes depending on the field and the forest are losing their roots for living.

Food security is an important means to realize the right to food. It means the access to adequate food to all members of the household throughout the year.

Nutritional status of Tribal

As compared to the national average nutritional profile of tribals is low. Malnutrition is a cause for deep concern among the tribes. Malnutrition is a pathological state resulting from a relative or absolute deficiency or excess of one

or more essential nutrients, this state being clinically manifested or detected only by biochemical, anthropometric or physiological tests, said Dr GN Jha and anthropologist.

“The spectrum of malnutrition encompasses the entire range of problems that can occur when dietary energy or nutrient intake are insufficient, excessive or simply imbalanced”, he added. Low dietary energy supply, wasting, stunting, underweight and low body mass index (BMI) are all used to identify the problem.

This energy deficit leaves its victims prone to illness and early death; it also makes them listless and unable to concentrate. A diet unbalanced in macronutrients, the energy-providing food components, is also a cause for concern even when total energy intake is adequate.

However, the healthy range of macronutrient intake, expressed as a percent of total energy, can be broad: 55-75 percent from carbohydrates, 15-35 percent from fats and 10-15 percent from proteins.

Superimposed upon the energy intake spectrum is the global problem of micronutrient malnutrition. Micronutrients - minerals and vitamins - are needed for proper growth, development and function.

Deficiencies are particularly common among women of reproductive age, children and people with compromised immune systems.

A simple analysis of the daily nutritional consumption of the Birhors— a primitive tribe (on the verge of extinct) was done by a dietician of RIMS, Ranchi (Jharkhand) is as follows:

Food Content	Consumption	Requirement	Deficiency	Excess
Protine (gm)	103	205	102	--
Iron (mg)	72	122	50	--
Calcium (gm)	355	235	--	120
Vit. A (mg)	239	11,812	11573	--
Vit. B1 (mg)	3.7	5.25	1.55	--
Vit. B2 (mg)	1.57	5.71	4.14	--
Vit. C (mg)	11	220	209	--
Nicotine Acid	44	69.6	25.4	--

Malnutrition among the tribal children is also a cause of great concern and important not only because it is common but also because it highlights important relationship between infection, immunity and nutrition which are of universal application.

Child bearing imposes additional health needs and problems on women - physically, psychologically and socially. Maternal mortality was reported to be high among various tribal groups.

The chief causes of maternal mortality were found to be unhygienic and primitive practices for parturition. From the inception of pregnancy to its termination, no specific nutritious diet is consumed by women.

On the other hand, some pregnant tribal women reduced their food intake because of simple fear of recurrent vomiting and also to ensure that the baby may remain small and the delivery may be easier.

As per the data available, maternal malnutrition is a major cause for concern among the tribes. A little less than 75 percent of all the women of Jharkhand, suffer from anaemia, which is much higher than the national average of 52 percent.

The percentage of women with moderate to severe anemia is 30 percent which also is much higher than the national average of 17 percent.

More importantly, pregnant women suffer the highest levels of anemia. The consumption of iron, calcium and vitamins during pregnancy are poor.

The habit of taking alcohol during pregnancy has been found to be usual in tribal women and almost all of them are observed to continue their regular activities including hard labour during advanced pregnancy.

Daily Food Intake by tribes : -

SN	Major Food Item	Variety of Food	Cooked Item
1.	Cereal and millet	Boiled Rice	Cooked by boiling in water
		Ragi	Roti or chilka Dumbu-dough is kneaded and small ball is made, which is cooked in boiling water.
		Maize	Roti, Bhat is prepared by boiling broken maize in water
		Wheat	Roti
2.	Pulse	Horsegram, Black gram, Red gram, Lentil	Dal is prepared by boiling pulses in water with little salt and turmeric.
3.	Roots and Tuber	Potato, sweet potato, onion, colocassia, radish, and unconventional roots	Curry is prepared by frying and boiling in water with or without spice.
4.	Vegetables	Pumpkin, brinjal, cauliflower, tomato, ladiesfinger including others	Curry is generally prepared with cooking with little oil and spices.
5.	Leafy vegetables		Chopped leaves are fried in oil with salt. Leaves are dried, powdered, cooked with gruel.
6.	Fruits	Mango, Jackfruit, Guava, Jamun and other unconventional fruits	Ripe fruits are eaten as such Curry is prepared out of unripe jackfruit by boiling in water with salt and spices
7.	Mushroom		Fresh mushroom are eaten as curry and surplus are dried, powdered and cooked with gruel salt and spices are added for taste.
8.	Non-Vegetarian Food	Meat of buffalo, hare, rabbit, crab, field rat, goat, red ant, snail, pigeon, few species of wild birds.	Meat in boiled in water with salt and spices.
		Fish	Curry is prepared by frying fish in little oil, salt and spices.
9.	Fats and Oils	Mustard, Niger and Mahua oil.	Mustard oil commonly used for cooking; Mahua oil is used as substitute of vanaspati.

Meal pattern of tribes

SN	Meals	Item	Quantity consumed
1.	Breakfast	Left over rice with soaked water, ragi roti or wheat roti with left over vegetable or black tea.	100-150 gm
2.	Lunch	Rice	150-200 gm
		Vegetables	50-70 gm
		Gruel	150-250 ml
		Dal (Four – Five times in a month)	25-40 gm
3.	Dinner	Rice	150-250 gm
		Vegetables	75-100 gm
		Dal (Occasionally)	25-30 gm
		Meat, Fish, Egg (Monthly)	50-100 gm

The primitive tribal groups of India have special health problems and genetic abnormalities like sickle cell anaemia, G-6-PD, red cell enzyme deficiency and sexually transmitted diseases. Genetic disorders especially sickle cell disease and G-6-PD have been found to occur in high frequency among various tribal groups and scheduled caste population.

According to the available data the sickle cell disease has been found in 72 districts of Central, Western and Southern India. About 13 lakh G-6-P D deficient are present in tribal population.

Sexually transmitted diseases (STDs) are most prevalent disease in the tribal areas. VDRL was found to be positive in 17 percent includes 9 per cent males and 8 percent females.

Meanwhile AIDS is as yet not a big concern among the tribes. Study found that knowledge about AIDS is thin. In the NFHS-2 survey, 65 per cent of tribal women had not heard about AIDS, and 68 per cent did not know any method of prevention.

Analysis of Findings of the study

Study found that higher prevalence of under nutrition in tribal population is due to

- ▶ Lack of awareness
- ▶ Poverty and consequent under nutrition
- ▶ Poor environmental sanitation
- ▶ Lack of safe drinking water increased morbidity from water-borne infections;
- ▶ Environmental conditions that favour vector-borne diseases;
- ▶ Lack of health care facilities

Suggestions

Keeping in view the extremely low living standards of these communities, the state of Jharkhand recently has started Chief Minister's Special Food Security Scheme for these primitive tribes groups, under which food grains (rice and wheat) are being made available free of cost to all families of Primitive Tribes. Under this scheme each family of Primitive Tribe will get 35 kg of food grains rice per month.

There is a need to achieve nutritional security along with food security in the tribal areas. This requires awareness and education among rural population about the need of eating vegetables, seasonal fruits and milk more.

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