

Human Nutrition in Ambah Town — A Study in Geography of Nutrition

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KEY WORDS Food Habits. Malnutrition. Poverty.

ABSTRACT In this study, an attempt is made to trace out human nutrition of Ambah town. The study is based upon a sample survey of 1117 house-holds of Ambah town. These house-holds consisted of about 50 per cent population (13485 persons) of the town (1990). Each family of these house-holds was interviewed during the survey and thus the information of mal- and under-nutrition was traced out in the period from August, 1989 to July, 1990.

INTRODUCTION

This investigation makes an attempt to open a discussion on the theme of radical geography of nutrition, with a set of social and environmental relationships.

The investigation of human nutrition in relation to the spatial environmental systems, is the burning problem of India, but it is still untouched. This paper discusses the consumption of food and food elements and food habits in relation to the spatial natural and social systems. In short, the study makes an attempt : (a) to examine the natural and social environmental systems in relation to human food and nutrition and (b) to explore the planning for improving the human food and nutrition in the town. Our first aim should be in this regard, for over 2300 calories consumption per head per day in quantity.

The paper focusses that supply of sufficient food and VARIED diet for the people is essential. The paper also stresses on inclusion of very wide range of protective substances of food in the diet.

In the end, it is concluded that the integrity of the relations of environmental systems

is absolutely essential for improvement of human nutrition in the town.

Traditionally, the people of Ambah Town have been resistant to change. It is noted that generally people maintain themselves precariously in the Chambal basin town environment with ways that have little changed over a century. To a considerable extent, the impact of Chambal ravines and the nature of sedentary grain cultivation in the town sphere, have limited the nutrition of the people.

In response to harsh tropical ravine environment and poor sociocultural and economic infrastructure of the agricultural area around the town, the people are facing a number of nutritional problems. Over all, the foodstuffs available in Ambah town are limited. Thus, the data, on nutritional problems and deficiency diseases of population of the town, point of rates which are considerably higher than those among the population of the northern towns of India.

The basic distinction between the Chambal area towns and the towns of the northern plains of India is worth noting. The basic distinction between the Chambal area towns and the towns of plains of India is reflected in the basic contrasts in food and nutrition. Basic contrasts in food and nutrition are complemented by social, economic and cultural differences.

Like other towns of Central India of which Ambah town forms a part, the people here are living in conditions that anticipate misery with regards to food supply, nutrition, health and hygiene. These evils are a challenge for researchers.

Human health depending on food and food depending on spatial environment is indeed a new radical approach in the minds of geographers. Mal- and under-nutrition is a common phenomena in the town.

Physical environment is the greatest gift of nature bestowed upon men, but human efforts for its proper and full utilization have been inadequate. So the natural and social resources in the town await such type of study.

The present study is a synthetic approach to the problems of the people. The quality and quantity of food production in the nearby areas of the town and consumption of the people in the town directly concern with the nutrition. Keeping these things in view, the authors have traced first of all the factors causing nutritional problems and then to study the level of Nutrition.

THE STUDY TOWN

Ambah town is located in the sphere of the Lower Chambal Basin, district Morena - Madhya Pradesh. It is part of tropical semi-dry zone of Central India. Geometrically, it is situated from 26°28' N to 26°32' N latitudes and from 78°12' E to 78°15' E longitudes. Due to the tropical semi-dry conditions of the climate and the impact of the chambal ravines, geographically the sphere of the town is not sound from the view point of physical, biological and socio-economic and cultural environment.

NUTRITIONAL PROBLEMS

The factors causing nutritional problems are many, but the following factors are of more importance to discuss.

1. *Sedentary or Indegenous Agriculture in The Sphere of The Town :*

There is very close association of human food with the indigenous agricultural production of the town sphere. In the agricultural

area near the town, the cultivators generally grow grains, pulses and oilseeds which are the backbone of human nutrition (mostly carbohydrate) in the town.

So practised agriculture results in the shortage of high quality nutritional food (specially, the shortage of minerals and vitamins) or responsible for mal- and under-nutrition in the town.

The limitations, which environment imposes upon economic activity, foodstuffs and upon nutrition, are considerable. Around the town the cultivators do not know the modern techniques of agriculture. Multiple cropping, rotation of crops, production of vegetables and fruits and dairy products are totally absent in the area. Thus, the food and nutrition, affecting with the local agriculture, are verypoor (Table 1).

Table 1 : Consumption per head per day of major food stuffs (Year, 1991)

Foodstuffs	Grams	Calories
Cereals and Pulses	542	1880
Vegetables	18	5
Fruits	5	3
Meat, Fish and Eggs	5	6

2. *Poverty*

Poor economy is also responsible for mal- and under-nutrition of the people in this town. The occupational activity of the people results that the modes of major earning job being rudimentary (*i.e.* house construction works, oil mills, agricultural works floor mills etc.) the economic return per capita of most of the people is very low. Under hard pressed conditions, it is very difficult to procure the requisite quality and quantity of foodstuffs (fruits, dryfruits, fresh green vegetables, meat, milk etc.) and also other necessities of life. Thus, the majority of the person in this town are very poor.

Due to low production and meagre supply of vegetables from the nearby rural area of the town and rising prices of vegetables, the people are able only to purchase them occa-

sionally. (Purchase of green vegetables are very rare). As such it is noted that there is an inverse ratio between low purchasing power and mal- and under-nutrition. Thus, poverty is most probably the dominant causes of nutritional problems.

Simply, lack of food is a common cause of dietary habits and nutritional problems of the people. Therefore, for population as a whole, deficiency of calories (Average consumption of calories per head per days 1995) is far more important as a cause of ill health than all vitamins deficiency put together. It does not mean that the people are free from vitamin and mineral deficiencies (consumption per head per day of calcium 630 mg, Vitamin B2 4 mg, Vitamin C 40 mg, Vitamin A 1600 I.U. and Vitamin D- 500 I.U).

3. Ignorance

Simply parental ignorance or neglect may some times result in children being given unsuitable food. Ignorance is one of the causes of malnutrition. The people do not know what their nutrition should be. In the sphere of the town, the farmers, do not know what foods to grow to meet their needs. In the town, the feeling of general hunger is known but the feeling of tissue hunger is not common. Therefore, limited foodstuffs are grown in the nearby rural area. Thus, the food consumption of the people of the town, being dependent on the local agricultural production, is very limited and unbalanced (Table 2).

Table 2 : Average consumption of food per head per day in Ambah town year, 1991

Food stuffs	Grams	Calories
Cereals	470	1630
Pulses	72	250
Vegetables	18	5
Oils and fats	15	6
Sugar	12	45
Fruits	5	3
Meat, fish and eggs	5	6
Milk and milk products	50	50
Total	607	1995

4. Food Habits (Of Too Much Dependence of Cereals)

Nutrition problems, relating to habits is an evidence of mal adjustment between the people and their nutrition. The food habit of the people is also a consequence of the under- and mal-nutrition. The food habit results in a defective dietary effect as when monotony of grains and pulses combined their defective consumptions. This is a basic food in the town. Here the people do not feel fed if they have not taken grain and pulse. Thus, they have a strong attachments to grain only (Table 2).

In this town the people have to depend exclusively on cereals. The Cereals (specially sorghum in general have certain qualitative defects. Their protein is poor in some essential amino acids, which is one of the causes of under nutrition.

The food and nutrition are of paramount importance for human health. Its level is determined by the physico-socio-economic and cultural conditions, the status of which in the town is very low. Thus, various types of nutritional problems and deficiencies are prevailing in the area. The major deficiencies are stated here as under :

1. *Deficiencies of Proteins and Amino Acids* : The proteins of food are the only important sources of nitrogen, sulphur and essential amino acids. But some proteins are notably deficient in certain amino acids, e.g. Zein, the Chief protein of sorghum (*Jowar*), which is mainly consumed in the town, contains no lysine or tryptophan. Hence deficiency of amino acids is a major problem. There is not only the Problem of animal protein which is essential for nutrition, but also there is a problem of protein derived from vegetable sources. Because very limited plant foods are eaten in this town (cereals and pulses are the major food stuffs in the town).

Where a diet in-adequate in protein is generally best decided by calculating the con-

tribution that the protein makes to the total calories, consumed. A satisfactory diet for a healthy person should contain sufficient protein to provide not less than 11 per cent of the total calories or 14 per cent in the case of a lactating women. The daily intake of protein for an adult should not be less than 50 grams (But here in the town is only 40 grams) and it is shown in the table 3, that the deficiency of protein and amino acids is very low in the town.

(2) *Deficiency of Iron* : Iron deficiency, as it is shown in the table 3, is very low (per head per day consumption only 20 mg.)

(3) *Deficiency of Vitamin A* : In fact serious vitamin A deficiency is common in the town. Analysis of the diet eaten by the people in the town usually shows that they don't provide any supply of vitamin A. People do not obtain fresh fruits and even fresh vegetables and run very short of ascorbic acid (Table 3).

Table 3 : Consumption of food nutrients per head per day in Ambah town (Year, 1991)

Food nutrients	Consumptions in Ambah Town	Standard in India
Carbohydrates (g)	450	440
Protein (g)	40	80
Fat (g)	70	75
Calcium (mg)	630	1400
Iron (mg)	20	22.5
Vitamin A (I.U.)	1600	3500
Vitamin B2 complex (mg)	4	14
Vitamin C (mg)	40	50
Vitamin D (I. U.)	500	1000

(4) *Malnutrition* : The term malnutrition should be restricted to those nutrition disorders which are due to an insufficient consumptions of particular nutrients. Specific chemical substances such as amino acids, minerals (per head per day consumption of calcium is only 630 grams) or Vitamins (per head per day consumption of Vitamin A, 1600 I.U., Vitamin B2 Complex, 4 mg, Vitamin C, 40 mg, and Vitamin D, 500 I.U.). In this way, the qualitative aspects of faulty nutrition will not

be confused with the quantitative. Malnutrition and sub-nutrition (under feeding) frequently coexist, but by no means always. In Ambah town malnutrition, as it is shown in the table 3, as a common phenomena.

Thus, the town like Ambah, with a total food intake which is little above the minimum, has inadequately nourished population liable to easy attack by diseases of all sorts.

CONCLUSION

Traditionally, the people have been resistant to change, to a considerable extent. The nature of indigenous grain cultivation, of the town sphere have limited the amount of change in nutrition. Thus, in this town, diets are lacking in both energy and protective values. In this regards, we may sum up this complex problem of nutrition by restating three simple rules:

(a) The intake of food must be adequate in quantity to yield sufficient calories to supply energy for living and working. (In India an average of 2400 calories) per head perday has been chosen as a standard, and below 2000 is danger.

(b) The intake is likely to include sufficient protein and the very wide range of protective substances. Though a three-fourth of population is vegetarian, in maintaining requisite amounts of certain vitamins, but is satisfactory if fish and dairy products are added.

(c) Many diseases which are wide spread can be treated to deficiencies in the diet which can often be simply or easily remedied—could free themselves from misery and suffering if only old prejudices and taboos could be thrown aside (Stamp, 1965).

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