



## **Eating Habits and Consumption Pattern of Bhil Tribe Children in Suwana Block, Bhilwara, Rajasthan**

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**Abstract:** Good nutrition means maintaining a nutritional status that enables us to grow well and enjoy good fitness. The choice of food is deeply related to life style of an individual and above, in which he is living. However the food habits are highly influenced by thoughts, beliefs, notions, traditions, and taboos of the society apart from these socio-cultural barriers, the religion, education and economic factor do alter the food behaviors (habits). The study was conducted in Bhilwara district of Rajasthan state. One block was selected randomly i.e. Suwana having five gram panchayat of the block namely Bholi in Center, Kodukota in East, Gurla in West, Jodhdas in North and Hameergarh in South. Total 500 children, 50 children from each village from each gram panchayat namely Bholi, Kodukota, Gurla, Jodhdas and Hameergarh (Center, East, West, North, and South) were approached. Public tap water is the main source of water in East (58%), West (52%) North (66%) and South (60%). Maximum share of grocery expenditure is 83 percent in west zone. Majority of Bhil tribe children are non vegetarians (95%) in East in Suwana Block. Ninety four per cent children in North never carry lunch from home as there were alternate arrangement for mid-day meal. Consumption of cereals was quiet high among in Centre, East, West, North and South zone in Suwana Block. Data revealed that 100% of weekly once consumption of milk was provided by MDM only and no milk is consumed at home. Weekly one glass of milk is given by MDM. Consumption of desi ghee in Suwana block samities on daily, weekly and monthly basis were negligible. Consumption of other vegetables on daily basis was negligible except green chillies and tomato. Green chili and Tomato were consumed by 100 per cent of families daily in Suwana block generally as mix vegetables in dinner. The consumption of fruits was 68 percent in Centre, 45 per cent in East, 75 per cent in West, 54 percent in North and 84 per cent in South all because of Mid-Day Meal (MDM). Consumption of only egg was very low 5 percent in Centre, 2 percent in East, 4 percent in North and one per cent in South.

**Keywords:** Bhil Tribe, Children Food Habits, Consumption Pattern, Mid-Day-Meal (MDM).

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## Introduction

Food habits refers to why and how people eat, which foods they eat, and with whom they eat, as well as the ways people obtain, store, use and cancel food. Individual, social, culture, religious, economic, environmental and political factors all influence people's eating habits. Food habit and food beliefs are among the oldest and most entrenched aspects of any culture. Food is a requisite not only for attaining good health but also for maintaining adequate growth and body equilibrium. The choice of food is deeply related to life style of an individual and above, in which he is living. However the food habits are highly influenced by thoughts, beliefs, notions, traditions, and taboos of the society apart from these socio-cultural barriers, the religion, education and economic factor do alter the food behaviors (habits). These factors are the determinants of the food pattern of the individuals in a given society but bound to vary from a society to other, one area to other and so on. The Scheduled tribes inhabit the areas which may be included in the 'poverty square' of India, measured according to four indicators- infant mortality, female education, number below poverty line and per capita net domestic product and is centered mainly in the states of Uttar Pradesh, Bihar, Orissa, Rajasthan and Madhya Pradesh.<sup>[1]</sup> Good nutrition means maintaining a nutritional status that enables us to grow well and enjoy good fitness. Children are the wealth of any nation as they constitute one of the important segments of the populations. Good health and good nourishment are important factors in the child's growth and development. United Nations Educational Scientific and Cultural Organization (UNESCO) since 1972, for the purpose of statistics consider 6-11 years as primary school age and 12-17 years as secondary school age. Nutritional status of the population largely depends on the consumption of food in relation to their needs, which in turn is control by the availability of food and purchasing power.

Consumption pattern and food habits of the tribes also need to be assessed because it differs from one tribe to another and from one region to another and it has a major issue on the nutritional status of the population. There is a rich habitat of natural foods in Indian tribal environments that need to be used to promote food surveillance, nutrition and health. Lead to development of poor nutrition and health challenges are geography, agricultural technology, cultural habits, lack

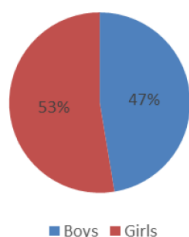
of formal education, poor infrastructure, including health care facilities, and poverty. So there is an urgent need to assess as well as to document the data regarding the consumption pattern, food habits of the tribes, that will give an understanding of the existent health and nutrition related problems which will help to form various policies and programmes by the government for the welfare of tribals. This in turn will help to improve the health status of the tribes. The logic behind the acceptance of the Bhils for study rest on the fact that the Bhils constitute one of the largest tribal groups of India.

## **MATERIALS AND METHODS**

The study was conducted in Bhilwara district of Rajasthan state. The Scheduled Caste and Scheduled Tribe population in Bhilwara district is 16.9 percent and 9.5 percent respectively whereas the State percentage of Scheduled Caste and Scheduled Tribe population is 17.8 and 13.5 respectively. <sup>[2]</sup> There are eleven block in Bhilwara district. List of blocks was obtained from the Block Development Officer (B.D.O.). From this list, one block was selected randomly i.e. Suwana having five gram panchayat of the block namely Bholi in Center, Kodukota in East, Gurla in West, Jodhdas in North and Hameergarh in South. Total 500 children, 50 children from each village from each gram panchayat namely Bholi, Kodukota, Gurla, Jodhdas and Hameergarh (Center, East, West, North, and South) were approached. This section dealt with information pertaining to the sanitary conditions, monthly expenditure on which items, the traditional food habits, daily meal pattern, carry lunch, alcoholic conditions, smoking practices, chewing materials and food consumption pattern. In food consumption pattern included information of daily, weekly, fortnightly, monthly and occasional consumption of major five food groups.

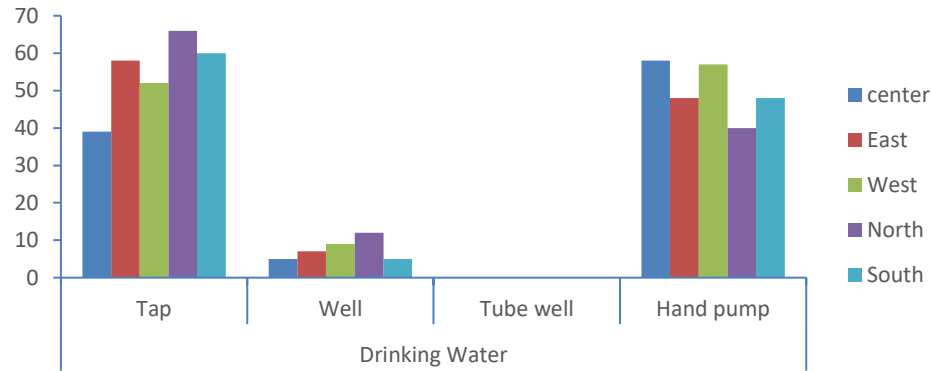
## **RESULTS AND DISCUSSION**

The sample consists of 500 Bhil tribe children comprising of 237 boys and 263 girls aged between 4 to 12 year old. They are grouped in 4-6 year, 7-9 year and 10-12 year age group. Maximum percentage of girls (62%) is found in North Zone. For boys it is 55 percent in west zone in Suwana Block. (fig.1)



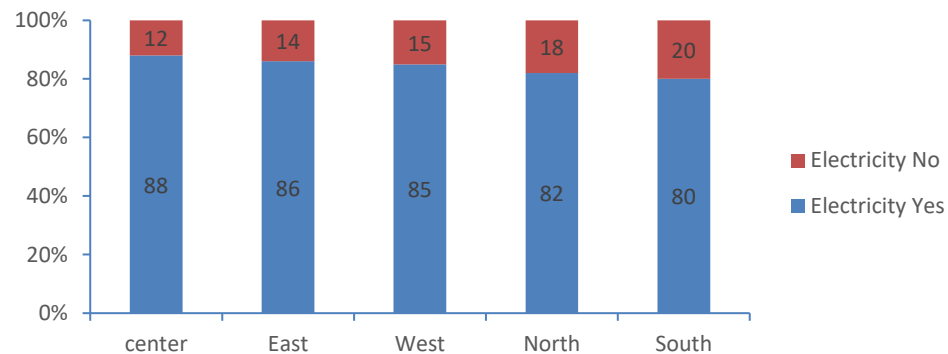
**Fig.1: Boys And Girls ratio in percentage in Suwana Block**

Public tap water is the main source of water in East (58%), West (52%) North (66%) and South (60%). Common Hand pump is main source in Center (58%) and West (57%). Tube well and well constitute a very small percentage of water uses. Some families are used both sources. (fig.2)



**Fig. 2: Sources of Drinking Water in Suwana Block**

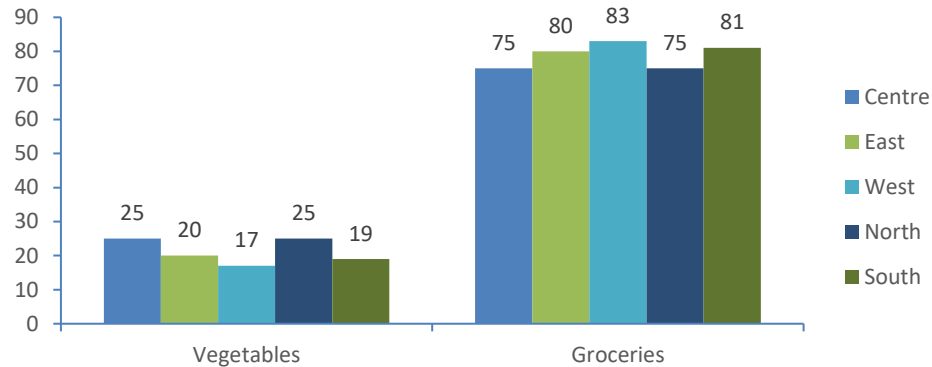
**Electricity:** Electricity availability was 88 per cent in Center, 86 per cent in East, 85 per cent in West, 82 per cent in North and 80 per cent in South. (fig 3.)



**Fig. 3: Electricity Availability and Status in Suwana Block**

**Lavatory facilities:** Majority of families defecates in open with maximum 93% in South. Remaining Families used own W.C. built by Anganwadi.

**Monthly expenditure on which items:** Major part of monthly expenditure on grocery items like oil, pulses, wheat flour, rice and sugar. Maximum share of grocery expenditure is 83 percent in west zone.

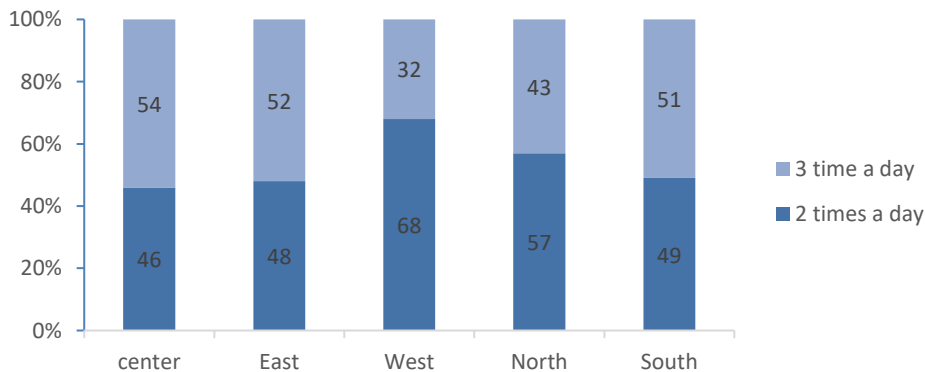


**Fig.4: Monthly Expenditure Profile in Percentage on Vegetables and Groceries**

## FOODS HABITS

### General food habits of Bhil Tribe Children in Suwana

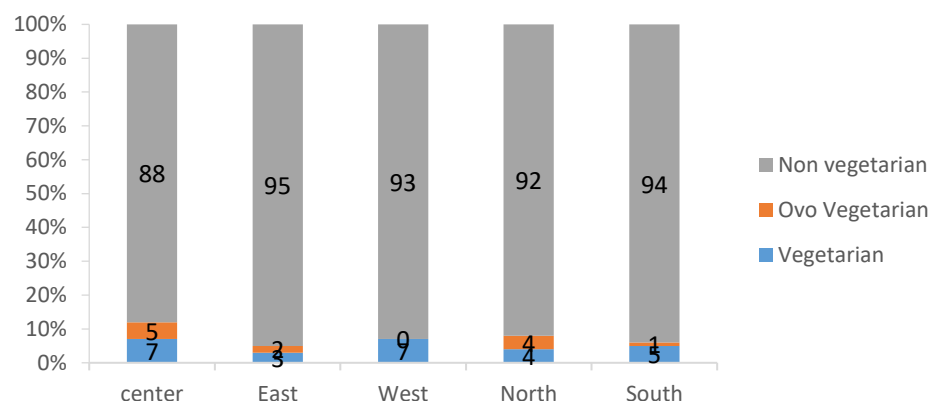
Food habits are deeply related to life style of an individual and are influenced by various socio-cultural and economic factors. The general food habit of the Bhil tribe that 68 per cent of the children in West and follow two time daily meal pattern and 54 per cent children in Center follow three time daily meal pattern. (Fig 5.) In their study on Meena tribe of Madhya Pradesh reported that Meenas take their meal twice a day, one around 11-12 a.m. and another in the evening before it gets dark<sup>[3]</sup>.



**Fig. 5: Meal Pattern of Suwana Block Children**

Majority of ninety five per cent children in East non-vegetarians. In non -vegetarian food items they prefer mutton, Meat, chicken. Consuming flesh of rabbit, birds and animals. Chicken and mutton are used only in festival from own pet. It is a major part of their celebrations and various

occasions. Seven per cent of children in Center and West were vegetarians. Bhil tribe children majority are non-vegetarians in Suwana block. Children prefer non veg only in home. (fig.6)



**Fig.6: Food Habits of Children in Suwana Block**

**Eating Habits:** Ninety four per cent children in North never carry lunch from home as there were alternate arrangement for mid-day meal. 100 per cent children skip morning breakfast in center, east west north and south. 19 percent children in Center were getting lunch from home. In Suwana block there was no difference in the food pattern of males, females and children in the family. All the members eat same kind of food. There is no practice of eating food in the same plate. Each member eats food in separate plate.

**Alcoholic Practices:** Alcohol consumption is a common practice among Bhils. It forms an indispensable part of their different celebrations. But in the case of children, mostly do not consume alcohol. No occasion is celebrated without alcohol. Women and girls consume alcohol occasionally during festivals and ceremonial days. In their study reported that *Kiad* is popular local liquor of Pnar tribe of Jantia hill district. It plays an important role in their socio cultural life and is a major part of their occasions <sup>[4]</sup>.

**Smoking Practices:** Maximum percentage of smoking was found in East zone (17%). Many children were habituated to smoking bidi due to undue influence from their parents. Still majority of the children remain non-smokers.

Similarly, 22% of rural women in Kerala chew tobacco in pan (betel leaf) <sup>[5]</sup>.

**Chewing Practices:** Maximum percentage of chewing practices were followed in West (37 %), Children are addicted due to bad influence from parents.

### **Food habits followed during different physiological conditions**

The data depict that during various physiological conditions when the demand of body is high, majority of Bhil children follow the common meal pattern or there is no special consideration taken during various physiological conditions.

### **Food preferred during various physiological conditions**

**Illness:** During illness foods that were easily digested were given to most of the patients. Foods that are liked by the patient were mostly preferred by Bhil children. Table. 1 reveals the information on foods that were most preferred during fever, Diarrhoea, and cold and cough by the Bhil children. During fever *khichdi* was given to the patient as it provides energy and strength and easy to digest. In her study on traditional health care practice prevalent in tribal areas also reported that *neem* helps to develop resistance in the body to fight against fever. Curry of *neem* flowers was given to the patient with added sugar to make it edible. It helps to relieve fever and prevent further chances of infection<sup>[6]</sup>. *Moong dhal* water and *khichari* was also given as it is easy to digest. *Thuli* and *daliya* is preferred by most of the children, it is believed that it is easy to digest.

Rice and curd helps to control diarrhoea. *Shikanji* with added salt and sugar was preferred which helps to recover the water loss of the body. *O.R.S* taken after every loose motion helps to recover lost water. *ORS* Taken from school. In cold and cough black tea (*Kali chai*) with *tulsi* was preferred as it is good for health and gives relief to the body. Hot jaggery raabadi provides strength and helps in recovery.

TABLE 1: FOOD PREFERRED BY BHIL CHILDREN DURING VARIOUS PHYSIOLOGICAL CONDITIONS

S.No.	Condition	Type of Food	Reason
1.	Fever	1. <i>Khichari</i>	• Easy to digest
		2. <i>Thuli (dalia+moong dhal water)</i>	• Easy to digest
2.	Diarrhoea	1. <i>Shikanji</i>	• Helps to recover lost water
		2. <i>Rice+Curd</i>	• Helps control diarrhoea

		3.O.R.S taken after every loose motion	<ul style="list-style-type: none"> <li>• Helps to recover lost water</li> </ul>
3.	Cold and cough	1. Black tea with tulsi	<ul style="list-style-type: none"> <li>• Good for health in cold</li> </ul>
		2. Hot Raabadi	<ul style="list-style-type: none"> <li>• Provides strength and helps in Recovery</li> </ul>

### **Consumption pattern of Bhil Tribe Children in Suwana Block**

#### **Cereals:**

Maize and wheat were main staple cereals consumed by all the children. Consumption of cereals was quite high among in Centre, East, West North and South zone in Suwana block. In cereals, wheat was consumed by 100 per cent children in Suwana block in the form of chapatti. Maize was used for making *Raabadi* and roti mostly in winter season. *Raabadi* is prepared by cooking maize porridge/ flour in buttermilk. 100 percent consumption of rice was twice or thrice per week in the form of Khichdi (Dal +Rice) in MDM. None of the children in Suwana block consumed rice on daily basis. (fig.7.)

Regarding consumption of cereals, in their study on tribals of Jharkhand district reported that the consumption of cereals was significantly higher among tribals which support the above statement <sup>[7]</sup>. Similarly also found that cereals intake was higher in Baiga tribe <sup>[8]</sup>.

#### **Pluses:**

Among pulses, data revealed that green gram, black gram and bengal gram dal were consumed by Bhil children know as Mix dal. Bengal gram and black gram were consumed by most of the children. Majority weekly consumption of mix dal was found in children in Suwana block. Maximum of the children in East (64 %) and South (54%) were consuming mix dal (add black gram and Bengal gram) on weekly basis. (fig.7.) Pulses were sourced from market rather than cultivation therefore the consumption did not have enough variety. Similarly, lower intake of pulses by tribal women of Ranchi as compared to RDI <sup>[7]</sup>. In her study also reported low intake of pulses in tribal of Rajasthan <sup>[9]</sup>.



### **Milk and milk products:**

Data revealed that 100% of weekly once consumption of milk was provided by MDM only and no milk is consumed at home. Weekly one glass of milk is given by MDM. 76 per cent children of west and 84 per cent of North were consuming buttermilk on the weekly basis. Salt is added before eating. (fig.7.)

### **Fats and oils:**

In fig.7. Shows 100 percent children in Center, East, West, North and South has daily consumption of oil in the form of dal and vegetable. Consumption of Desi ghee in Suwana block samities on daily, weekly and monthly basis were negligible. In north 12 percent and 9 percent in south children consume *Desi ghee* occasionally. Children in Suwana block did not consume *Desi ghee* at all.

### **Green leafy vegetables:**

Bhaji is made by mixing all green leafy vegetable like meethi, radish leaves etc. Maximum green leafy vegetable were being consumed by maximum children in Suwana block. Consumption of green leafy vegetables was generally twice or thrice a week. Only Methi leaves consumption is 37% in both North and South on weekly basis. Green leafy vegetable is consumed only in winter season.(fig.7) The study of on Bhils of Gujarat was found supportive which states that the consumption of green leafy vegetables was done in large quantity when they are easily available<sup>[10]</sup>.

### **Other vegetables:**

Bhils children were consuming low cost vegetables which were easily available in market and open field. The most commonly consumed other vegetables were green chillies. Consumption of other vegetables on daily basis was negligible except green chillies and tomato. Green chili and tomato were consumed by 100 per cent of families daily in Suwana block generally as mix veg in dinner. Karunda was consumed weekly by 53 percent children in North and 14 per cent in East as it is easily available from open fields. (fig7). Brinjal was also

consumed weekly by 26 per cent in Centre, 14 percent in East, 34 percent in West, 32 per cent in North and 57 per cent in South.

### **Roots:**

100 percent children in Suwana block consume potato twice or thrice per week. Only 17 per cent children in Centre, 56 per cent in East, 37 per cent in West, 49 per cent in North and 64 per cent in South children consume onion in daily basis. (fig 7.) 100 per cent families in Suwana block consume garlic daily in the form of dal and vegetable and chutney.

### **Fruits:**

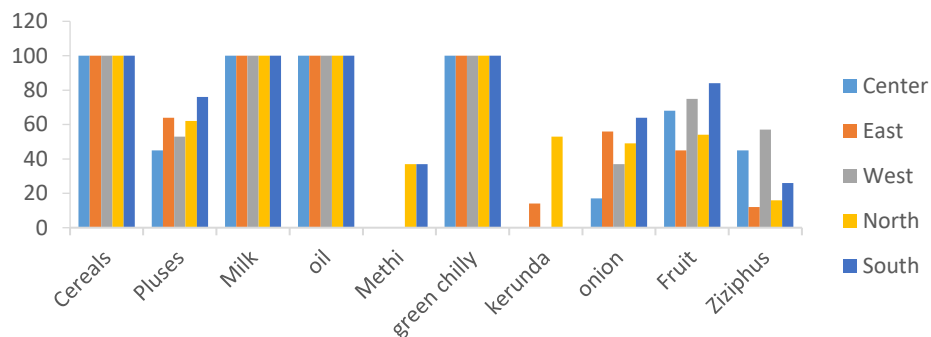
The consumption of fruits was 68 percent in Centre, 45 per cent in East, 75 per cent in west, 54 percent in North and 84 per cent in South all because of MDM. Apart from MDM, it is very low due to poor socioeconomic status and seasonal availability. 45 percent in Centre, 12 percent in East, 57 percent in West, 16 percent in North and 26 percent in South consume zizphyus twice and thrice in a week.(fig.7.) It is wild fruit and is easily available. Low cost fruits like Guava and Banana are distributed as part of MDM in school. The study on diet of Oroan tribe was found supportive with our study<sup>[11]</sup>.

### **Non vegetarian foods:**

Ninety five percent children in East are non-vegetarians. In non -vegetarian food items they prefer consuming rabbit, domestic birds and locally available animals twice or thrice in a week. Chicken and mutton is used only in festival. It is a major part of their celebrations and various occasions. 94 per cent children in south, 88 per cent in Centre, 93 percent in West, 92 per cent in North zone and 15 per cent in south use non veg only occasionally.

Children prefer non-veg only in home. Consumption of meat and chicken was very low and infrequent due to their low purchasing power. Consumption of egg was very low 5 percent in Centre, 2 percent in East, 4 percent in North and one per cent in South .

Reported in their study on nutritional status of tribes of Rajasthan that all the tribes were non vegetarian but the intake of animal food was lacking because of its higher price and the low availability<sup>[12]</sup>. Also reported low consumption of animal products in tribal diet<sup>[13]</sup>.



**Fig. 7: Bhil Tribe Children Food Consumption Pattern in Suwana Block**

## CONCLUSION:

In this study Majority of ninety five per cent children in East non-vegetarians. Still majority of the children in Suwana were remain non-smokers. Ninety four per cent children in North never carry lunch from home as there were alternate arrangement for mid-day meal. 100 per cent children skip morning breakfast in Center, East West North and South. Wheat was consumed by 100 per cent children in Suwana block in the form of chapatti. Maize was used for making *Raabadi* and roti mostly in winter season. Majority weekly consumption of mix dal was found in children in Suwana block. 76 per cent children of west and 84 per cent of North were consuming buttermilk on the weekly basis. Cereals, pluses and milk and milk products consumption of Bhil tribe children in Suwana block is very much. Mainly reason of fruits, milk and pluses consumption is high because school going children had this in MDM. Potato, onion and green chili consumption are also highly in Bhil tribe children in Suwana Block.

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