

## HOUSEHOLD LEVEL FOOD SECURITY IN TEHSIL BHADERWAH

SONIKA SUDAN

**Abstract:** The present paper attempts to understand the household level food security in Tehsil Bhaderwah. Food security relates to people securing access to food they need for healthy and an active life. It has been widely recognized that food insecurity widely occurs when people become vulnerable to hunger and starvation (crush et al 2012). The concept of food insecurity has become a fundamental form in any developmental agenda. Food security is still a major concern for a large share of households in world. By determining the food security status of the various households it is possible to derive the diagnosis of food insecurity. In the previous chapter there is detailed description of concept of food security and its various indicators. It also describes the data sources and methodology used in the study. It also includes the explanation of the study area both in terms of physical aspects and demographic scenario. In this chapter there is evaluation of food security status of the sampled households in the four villages' i.e Thanalla, Sungli, Chinta and Khilleni. The aim of this chapter is to provide the analysis carried out after field survey in four villages at different cardinal points in Bhaderwah tehsil.

**Keywords:** Food availability, Food Accessibility, Body Mass Index, Food Stabilization, Food Utility, Calorie.

### INTRODUCTION

Any substance which is consumed by an organism and it provides nutritional support for an organism is termed as food. It can be of plant or animal origin and contains essential nutrients like carbohydrates, proteins, fats, vitamins, or minerals. Food security involves ensuring adequate food supply to people, especially those who are deprived of basic nutrition. It is of major concern in any developing nation like India. According to UN (United Nation) there are nearly 195 million undernourished people in India which is quarter of the worlds hunger burden. India ranks. India ranks 100 among 119 countries in Global Hunger Index (Global Hunger Index, 2017). The issue of food security is so important that according to the state of food insecurity in the world 2012 published by FAO around 870 million people (out of which 852 million from developing countries) are estimated to have been undernourished in the period 2010-2012. The concept of food security has evolved in the last thirty years to reflect changes in official policy thinking (Clay, 2002). The term first originated in the mid 1970s when the world food conference defined food security in terms of food supply – assuring the availability and price stability of basic food stuffs at the international and national level.

According to Article 11 of International Covenant of Economic, Social and Cultural Rights, the branch of International Rights it is the Fundamental Right of every individual human being is to be free from hunger.

There was evolution of the concept of food security over the last quarter century. Food and nutrition analysis is done at two levels:

- 1) Macro level
- 2) Micro level

Macro level involves assessment at world, national and regional level whereas micro level involves assessment at household and individual level.

A household level food security implied a situation where every member of the house has access at all times to the food needed for an active and healthy life.

A draft document of the subcommittee on nutrition (United Nations, 1987) defined food security as:

A household is food secure when it has access to the food needed for a healthy life for all its members (adequate in terms of quality safety and culturally acceptable) and when it is not at undue risk of losing such an access. There are four indicators of food security which are also known as parameters of food security by FAO.

- A) Food Availability
- B) Food Accessibility
- C) Food Utilization
- D) Food Stability

**FOOD AVAILABILITY:** Food Availability implies that sufficient quantity of food should be available and every individual must have access to food.

Food and Agricultural Organization (1981): It has termed food availability as a physical and economic access to food by all people at all times involved in concurrent step of production and consumption. Food Availability is determined by food production and food trade (FAO, 2008)

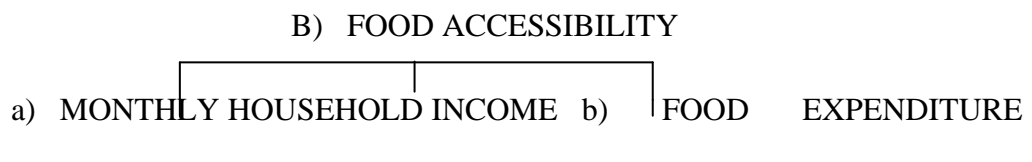


**a) Food Consumption Score:** It is a score calculated using the frequency of consumption of different food groups consumed by a household during the 7 days before the survey.

**b) Dietary Energy:** The human body requires dietary energy for all the body functions.

**B) FOOD ACCESSIBILITY:** Food access suggests that every individual should have sufficient access to sufficient resource in order to have appropriate food to live a healthy life.

Food Accessibility can be obtained through consumption, production. The extent to which each member of a household has access to sufficient food depends on several factors such as gender, age and the employment status. (Bensen, 2004)



**a) Monthly Household Income:** It is a measured of the combined incomes of all people sharing a particular household in place of residence on monthly bases. It includes every form of income e.g. salaries, wages, retirement income etc.

**b) Food Expenditure Share:** It refers to the share of the expenditure which people usually spent on food items.

**C) FOOD STABILITY:** It means that every individual should have access to sufficient food at all times.

**D) FOOD UTILIZATION:** Utilization of food involves the preparation of sufficient food with clear water, sanitation and special health care. (Richardson, 2010)

It implies that the food which is taken by an individual should be of better quality and safe. It should provide sufficient amount of energy and vital nutrients.

#### D) FOOD UTILIZATION

a) DRINKING WATER FACILITY      b) TOILET FACILITY

**a) Drinking Water Facility:** It implies that the water which the people are drinking is safe

**b) Toilet Facility:** It implies whether the households have sanitation facilities or not.

#### OBJECTIVES:

- 1) To measure the food security status of the households.
- 2) To measure the nutrition status by using BMI (Basal Metabolic Index).
- 3) To study the factors influencing the food security in the study area.

#### Database and Methodology

Methodology is a systematic, theoretical analysis of the methods applied to a field study. Methodology used in the House hold level food security can be classified in two ways-

- Methodologies for data collection.
- Methodologies for data analysis.

#### Data collection:

Four villages are selected for our study. Our survey was based on primary as well as secondary sources collected from field research in the village and the district census handbook respectively. An interview schedule with close ended was used to know the calorie intake by people of the different households, factors effecting the status of the food security in the respected households, attitude and perception of the local people towards food security.

#### Data analysis:

First of all sampling of the households was done by stratified sampling method.

To collect information on various aspects of agriculture and its impact on the socio economic life of the people, local residents were interviewed. For data analysis, statistical

methods have been used which will provide empirical evidences for the study. In such method, percentage of each attribute has been calculated which can give a better picture of the whole scenario.

Body Mass Index is calculated by dividing the weight of the individuals in kg by the height of the individual in mts. i.e Weight in Kgs/ Height in meters

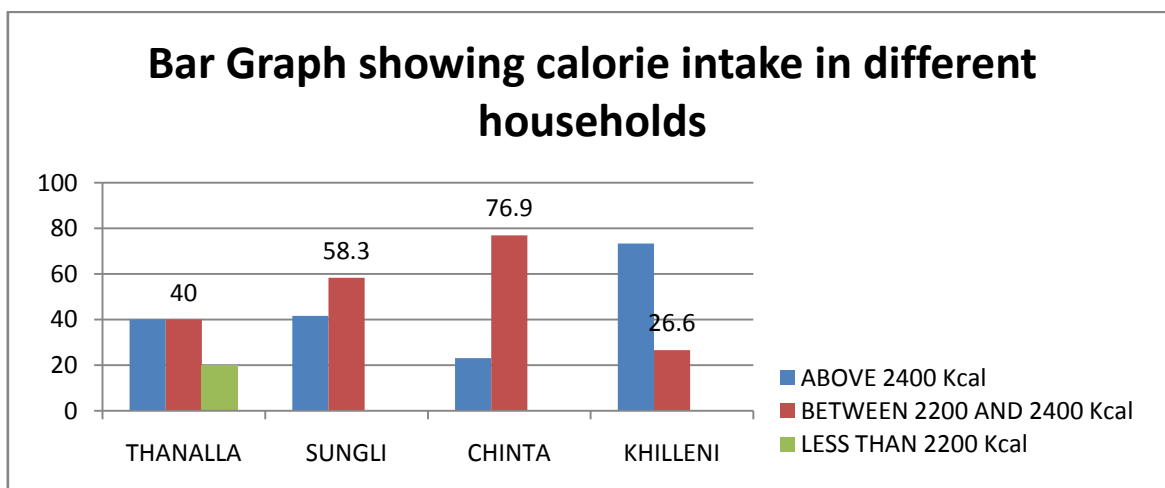
For the calculation of Household Food Expenditure share the expenditure on food is divided by the total expenditure and it is finally multiplied by hundred.

### Status of food security in four different villages in Bhaderwah tehsil

Daily calorie intake varies from person to person, but there are certain guidelines for calorie requirement. The amount of calories which a person should consume each day depends on his /her activity level, gender and age. Calories are required to perform the daily activities. India has seen impressive economic growth in recent years but it still struggles with widespread poverty and hunger. According to United Nation India has nearly 195 million undernourished people. In Jammu and Kashmir there is also deficient food grain production to meet the demands of the people. According to Planning commission of India the daily calorie intake for persons in rural areas should be 2400 Kcal and in urban areas it should be 2100 Kcal, since the field survey is carried out in the rural areas so 2400 Kcal is taken as a standard unit.

**Table no. 1 : Calorie intake in different households of Bhaderwah Tehsil**

CATEGORY	THANALLA	SUNGLI	CHINTA	KHILLEN
Above 2400 kcal (Food secure)	40%	41.6%	23.07%	73.3%
Between 2200 and 2400 kcal (Moderately food secure)	40%	58.3%	76.9%	26.6%
Less than 2000 (Less food secure)	20%	–	–	

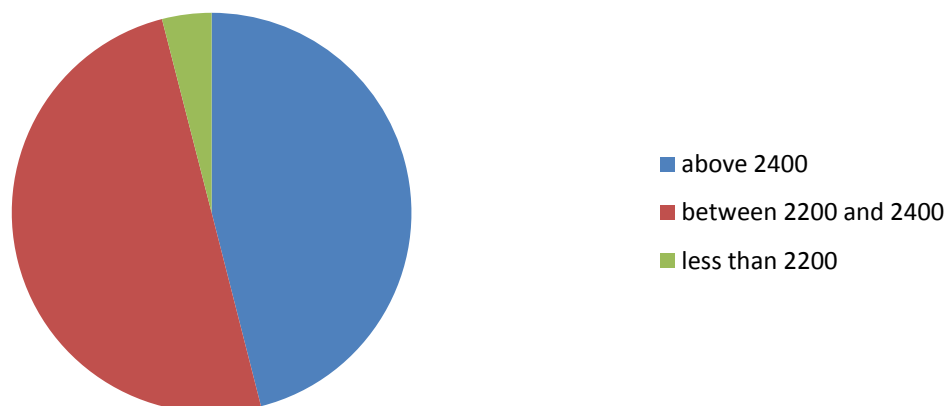


The above figure shows the status of food security in four different villages of Bhaderwah tehsil at household level. From the figure it becomes clear that a large number of households in village Thanalla are food secure since the households of village Thanalla have low per capita income but they have their own agricultural land and they grow vegetables and fruits in this land for their own consumption. There are only 20 percent households of this village which are less food secure because they have low per capita income, they don't have their own agricultural land and the size of their family is also large. In village Sungli a majority of households are food secure because of their high per capita income and the availability of grocery shops near around. Likewise village Sungli, In village chinta there are also large number of households which are food secure they have good per capita income because a large number of persons of this village are government employees as well as they have their own agricultural land on which they grow maize, rajma. They not only produce them for their own consumption but they also sell them in market which also becomes a source of their income. In khilleni village a large number of households are food secure because of their good per capita income as well as the availability of agricultural land.

**Table no. 2: Calorie intake in four different villages of Bhaderwah Tehsil**

CATEGORY	NUMBER OF NO. HOUSEHOLDS	PERCENTAGE
Above 2400 Kcal (Food secure)	23	51.11
Between 2200 and 2400 Kcal(Moderately food secure)	25	55.5
Less than 2000 Kcal(less food secure)	2	4.444

## CALORIE INTAKE IN FOUR DIFFERENT VILLAGES OF BHADERWAH TEHSIL



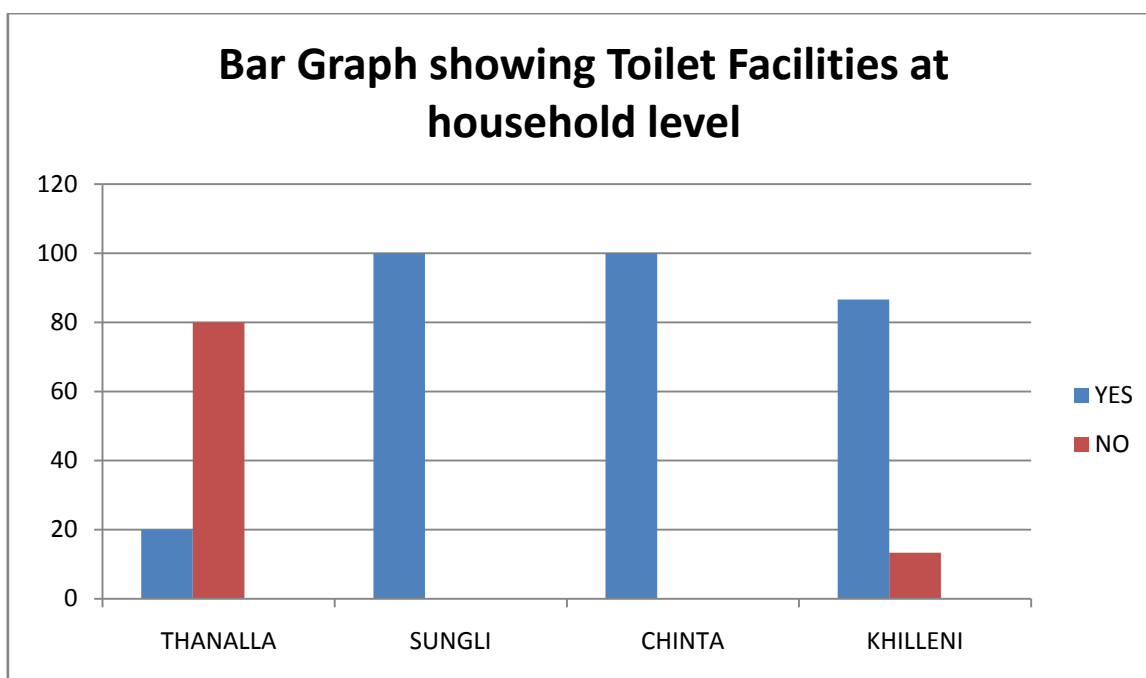
From the above figure it becomes clear that there are large number of households in all the four villages which are food secure because of their per capita income availability of agricultural land. Since it is a well known fact that rural people consume more calories as compared to the urban people and there are only 4% of houses which are not food secure because of their low per capita income and the large size of their families. The overall status of food security in all the four villages at household level which are surveyed is good.

### TOILET FACILITIES

Recent evidences indicate that India is heading towards a major sanitation crisis in the coming years. The fastest growing economy seems to have missed out on having adequate toilet facilities for as high as 65% of its population. For example nearly half of India's population 1.2 billion people have no toilet facility at home but more than half of India's people own a mobile phone, indicates the latest census data.

**Table no. 3: Toilet facilities at household level in four different villages of Bhaderwah tehsil**

VILLAGES	TOILET FACILITIES	
	YES	NO
THANALLA	20%	80%
SUNGLI	100%	—
CHINTA	100%	—
KHILLENi	86.6%	13.3%

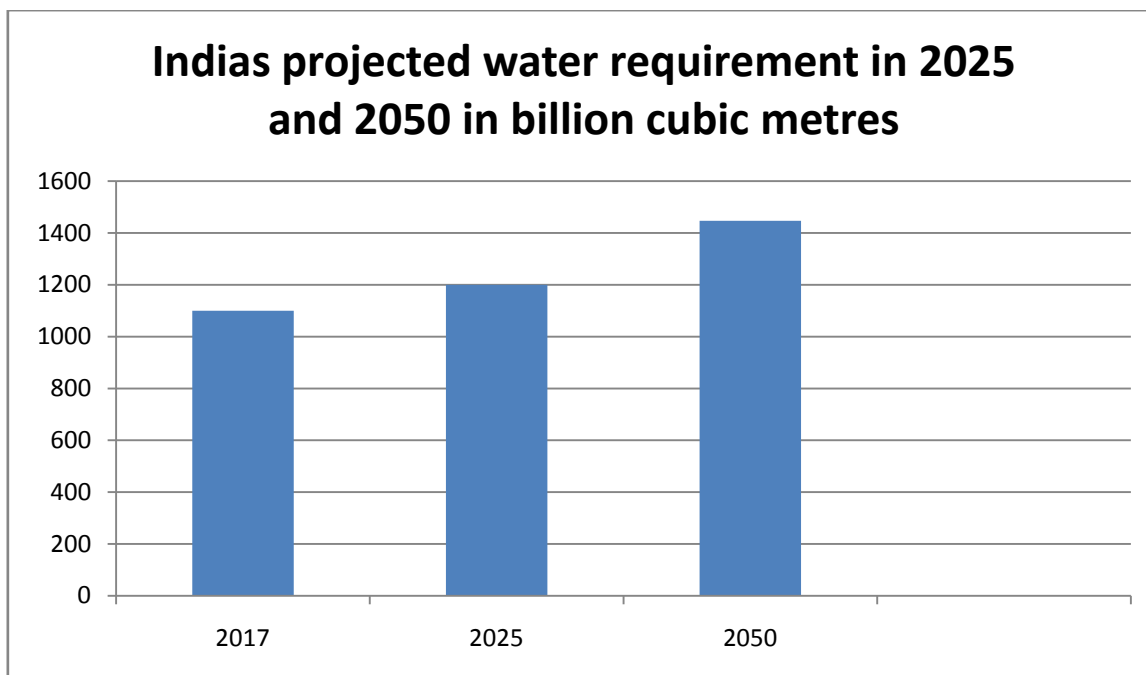


From the graph it becomes clear that there are very few households in the village Thanalla which have toilet facilities because a large population of the village Thanalla has low per capita income and they are not very much literate so these people don't know the importance of proper sanitary conditions in their households. The people living in the village sungli have proper access to the toilet facilities as they are literate and they have high per capita income. The presence of the campus of Jammu University has changed the thinking of the people of Sungli region which is quite broad as compared to the people living in the Thanalla region who have narrow thinking. In chinta likewise sungli the sanitary conditions are good. The people living in village Chinta have proper access to the toilet facilities. The Army Base camp in village chinta has profound impact upon the cleanliness of the village and it ultimately impacts the thinking of the people living in village Chinta. In village Khilleni there are few households which don't have toilet facilities but a majority of households have toilet facilities. The people living in khilleni have moderate per capita income and they are literate. There are also toilets in khilleni which were basically built by government of India under Swachh Bharat Abhiyaan.

#### **DRINKING WATER FACILITIES**

Access to safe drinking water has been a grave problem for our country especially in rural areas where lack of usable water has resulted in decades old sanitation and health problems. A Water Aid report in 2016 ranked India among the worst countries in the world for the number of people without safe water. As estimated near about 76 million people in India have no access to safe water supply, and the situation is only getting more serious. The Asian Development Bank has forecast that by 2030, India will have a water deficit of 50%. **The Union Ministry of Water Resources** has estimated the country's current water requirement to be around 1200 billion cubic metres for the year 2025 and 1447 billion cubic meters for the year 2050.

Plate no.6: India's projected water requirement



Source: The Union Ministry of Water resources

In Jammu and Kashmir only 34% of the total population have access to safe drinking water, according to Census of India 2011. Nearly 64% of the total population of Jammu and Kashmir uses tap water for drinking but only 34.7% get it from treated source, rest of population uses water from hand pumps, rivers, canals, ponds, and springs. It had led a large number of health problems in the people living in Jammu And Kashmir State. The people are subjected to a large number of water borne diseases like typhoid, cholera etc. Many rivers and other water bodies in Jammu and Kashmir have become the prime target of pollution due to inadequate system of waste disposal. The rivers like Tawi, Jhelum, dal lake, Pulasta river of poonch have been turned into receivers of direct waste materials which has caused a serious problem related to drinking water in Jammu and Kashmir state.

**Table no 4 : Drinking water facilities at four different villages in Bharderwah tehsil**

Villages	Drinking water facilities	Source
Thanalla	100%	Dai nallah
Sungli	100%	Tap water
Chinta	100%	Spring
Khilleni	100%	Tap water

From the above table it becomes clear that in all the households which are surveyed in four different villages in Bharderwah tehsil have proper drinking water facility but the source of drinking water varies from one village to the other village. In village Thanallah there is a nallah which the local people living in that area called it as Dai nallah. They use this water for their daily activities like drinking, washing clothes, cooking etc. This source of water is



not safe for drinking. In village sungli the source of water is tap water. In village chinta there is a spring and the people use this water to fulfill their daily needs. Both these sources of water are safe for drinking. In khilleni the source of water is a tap water and this source of water is safe for drinking. Except Thanalla in all the rest four villages the water is safe for drinking purpose as it is either tap water or spring.

### **BODY MASS INDEX (BMI)**

The body mass index or quetelet index is a value derived from the mass (weight) and height of an individual. The BMI is defined as the body mass divided by the square of the body height and is universally expressed in units of kg/m. for every height there is a respective optimal weight that an individual must hold to be termed as healthy. It is used as a diagnostic indicator to indicate if you are overweight, obese, underweight, normal weight. A study published in the noted medical journal lancet, India is just behind US and China in the global hazard list of top 10 countries with highest number of obese people. A country where large number of population lives below poverty line obesity seems to be a distant issue, meant for the rich kinds. But India is under siege: junk food, alcohol and sedentary lifestyles are leading to us in silent self destruction, making one in every five Indian men and women either obese or overweight.

$$\text{BMI} = \frac{\text{weight (kg)}}{\text{Height (m)}^2}$$

Height (m)

### **BMI Classification by WHO**

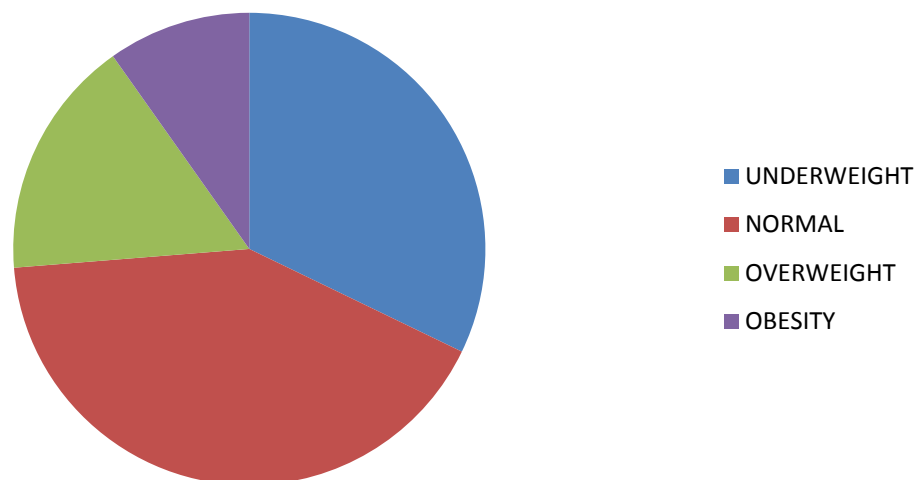
<b>BMI CLASSIFICATION</b>	<b>BMI CATEGORY</b>
<b>UNDERWEIGHT</b>	<b>&lt;18.5</b>
<b>NORMAL</b>	<b>18.5-24.9</b>
<b>OVERWEIGHT</b>	<b>24.9-29.9</b>
<b>OBESITY</b>	<b>&gt;29.9</b>

Source: WHO

**Table no. 6: Distribution of Respondents according to BMI Classification**

<b>BMI CATEGORY</b>	<b>NUMBER OF RESPONDENTS</b>	<b>PERCENTAGE</b>
<b>UNDERWEIGHT</b>	<b>82</b>	<b>32.03</b>
<b>NORMAL</b>	<b>106</b>	<b>41.40</b>
<b>OVERWEIGHT</b>	<b>42</b>	<b>16.4</b>
<b>OBESITY</b>	<b>25</b>	<b>9.76</b>
<b>TOTAL</b>	<b>256</b>	<b>100</b>

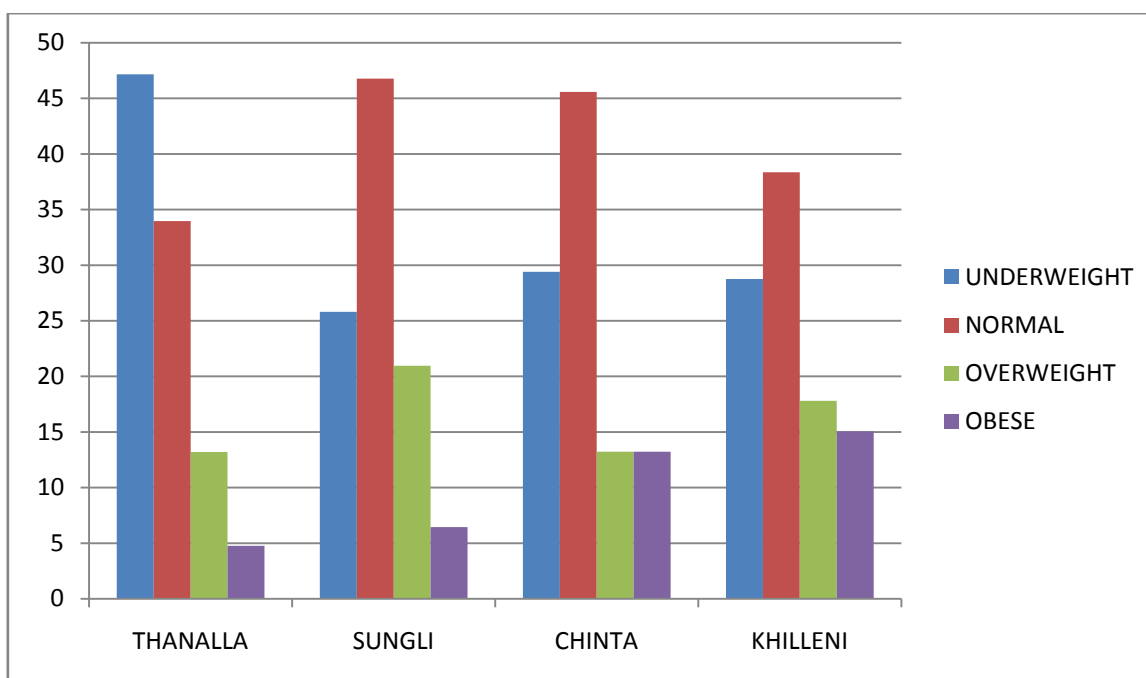
## DISTRIBUTION OF RESPONDENTS ACCORDING TO BMI CLASSIFICATION



From the above figure it becomes clear that 32.03% of respondents living in four different villages are underweight because of the lack of the availability of food. This is probably because of the reason that these people have low per capita income and they don't have their own agricultural land moreover the majority of respondents falling under this category reside in a far flung area which is basically mountainous and it is not easy for them to get the regular supply of food from ration stores. A large proportion of population has normal weight especially those who are financially secure. Only 16.4% of respondents are overweight and a small proportion of population i.e 9.76% are obese.

**Table no 2.7. PERCENTAGE PREVALANCE OF UNDERWEIGHT, NORMAL, OVERWEIGHT AND OBESITY AMONG THE FOUR DIFFERENT VILLAGES OF BHADERWAH TEHSIL**

VILLAGES	UNDERWEIGHT %age	NORMAL %age	OVERWEIGHT %age	OBESSE %age
THANALLA	47.16%	33.96%	13.20%	4.76%
SUNGLI	25.80%	46.77%	20.96%	6.45%
CHINTA	29.41%	45.58%	13.23%	13.23%
KHILLENi	28.76%	38.35%	17.80%	15.06%



From the above figure it becomes clear that in thanalla village the percentage of underweight population is more because the people living in those areas have low per capita income and they are generally illiterate moreover this area can be considered as a remote area because of its far flung location besides the people living in these areas do not have their own agricultural land. In village Sungli the concentration of the normal weight respondents is more because majority of respondents living in these areas are generally government employees and they have high per capita income. In village chinta the respondents are also employed in large number of economic activities and they know the harmful impacts of obesity. Similarly in village khilleni the population of the normal weight respondents is more as compared to the rest of the other categories of BMI suggested.

#### **FOOD EXPENDITURE SHARE:**

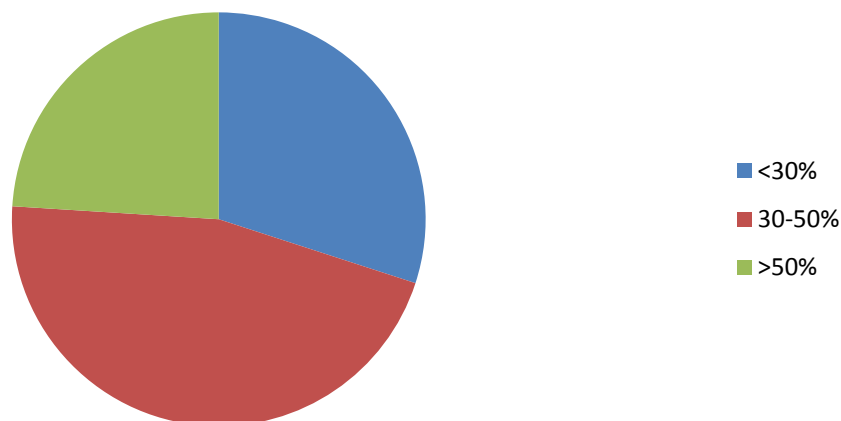
It refers to the share of expenditure which people usually spend on food items.

**Table no. 7: Food expenditure share in surveyed households in Bhaderwah tehsil**

CATEGORIS	NUMBER OF HOUSEHOLDS	PERCENTAGE
>30%	15	30%
30-50%	23	46%
>50%	12	24%

+

### PIE CHART SHOWING FOOD EXPENDITURE SHARE IN SURVEYED HOUSEHOLDS IN BHADERWAH TEHSIL



From the above figure it becomes clear that there are 24 percent of households whose food expenditure share is greater than 50 percent this is because of the fact that these households have low per capita income and they have large families so a large portion of their earning is spent on the food on the other hand those households whose food expenditure share is less than 30 percent they have their own agricultural land so they grow crops like maize rajma on these lands to meet their daily requirements hence their food expenditure share is low as compared to the other households.

**FACTORS AFFECTING THE FOOD SECURITY IN THE STUDY AREA:** There are various factors which affect the food security in the study area. These factor vary from one village to the other village for example in village Thanalla the main problem was the remoteness of that village the people living in the households of the thanalla region are illiterate secondly that area was mountainous and there was non availability of the grocery shops so the members of the household have to brought food from the main tehsil region the people living there have their own agriculture land which makes the people of that region food secure but there were not proper sanitation facilities and the water which they consume was also not pure the people living in that village does not know the importance of sanitation facilities because of illiteracy. The households of village sungli are food secure because of their high percapita income and the presence of campus of Jammu University is also responsible for the broadening the thinking of the people of that village hence they are literate and have proper sanitation and drinking water facility. In village chinta army camp play a very vital role as aresult of which the people living in that village know the importance of the cleanliness and they have proper sanitation and drinking water facility they are also food secure because of their high percapita income and the availability of their own agricultural land. like sungli and chinta khilleni also has good sanitation and drinking water facility and the people living in the households of khilleni region have high per capita income so they are food secure.

**CONCLUSION:**

Food insecurity and hunger have been constants throughout history. Today there are still many in similar situations, although the problem of hunger has become invisible in most of the developed countries but it is a major issue in the developing nations as well as underdeveloped nations including India. From the field survey which is being carried out in four different villages of Bhaderwah Tehsil it can be concluded that majority of the households which are surveyed are food secure. Only a small number of households are not food secure the reason being the remoteness of the village and the illiteracy prevailing in that village which ultimately results in the poor economic status of villages, weak financial conditions and hence they are food insecure. The government is still making efforts to aid those who are in need.