

# Trends and Patterns of Malnutrition across States in India

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**Abstract:-** As per the Global Hunger Index (2021), India ranked poorly at 101 among 116 countries in the World and is projected as seriously severity among the countries of the world. Though India ranks second in food production in the world, it is also second in undernourished population in the world. This paper brings out the trends and patterns of under-nutrition, micronutrient deficiencies and over-nutrition among children and adults across states in India using NFHS data. The under-nutrition status shows that the stunted children in India on an average as per NFHS-5 are 31.6 a little less when compared to NFHS-4 at 32.23 percent. The states like Bihar, UP, Jharkhand and Meghalaya continue with highest rates of stunted children having more than 40 percent. There has been an increase in the stunted children in most of the northeast states and Telangana in south and Dadra and Nagar Haveli and Lakshadweep among Union Territories and Himachal Pradesh in north. The status of underweight children shows that there has been a decrease in most of the states except a few states. There has been a reduction in the child wasting rate in most of the states in India. In case of Malnourishment among women, it is observed that the BMI < 18.5 for women aged 15-49 has improved in all states except in Punjab and in Dadra and Nagar Haveli. Similar situation exist for malnourished men except for 7 states.

The situation of anaemic children across states has worsened where most of the states have witnessed an increase with some of the states with very high increase in anaemic condition of children. Except a few states like Goa, Tamil Nadu and Dadra & Nagar Haveli, all other states have witnessed an increase in anaemic children. Anaemic condition of men and women has risen in most of the states. After malnutrition, over-weight has become another alarming problem in India, the status of overweight children aged 6 to 59 months shows that there has been an increase in the overweight cases across

states in India. The percentage of overweight women has increased across states in India except a few states like Rajasthan; Meghalaya; Nagaland; Gujarat; and Lakshadweep. There has been an increase in overweight cases of men in all states except Andhra Pradesh and Dadra & Nagar Haveli. The NFHS-5 computed waist to hip ratio for the first time and it reveals that on an average about 60 percent of women and 48 percent of men in India are at high risk for heart diseases, diabetes and premature deaths as the waist to hip ratio is high. Though there is a positive change but the extent of change is very less and it is the need of the hour to take up healthy diet habits and curb the problems of malnutrition and also the newly added problem of over-nutrition which is scaling up high in most of the states in India. Policy interventions like creation of nutritional awareness, changes in PDS system and an increase in spending on micronutrient supplementation programme across states is needed to curb the micronutrient deficiencies and problems of malnutrition.

## I. INTRODUCTION

As per the Global Hunger Index (2021), India ranked poorly at 101 among 116 countries in the World and is projected as seriously severity among the countries of the world. There is a decreasing trend in the GHI score but the difference is large when the first two periods are compared to the next two periods during 2021. There was a ten percent decrease in the year 2006 when compared to the year 2000, whereas there are only 1.3 percent changes in the score in 2021 when compared to 2012. (See figure 1 in annexure). As per the Ministry of Agriculture and Farmers' Welfare third advanced estimates as released by them for the year 2020-21 shows that there is an increase in the food production by 7.94 million tonnes when compared to 2019-20 estimates. (See figure 2 in annexure) The major production crops in India are rice, wheat, cereals, pulses, oilseeds and sugar.

Table 1: Major Crops Production in India

Name of the Crop	Average Production 2015-16 to 2019-20 (5 years) (in million tonnes)	Estimated Production 2020-21 (in million tonnes)
Food grains	270.84	305.44
Rice	112.44	121.46
Wheat	100.42	108.75
Nutri / Coarse Cereals	47.75	49.66
Pulses	21.93	25.58
Oilseeds	27.2	36.57
Sugarcane	362.07	392.80

Source: (Welfare, Ministry of Agriculture and Family, 2021)

The above table shows that there has been a continuous increase in the production of major agricultural crops. The highest percentage increase is in oilseeds at 34 percent followed by pulses at 17 percent, food grains at 12 percent and rice, wheat, and sugarcane at 8 percent each and cereals at 4 percent. Though India ranks second in food production in the world, it is also second in undernourished population in the world. India's monthly per capita consumption expenditure during 2011-12 on major food products shows that major amount is spent on cereals followed by milk and milk products, beverages, refreshment and vegetables. When the rural and urban per capita consumption is compared it can be observed that the urban per capita consumption expenditure is more than rural expenditure. The percentage of change is also high among all food products. Highest amount is spent on cereals in rural areas whereas highest amount is spent on beverages and refreshments in urban areas. (See figure 3 in annexure).

The per capita consumption expenditure value in rupees during 2016 computed by Statista shows that the major value spent on the consumption goods in urban area is spent on milk, cheese and eggs followed by bread, cereals, then fruit, vegetables (See figure 3 in annexure) that represents on an average how a person spends on food products. But this situation may be different in rural areas.

In case of average household consumption of food stuffs is concerned in 16 states and UTs viz. Andaman and Nicobar Islands, New Delhi, Andhra Pradesh, Gujarat, Rajasthan, Tamil Nadu, Puducherry, Maharashtra, Karnataka, Madhya Pradesh, Odisha, West Bengal, Kerala, Assam, Uttar Pradesh and Bihar as computed by National Nutrition and Monitoring Bureau in its 27<sup>th</sup> report, it can be seen that the consumption of food as percentage of the Recommended Daily Intake (RDI) in urban areas are more than RDI in roots and tubers followed by fats and oils, vegetables and pulses and legumes. In case of products like cereals and millets, green leafy vegetables, milk and milk products and sugar and jiggery the consumption is less than the RDI (See figure 4 in annexure).

If we see the average percentage of Recommended Dietary Allowance (RDA) in urban 16 states, it can be observed that there is deficiency in the consumption of nutrients as percentage of RDA except in vitamin-C and dietary folate. The maximum deficiency can be seen in consumption of vitamin-A at only 22.8 percent of RDA followed by riboflavin at 50 percent. The remaining nutrients are between 50 percent and 90 percent of RDA. Niacin is at 61.3 percent and calcium is only at 67 percent of RDA (See figure 5 in annexure).

The RDA details indicate that India still needs to work on improving the health conditions of the population. Though there is a positive change but the extent of change is very less and it is the need of the hour to take up healthy diet habits and curb the problems of malnutrition and also the newly added problem of over-nutrition which is scaling up high in most of the states in India. It is important to see the nutrition situation across states and take up policy measures

to eradicate malnourishment among children and adults across states in India.

## II. LITERATURE REVIEW

The Global Nutrition Report (2021) shows that most of the countries were not able to meet the global nutrition targets and about 22 percent of children are stunted worldwide, 6.7 percent are wasted and 5.7 percent are overweight. About 40 percent of men and women around the world are overweight. 30 percent of women across the world are anaemic. The diseases like high blood pressure prevail at 20 percent for women and 24 percent for men across the world. Nearly 9 percent women and 10.5 percent men are diabetic in the world and 9.1 percent of women and 8.1 percent of men are underweight globally. Moreover the covid-19 pandemic has halted the nutrition progress and about 155 million people were reversed to extreme poverty (World Bank, 2021).

According to the Comprehensive National Nutrition Survey (CNNS) - 2016-18 data, the minimum acceptable diet received by children aged 6 to 23 months was only 6.4 percent in India and among the states, highest was in Sikkim (35.9); Kerala (32.6); Arunachal Pradesh (20.6); Odisha (17); Tripura (16.9); Himachal Pradesh (13.6); West Bengal (12.9); Chhattisgarh (10.8) and the remaining states below 10 and the least was in Andhra Pradesh (1.3); Maharashtra (2.2); Mizoram (2.8) and others between 3.1 and 8.3. The children receiving minimum acceptable diet is very less across states in India.

If we see the food consumption among children aged 2 to 4 years, about 96 percent of the children consume grains, roots and tubers and 62 percent of the children consume dairy products and 16 percent consume eggs, and only 5 percent of the children consume vitamin A rich fruits and vegetables and only one percent consumes flesh foods. These were consumed during the last 24 hours recall time at the survey. The consumption of grains across states is high among all states with a range of 84.9 and 99.5 percent. The consumption of dairy products across states shows that the states such as Punjab, Himachal Pradesh, Haryana, Delhi, Sikkim, Tamil Nadu, Rajasthan, Jammu & Kashmir, Goa, Gujarat, Uttarakhand and Meghalaya consume dairy products between 71.8 and 91.9 percent. Whereas Andhra Pradesh, Maharashtra, Uttar Pradesh, Telangana, Kerala, West Bengal, Madhya Pradesh, Karnataka, Bihar and Tripura are between 52.9 and 68.9 percent. The other states are below 50 percent and they are Arunachal Pradesh, Manipur, Nagaland, Assam, Mizoram, Jharkhand, Odisha and Chhattisgarh ranged between 23.3 to 45.6 percent. In consumption of vitamin A rich fruits and vegetables, eggs, other vegetables, and flesh foods, many states have less than 40 percent consumption (Ministry of Health and Family Welfare, GoI, UNICEF and Population Council, 2019).

The paper on the trends and patterns in the triple burden of malnutrition in India shows that the levels of under-nutrition has improved but the anaemic conditions persists with the micronutrient deficiencies and the quality of food intake is one of the major cause. The over-nutrition problem has increased and both over-nutrition and anaemia

are related to the poor quality of diet that needs policy intervention (Meenakshi, 2016).

The status of malnutrition during two decades time before 2001 reveals that the levels of malnutrition in India is very high and there is no relation between the high income states with levels of nutrition. The study found that middle income states like Kerala and Tamil Nadu are better off in nutritional levels when compared to high income states like Maharashtra and Gujarat. The malnutrition severity is high with half of the population facing malnourishment. Malnourished children were related to undernourished mothers and the incidence of malnutrition was high among children when compared to adults (R Radhakrishna and C Ravi, 2004).

World-wide the poor intake, improper diets and malnutrition are the major problems leading to common diseases among the people. Africa and Asia have more problems of malnutrition in the world. Most of the countries are trying to achieve sustainable development goals and these include 12 SDGs that are important and or linked to the nutrition. There is a need to increase spending on the cause of malnourishment and most of the countries spend very less. Not only government but it is the responsibility of each and everyone including civil society, government bodies to look into the problems of malnutrition and invest and curb the problem as fast as it can (International Policy Research Institute (IFPRI), 2016).

India ranks 10<sup>th</sup> among underweight children in the world and 17<sup>th</sup> among stunted children. Malnutrition is the major cause for death in children below 5 years age. The percentage of underweight children is more in rural India. 20 percent men and 23 percent women are undernourished in India. About 20 percent of men and women are obese in India. The National Nutrition Mission – *Poshan Abhiyan* was implemented to curb malnutrition by 2022 but the problem still remains (Niti Ayog, 2017)

A. Objectives

- To find out the trends and patterns of under-nutrition across states in India among children and adults
- To analyse the micronutrient deficiencies that are prevalent across states in India
- To project and compare the over-nutrition trends across states

B. Methodology

The NFHS data is compiled and analysed to find out the levels of under-nutrition, micronutrient deficiencies and over-nutrition among children and adults across states in India. The two rounds of NFHS-4 and NFHS-5 are compared to see the trends and patterns that have emerged. The states of India are categorically taken as north, central, east, northeast, west, south, and union territories to find out the trends across these zones projecting figures like highest, lowest, average, and other changes that have been observed with measures that are required for follow up action. Regression has been computed to see the changes in anaemic cases with spending on micronutrient supplementation.

III. FINDINGS

A. Under-nutrition across states in India among children and adults

➤ Under-Nutrition among Children

- Stunting (height for weight)

The Stunted children in India on an average as per NFHS-5 are 31.6 a little less when compared to NFHS-4 at 32.23 percent. The states like Bihar, UP, Jharkhand and Meghalaya continue with highest rates of stunted children from NFHS-4 to NFHS-5 having more than 40 percent stunted children below five years. Even Gujarat has high percentage nearing to 40 percent. The states like Kerala and Puducherry stand lowest at twenty percent. Below figure 1 represents the stunted children across states in India as per NFHS-4 and NFHS-5 data.

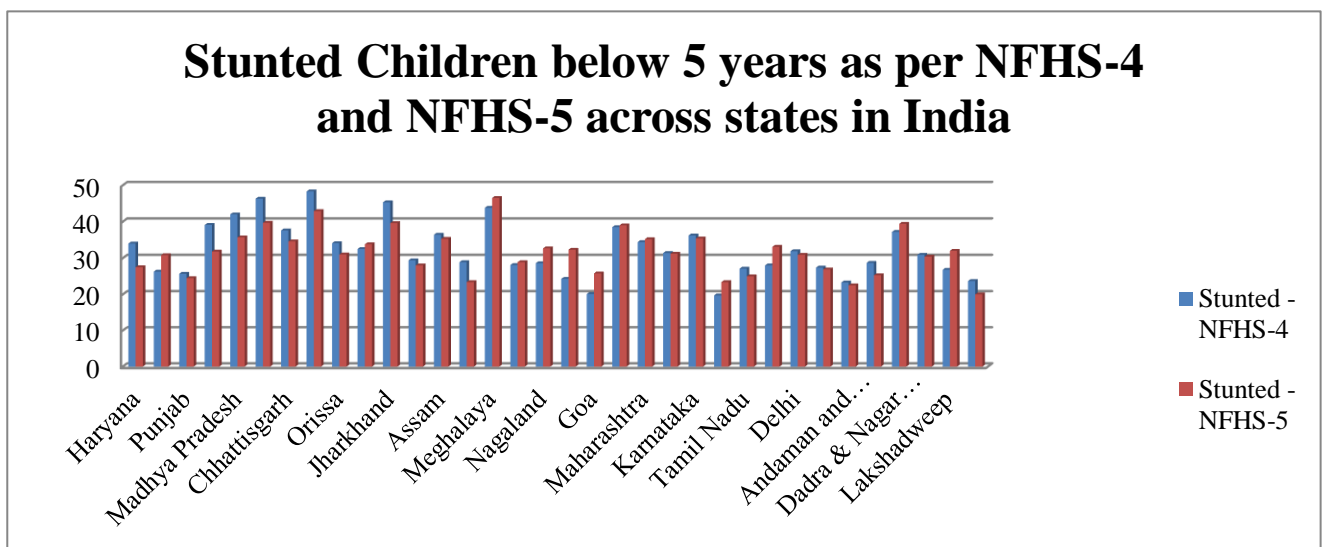


Fig. 6: Stunted Children below 5 years across states in India

Source: NFHS-4 and NFHS-5

There has been an increase in the stunted children in most of the northeast states and Telangana in south and Dadra and Nagar Haveli and Lakshadweep among Union Territories and Himachal Pradesh among northern states in India. A similar trend prevailed during the NFHS first three rounds. The reasons for the stunted growth among children can be correlated to the poor diet and nutrition of mothers who in turn do not provide sufficient milk to their babies that keep the children under-nourished that causes stunted growth.

- Under-weight  
The status of underweight children across states in India shows that there has been a decrease in most of the states except Telangana in South, Assam and Nagaland in Northeast, Himachal Pradesh in North, Dadra and Nagar Haveli, Ladakh, Lakshadweep among Union Territories where the percentage of underweight children has increased in NFHS-5 when compared to NFHS-4 data.

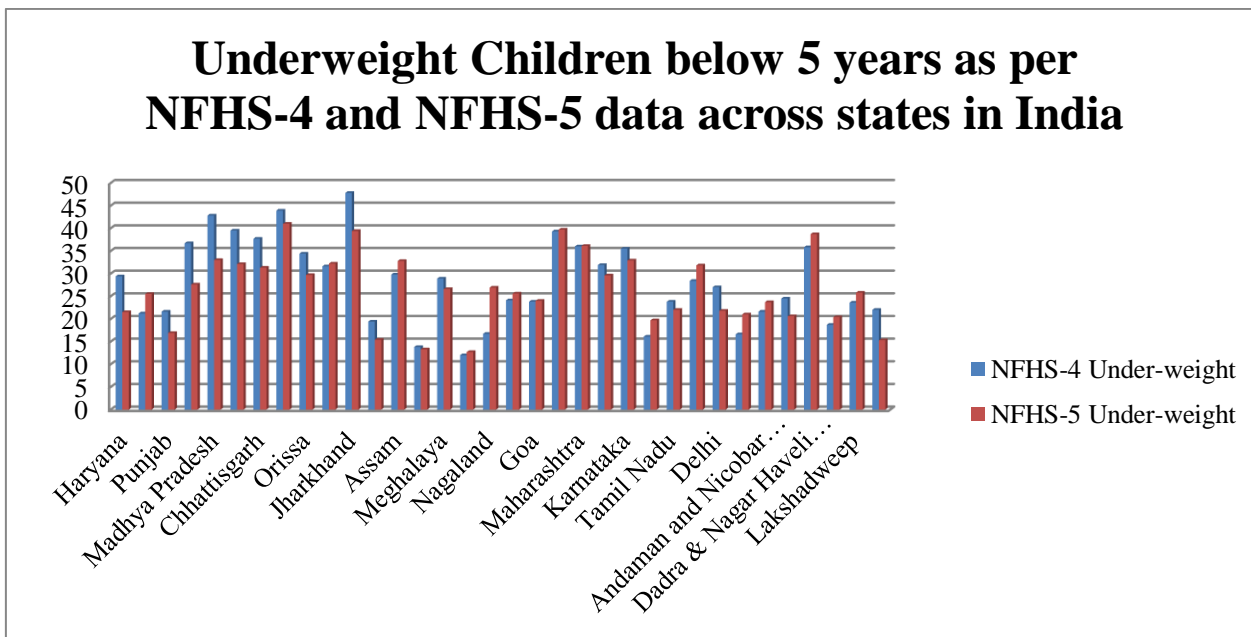


Fig. 7: Underweight Children below 5 years across states in India

Source: NFHS-4 and NFHS-5

- Wasting among children (weight for height)

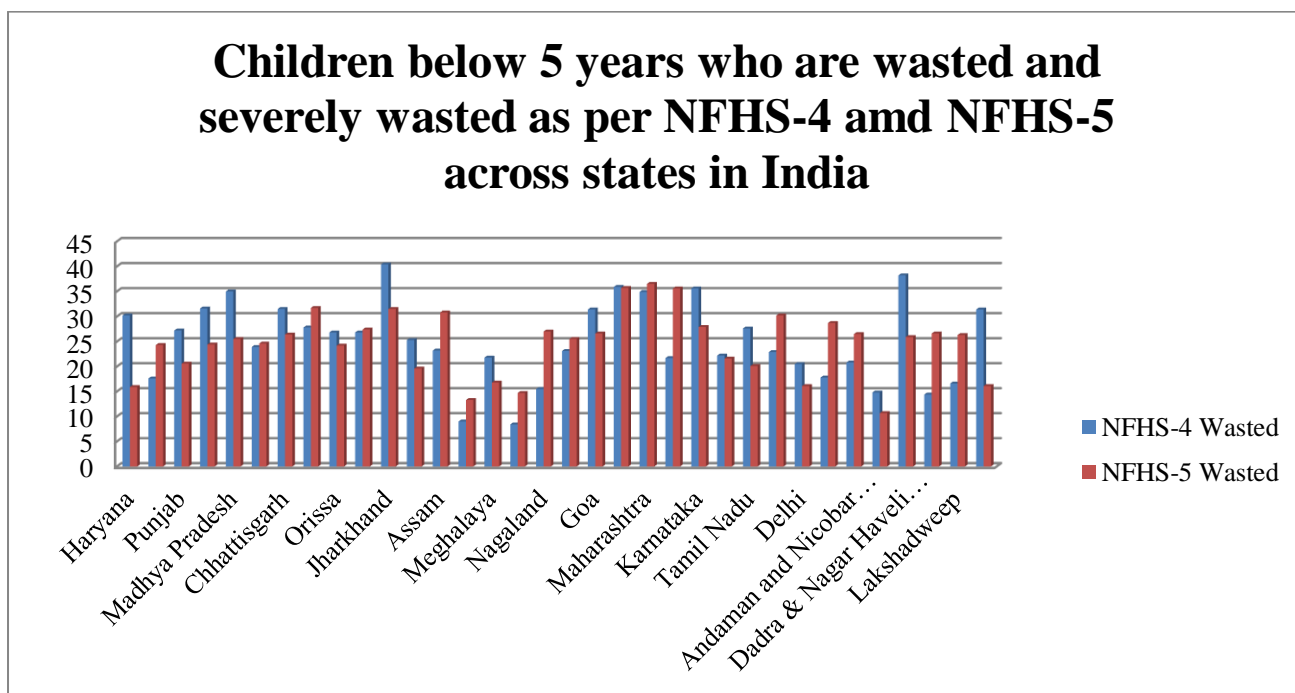


Fig. 8: Children below 5 years who are wasted and severely wasted as per the two rounds of NFHS across states in India

Source: NFHS 4 and NFHS 5

As per the UNICEF organization India, There are 51 million wasted children in the world out of which India has about 20 million that is about 40 percent of the wasted children are in India. The reason for the low weight for height is related to non-availability of food or due to prevailing diseases (UNICEF.org/India). As per the Global Hunger Index (GHI) report 2019 about 90 percent of children in India aged between 6 and 23 months do not get sufficient food making it a cause of child wasting rate high in the world (Global Hunger Index 2019). There has been a reduction in the child wasting rate in most of the states in India as per NFHS-5 when compared to NFHS-4 data. But there is an increase in the child wasting rate in some of the states like Himachal Pradesh, Bihar, Assam, Nagaland, Telangana and Jammu & Kashmir. In case of severely wasting rate it was observed that along with the above states for wasting there are some additional states who have

severely wasted children increased among the two NFHS rounds and they are West Bengal, Tripura, Gujarat, Maharashtra, Ladakh and Lakshadweep.

- Under-weight among adults (BMI<18.5) Malnourished Women

In case of Malnourishment among women, it is observed that the BMI < 18.5 for women aged 15-49 has improved in all states from NFHS-4 to NFHS-5 except in Punjab and in one of the Union Territories Dadra and Nagar Haveli when the malnourishment among women has increased. If we see the situation of malnourished men it was observed that in many states the malnourishment has reduced in NFHS-5 when compared to NFHS-4. The states with increased malnourishment among men are Haryana, Punjab, Goa, Andhra Pradesh, Kerala, Dadar and Nagar Haveli and Puducherry.

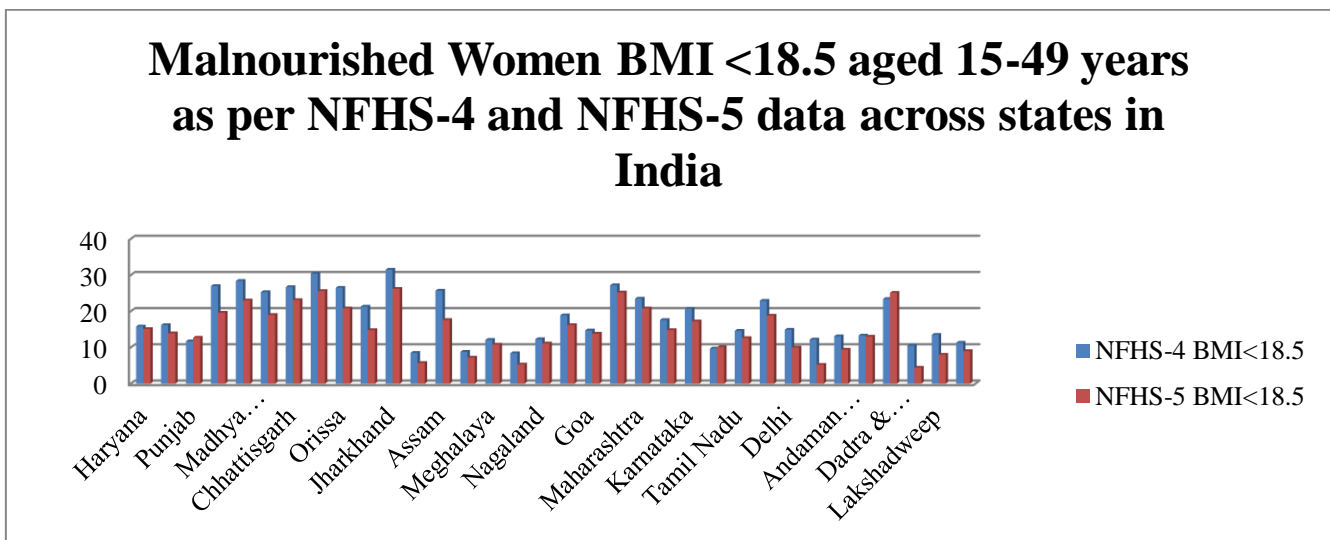


Fig. 9: Malnourished women across states in India

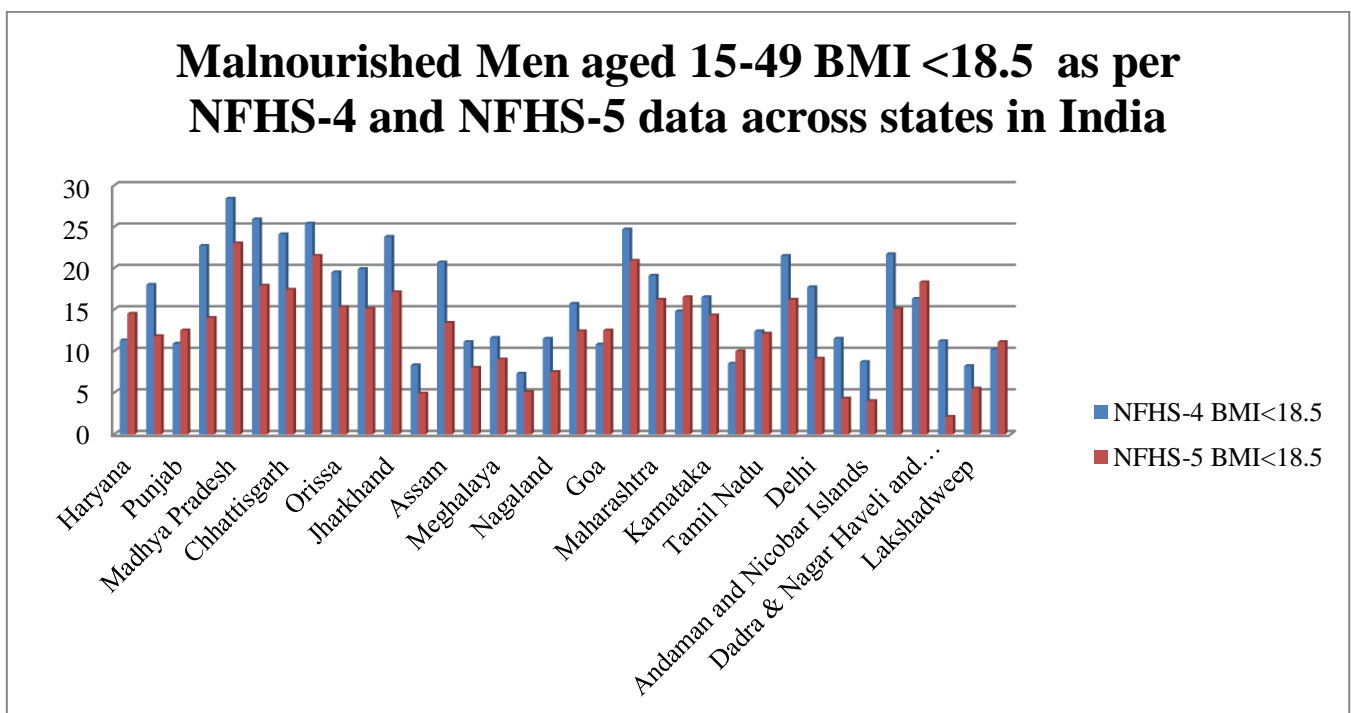


Fig. 10: Malnourished Men across states in India

**B. Micronutrient Deficiencies across States in India**

Anaemic condition arises when the blood levels fall down below the standard figure of below 12 for women and below 13 for men or when the red blood cells are lower than normal figure. Anaemia is generally caused due to improper diet that does not supplement iron, folic acid and vitamin B12.

➤ **Anaemic Children aged 6-59 months**

The anaemic children across states have worsened when the NFHS-4 data is compared to NFHS-5 where most of the states have witnessed an increase with some of the states with very high increase in anaemic condition of children. Except for states like Haryana, Jharkhand, Meghalaya, and UTs like Andaman Nicobar, Chandigarh, Dadra and Nagar Haveli and Lakshadweep, all other states have witnessed an increase in anaemic children.

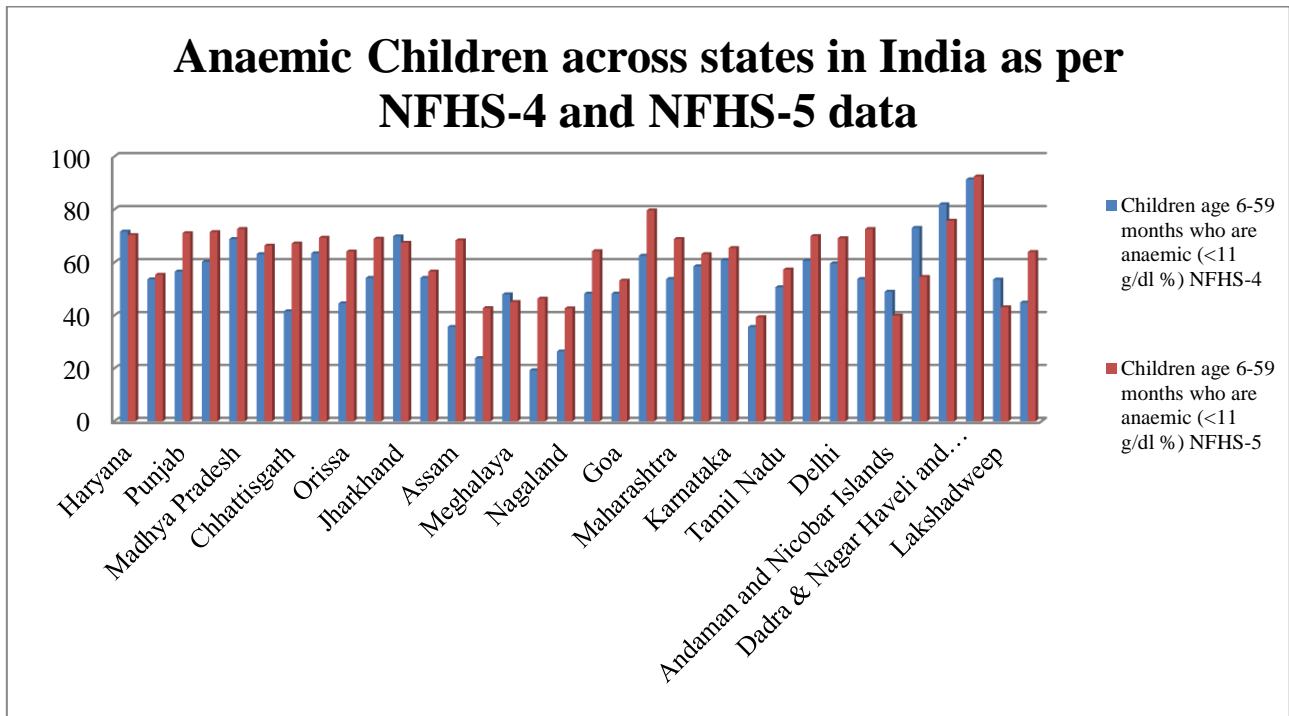


Fig. 11: Anaemic Children across states in India

**C. ANAEMIC WOMEN AND MEN ACROSS STATES IN INDIA**

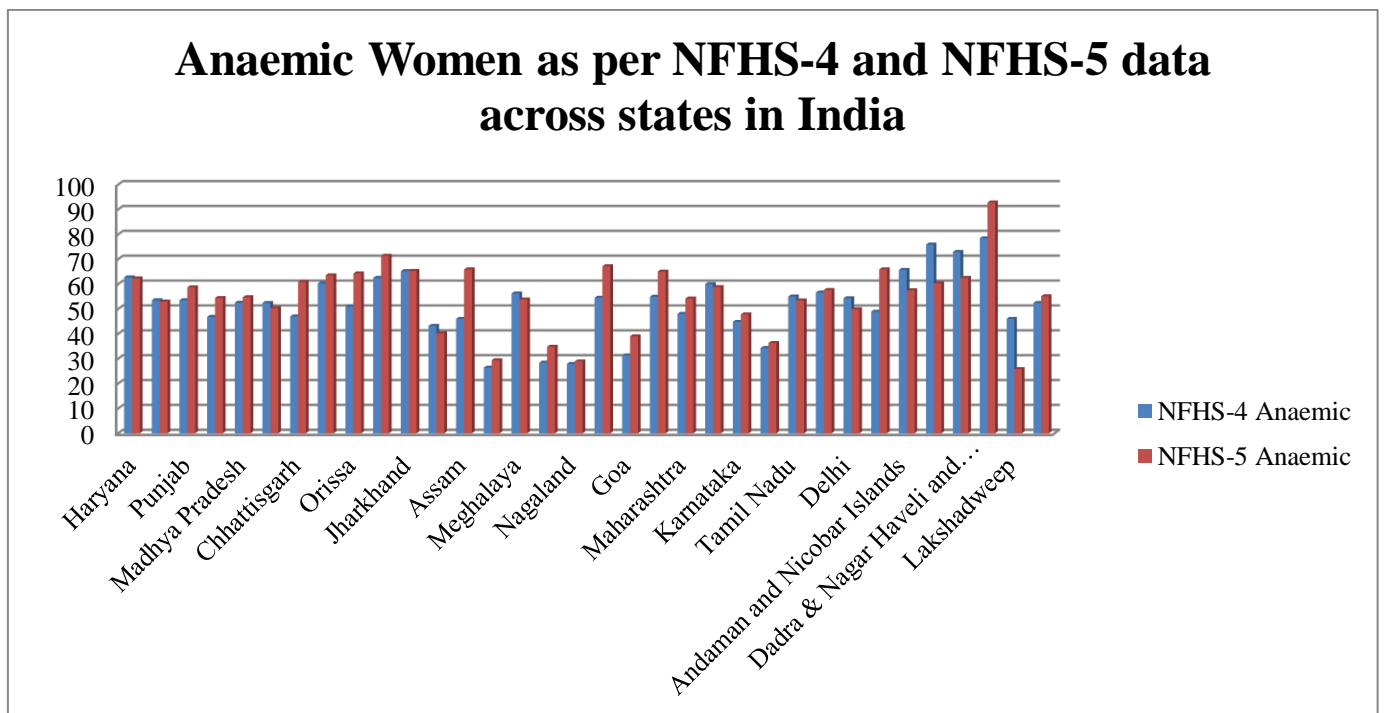


Fig. 12: Anaemic women across states in India

There has been an increase in 22 states out of 34 in the anaemic condition of women during NFHS-5 when compared to NFHS-4 data. Assam had a highest increase of 20 percent followed by Jammu & Kashmir at 17 percent, Ladakh and Chhattisgarh at 14 percent and Odisha at 13.3 percent. In case of anaemic condition of men across states it

was found that the anaemic condition has increased among men in 15 states out of 34 states in India. Ladakh has highest increase of 34 percent followed by Jammu & Kashmir at 16.3 percent, Tripura at 12.2 percent and Assam at 10.6 percent.

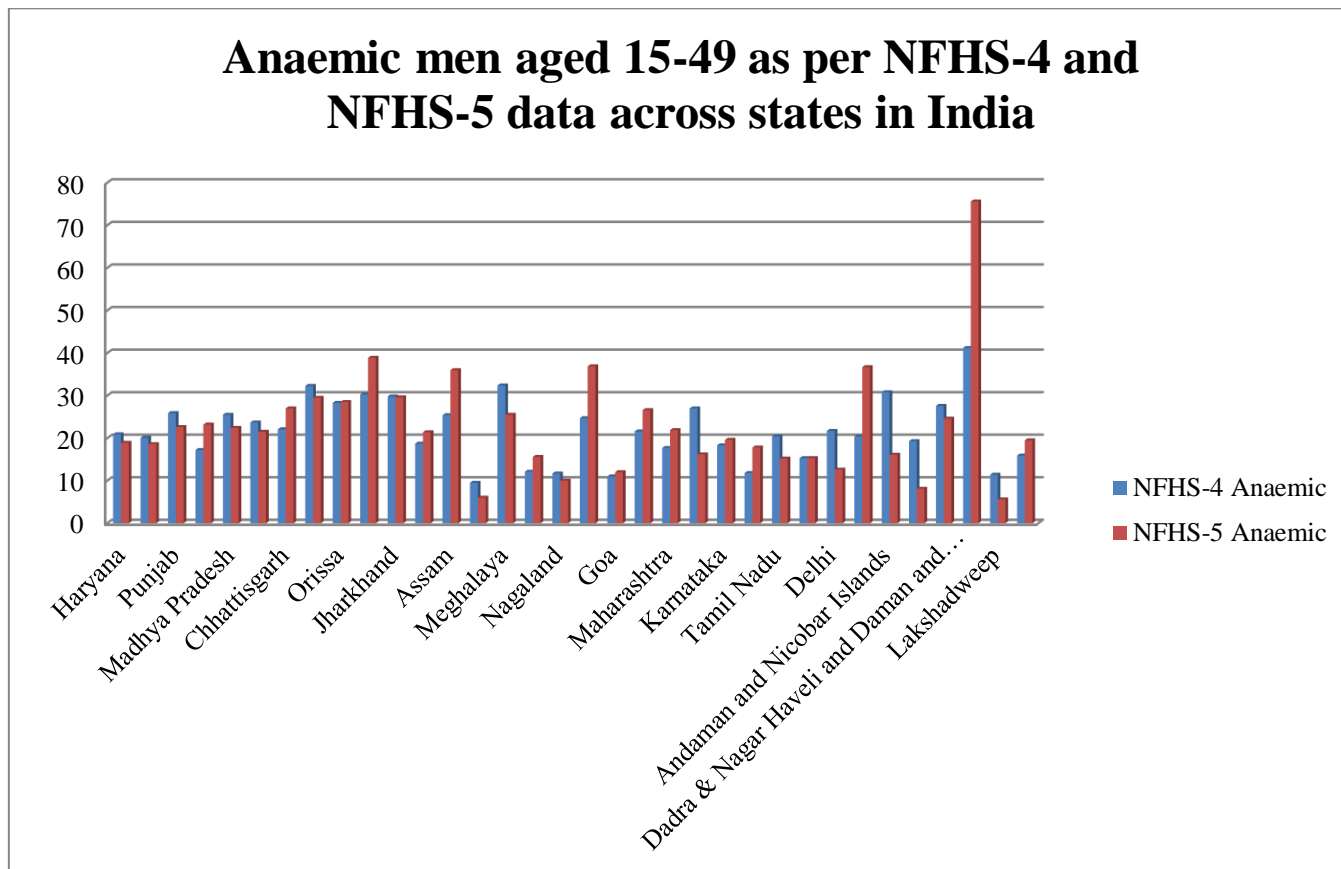


Fig. 13: Anaemic men across states in India

D. Over-Nutrition (Over-weight and Obesity)

➤ Overweight Children

After malnutrition, over-weight has become another alarming problem in India according to NFHS-5 data when compared to NFHS -4 data. The status of overweight children aged 6 to 59 months in India shows that there has been an increase in the overweight cases across states in

India except a few states with a little decrease in percentages and these states are Goa (-0.9), Tamil Nadu (-0.7) and Dadra & Nagar Haveli (-2). Remaining all states have witnessed an increase in percentage of overweight children with highest in Ladakh (9.4), followed by Lakshadweep (8.9) and Mizoram (5.8) and remaining other states between 0.2 to 4.8 percent (Arunachal Pradesh 4.8).

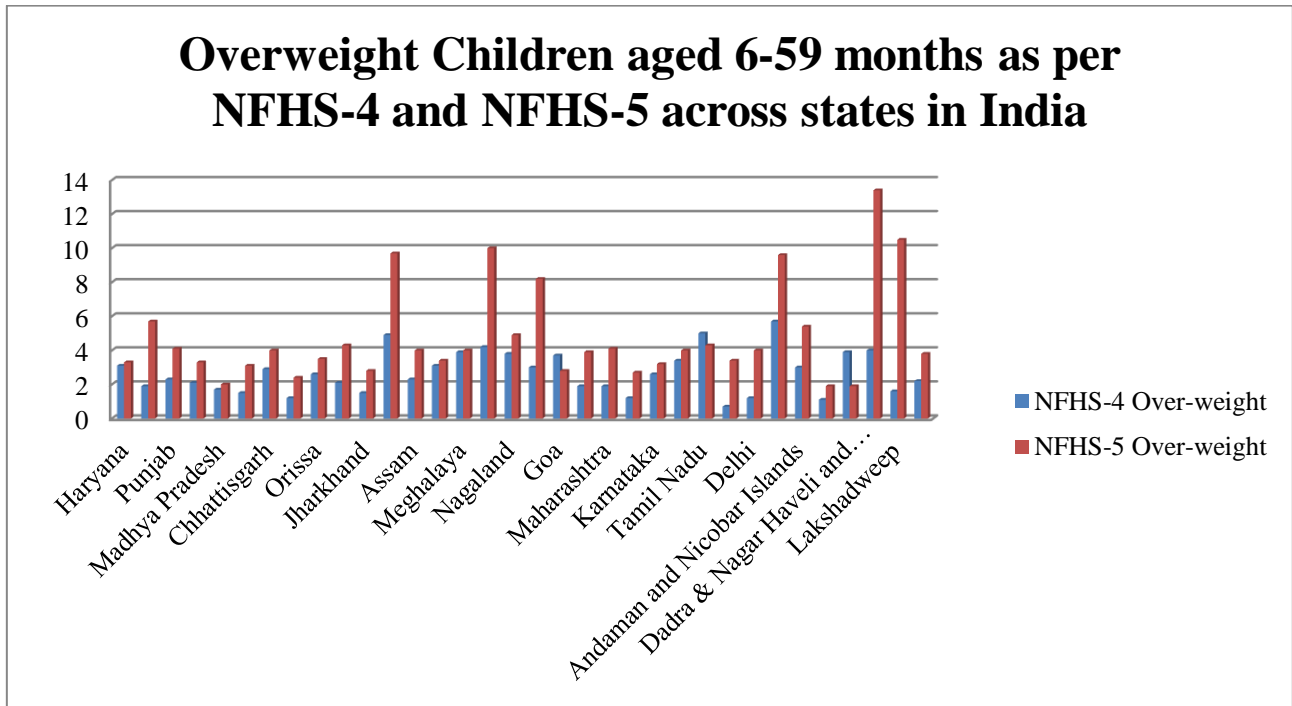


Fig. 14: Overweight Children aged 6-59 months across states in India

➤ *Overweight Women and Men across states in India (NFHS-5 compared to NFHS-4)*

In case of overweight women across states in India the percentage of overweight women has increased across states in India except a few states like Rajasthan (-1.2); Meghalaya (-0.7); Nagaland (-1.8); Gujarat (-1.1); and Lakshadweep (-7.1). The highest increase in overweight women are in

Haryana (12.1); Punjab, Tamil Nadu, and Puducherry (9.5); Uttar Pradesh (8.8); Manipur (8.1); Delhi (7.8) and Odisha (6.5) and the other remaining state between 1.8 and 6.2. There is neither increase nor decrease in Maharashtra as per NFHS-5 data when compared to NFHS-4. Below figure 15 represents the overweight women across states in India.

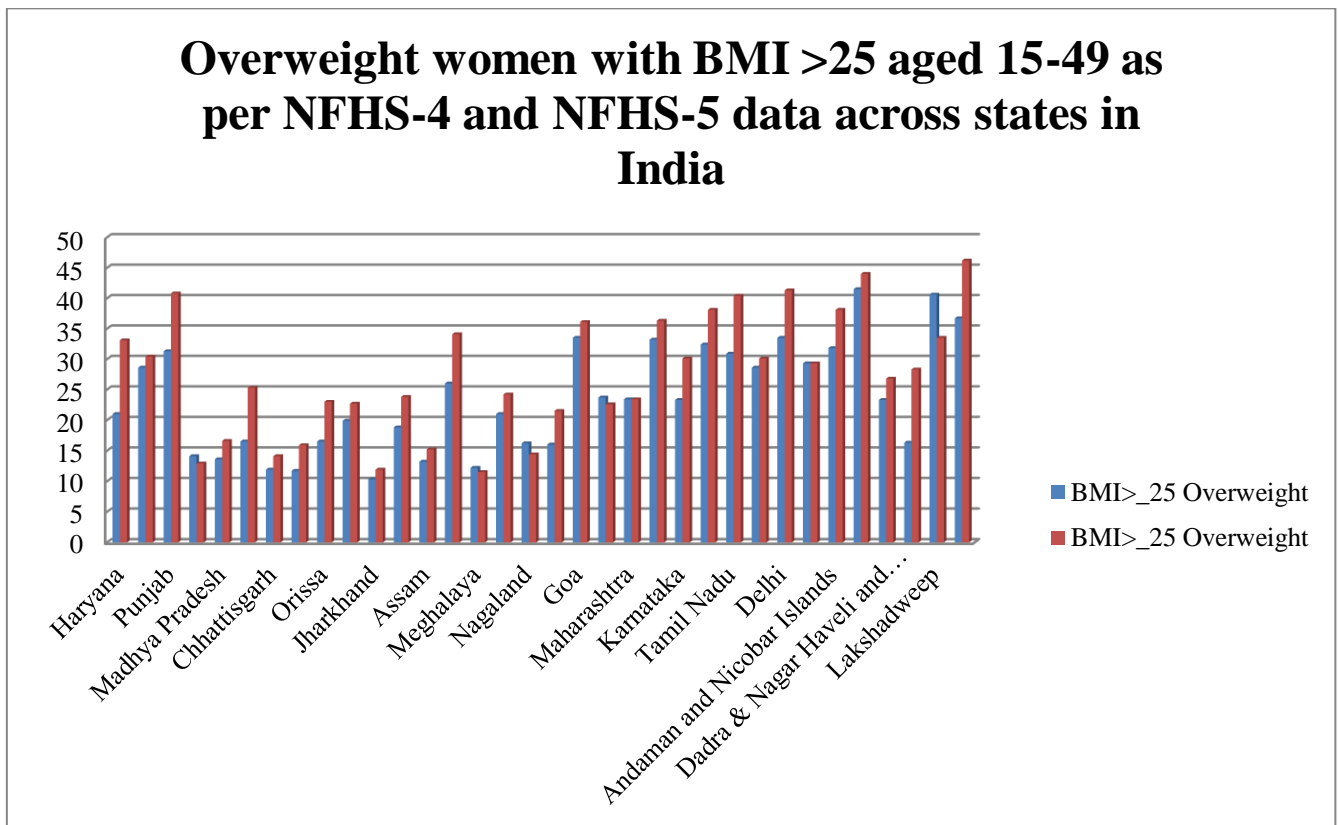


Fig. 15: Overweight Women with BMI> 25 across states in India



A similar trend can be observed in case of overweight men across states in India. There has been an increase in overweight cases of men in all states except Andhra Pradesh (-2.4) and Dadra & Nagar Haveli (-4.9). In remaining all states there is an increase with highest increase in overweight percentages in Ladakh (19); Lakshadweep

(17.2); Delhi (13.4); Jammu & Kashmir and Mizoram (11); Manipur (10.5); Nagaland (10); Karnataka and Tamil Nadu (8.8); and other states between 2 and 8.6 percent. There has been no change in Goa in overweight men according to NFHS-5 when compared to NFHS-4 data.

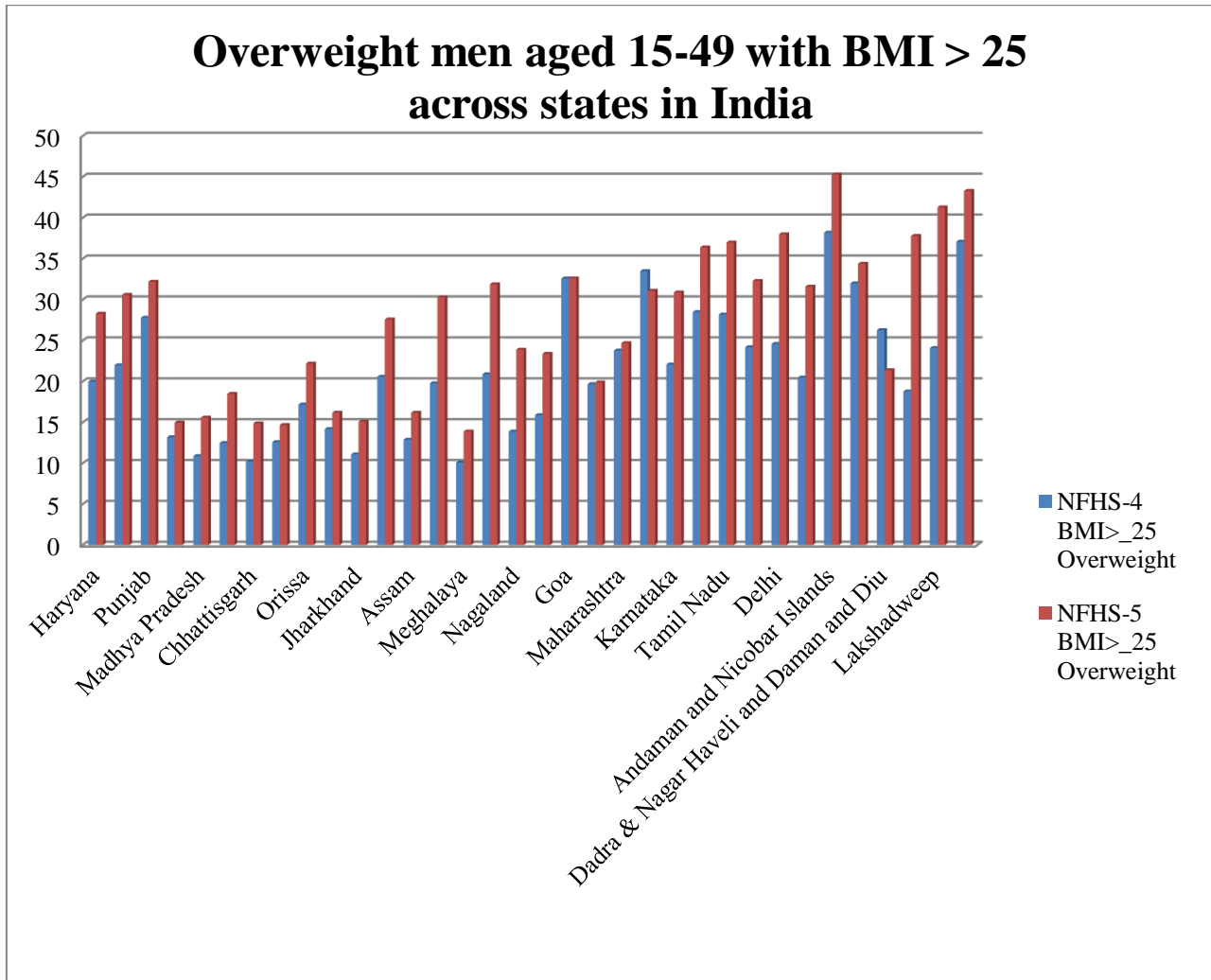


Fig. 16: Overweight Men across states in India

Source: (National Family Health Survey, 2021)

As per financial express dated 19<sup>th</sup> August 2019, there has been an increase in the consumption of junk food in India. About 93 percent of the children in India consume packed food more than one in week and about 40 percent of the school going children take packed food as lunch to school. This increase in eating junk food is one of the major

cause of children becoming overweight in India (Sanand, 2019). The increase in consumption of junk food has also become a problem in rural area in Himachal Pradesh. The study reveals that about 36 percent of the children in rural areas consume junk food (Aadriti Gupta, Umesh Kapil and Gajendra Singh, 2019).

E. Waist to Hip Ratio of Women and Men as per NFHS-5 data

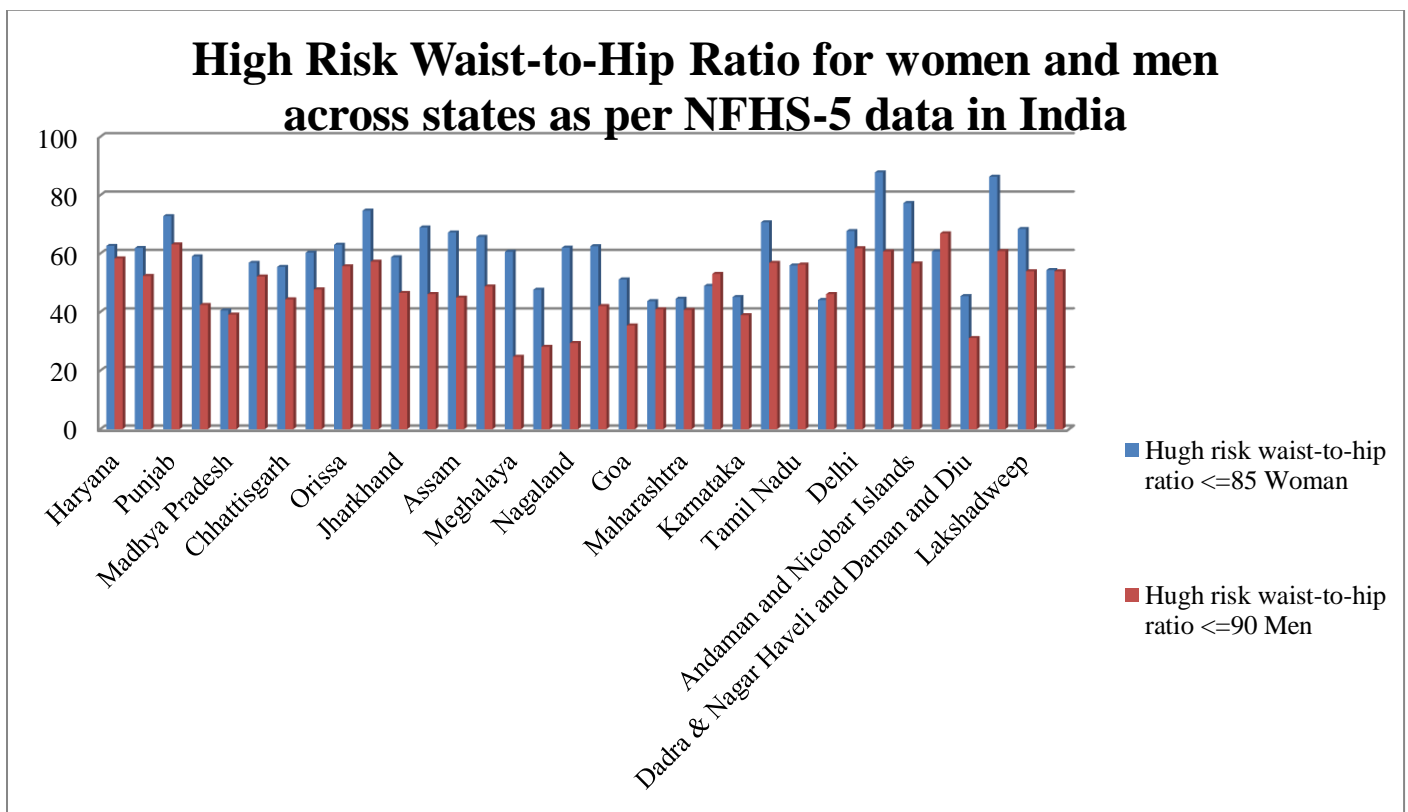


Fig. 17: High Risk Waist-to-Hip Ratio of Women and Men across states in India

The NFHS-5 data reveals that on an average about 60 percent of women and 48 percent of men in India are in high risk for heart diseases, diabetes and premature deaths when compared to the women with waist to hip ratio of less than 0.80 and for men at less than 0.95. This means that people with more weight on their hips and thighs tend to become weak and are more prone to diseases than others. Across states in India the women are with more risk when compared to men in all states except in states like Andhra Pradesh, Tamil Nadu, Telangana and Chandigarh. The states with highest percentage of waist to hip ratio among women are in Jammu and Kashmir (87.8); Ladakh (86.3); Andaman and Nicobar (77.3); West Bengal (74.7); Punjab (72.8) and Kerala (70.7). The remaining state are in range of 40.5 to 68.9 percent. The high waist to hip ratio among men is highest in 5 states with more than 60 percent are in Chandigarh (66.9); Punjab (63.1); Delhi (61.8); Ladakh (60.8); and Jammu and Kashmir (60.7) percent. Majority of the state have more than 40 percent of waist to hip ratio among men and about 6 states have less than 40 percent.

F. Region wise Pattern of Malnutrition in India (See table 2 and 3)

The pattern of malnutrition among children aged below 5 years shows that the highest underweight children are in Bihar at 41 percent. The highest stunted children in India are in Meghalaya at 46.5 percent and in wasting the highest is in Maharashtra at 36.5 percent. When it comes to anaemic children, Ladakh is highest with 92.5 percent and is also highest in overweight children. As far as the lowest cases of underweight children in India are concerned it is in north east region in Mizoram at 12.7 percent. The lowest

percentage of stunted children in India is in Puducherry (UT). The lowest wasted children in India are in Chandigarh (UT) at 10.7 percent. The lowest anaemic children are in Kerala at 39.4 percent in India. Among the overweight children the lowest percent is in Chandigarh and Dadra & Nagar Haveli at 1.9 percent each.

In case of malnourished women Jharkhand (26.2 %) has the highest cases in India and in case of malnourished men Madhya Pradesh (23 %) has the highest cases. Among anaemic cases Ladakh has highest cases of anaemic women (92.8 %) and anaemic men (75.6 %). In case of overweight women, Puducherry (46.2 %) has highest cases and Andaman and Nicobar has the highest cases of overweight men ( 45.4 %).

➤ North India

Among the north Indian states the malnutrition is highest in Rajasthan with highest case of underweight children (27.6), stunted children (31.8), wasted children (24.4) and also anaemic children at an alarming percentage of (71.5). The overweight children are more in Himachal Pradesh at 5.7 percent. Among the lowest cases, Haryana has lowest cases in underweight (21.5) percent, lowest cases of wasted children (15.9) percent and lowest cases of overweight children at 3.3 percent. Punjab is lowest among stunted children (24.5) percent and Himachal Pradesh is lowest among overweight children at 55.4 percent. More number of malnourished women and anaemic men are in Rajasthan and more number of anaemic women and malnourished men are in Haryana. Punjab has highest cases of overweight men and women. The lowest cases of anaemic

women and men and lowest cases of malnourished men are in Himachal Pradesh. The lowest cases of malnourished women are in Punjab and the lowest cases of overweight men and women are in Rajasthan.

➤ *Central India*

Among central states, Madhya Pradesh has highest case of underweight children (33 percent) and is also highest in anaemic children (71.5 percent). Uttar Pradesh is highest in stunted cases at 39.7 percent and Chhattisgarh is highest in wasted children at 26.4 percent and highest in overweight children at 4 percent. Among lowest cases in central India, Chhattisgarh is lowest in underweight cases (31.3) percent and also in stunted cases (34.6) percent whereas Uttar Pradesh is lowest in wasted cases (24.6) percent and also in anaemic cases (66.4) percent. Madhya Pradesh has lowest cases of overweight children. Chhattisgarh has highest cases of malnourished women and anaemic men and women. Madhya Pradesh has the highest cases of malnourished men. Uttar Pradesh has the highest cases of overweight men and women. The lowest cases of malnourished women and anaemic men and women are in Uttar Pradesh. The lowest cases of malnourished men and overweight men and women are in Chhattisgarh.

➤ *East India*

In eastern states of India Bihar have the highest cases of underweight children in India and also in eastern states. And it also has the highest cases in stunted children, wasting and anaemic children. West Bengal has the highest cases in overweight children. Odisha has the lowest cases among eastern states in underweight, stunting, wasting and anaemic children. Bihar has the lowest cases of overweight children. Highest cases of malnourished women are in Jharkhand and highest cases of anaemic women and men are in West Bengal. Bihar has the highest cases of malnourished men and Odisha has the highest cases of overweight men and women. The lowest cases of malnourished men and women are in West Bengal. The lowest cases of anaemic women are in Bihar and lowest anaemic cases of men are in Odisha. The lowest cases of overweight women are in Jharkhand and lowest cases of overweight men are in Bihar.

➤ *North East India*

Among the north east states, Assam has highest cases of underweight, wasting and anaemic children and Meghalaya has highest case in stunting and that is the highest in all India also. Mizoram has the lowest cases of underweight children and Manipur has lowest cases of stunting, wasting and overweight. Nagaland has the lowest cases of anaemic children. The highest cases of malnourished men and women are in Assam and the highest cases of anaemic men and women are in Tripura. The highest cases of overweight women are in Manipur and highest cases of overweight men are in Mizoram. The lowest cases of malnourished women are in Mizoram and for men it is in Arunachal Pradesh. The lowest cases of anaemic women are in Nagaland and for men it is in Manipur. The lowest cases of overweight men and women are in Meghalaya and that is the lowest in all India.

➤ *West India*

In the west states, Gujarat has the highest cases of underweight, stunting and anaemic children. Maharashtra has highest cases of wasting and is also high in India and it also has highest cases of overweight children. Goa is in better condition in western states with least cases in underweight, stunting, anaemic, wasting and overweight children. Gujarat has the highest cases of malnourished men and women and also in anaemic men and women. Goa has the highest cases of overweight men and women. Goa has the lowest cases of malnourished men and women and also in anaemic cases of men and women. In overweight cases, Gujarat has the lowest cases for both men and women.

➤ *South India*

In southern states, Karnataka has highest cases of underweight and stunted children. Andhra Pradesh has highest cases of wasted children, Telangana has highest cases of anaemic children and Tamil Nadu has highest cases of overweight children. Among the least cases, Kerala has lowest percentage of cases in underweight, stunting, and anaemic children whereas Tamil Nadu has lowest percentage of cases in wasting and Andhra Pradesh has lowest cases of overweight children. Highest cases of malnourished women are in Telangana and highest cases of malnourished men are in Andhra Pradesh. Highest cases of anaemic cases of women are in Andhra Pradesh and for men it is in Karnataka. The overweight cases are highest in Tamil Nadu. The lowest cases of malnourished men and women and anaemic women are in Kerala. Karnataka has the lowest cases of overweight men and women and Telangana also has the lowest cases of overweight women.

➤ *Union Territories*

Among the Union Territories, Dadra and Nagar Haveli has the highest case of underweight and stunted children. Jammu & Kashmir has the highest cases of wasting and Ladakh has the highest cases of anaemic children and overweight children. The least cases are in Puducherry in underweight children and stunting, Chandigarh has lowest cases in wasting and overweight cases and Dadra & Nagar Haveli also has lowest cases in overweight children and these are also lowest in all India. Highest cases of malnourished men and women are in Dadra & Nagar Haveli and highest cases of anaemic men and women are in Ladakh. The highest cases of overweight women are in Puducherry and for men it is in Andaman and Nicobar. The lowest cases of malnourished men and women are in Ladakh and the lowest cases of anaemic men and women are in Lakshadweep. The lowest cases of overweight men and women are in Dadra & Nagar Haveli.

Table 2: Region Wise Pattern of Malnutrition among children below 5 years in India

	NFHS-4	NFHS-5	NFHS-4	NFHS-5	NFHS-4	NFHS-5	NFHS-4	NFHS-5	NFHS-4	NFHS-5
	Under-weight	Under-weight	Stunted	Stunted	Waste d	Wasted	Anaemic Children	Anaemic Children	Over-weight	Over-weight
North										
Haryana	29.4	21.5	34	27.5	30.2	15.9	71.7	70.4	3.1	3.3
Himachal Pradesh	21.2	25.5	26.3	30.8	17.6	24.3	53.7	55.4	1.9	5.7
Punjab	21.6	16.9	25.7	24.5	27.2	20.6	56.6	71.1	2.3	4.1
Rajasthan	36.7	27.6	39.1	31.8	31.6	24.4	60.3	71.5	2.1	3.3
Central										
Madhya Pradesh	42.8	33	42	35.7	35	25.5	68.9	72.7	1.7	2
Uttar Pradesh	39.5	32.1	46.3	39.7	23.9	24.6	63.2	66.4	1.5	3.1
Chhattisgarh	37.7	31.3	37.6	34.6	31.5	26.4	41.6	67.2	2.9	4
East										
Bihar	43.9	41	48.3	42.9	27.8	31.7	63.5	69.4	1.2	2.4
Orissa	34.4	29.7	34.1	31	26.8	24.2	44.6	64.2	2.6	3.5
West Bengal	31.6	32.2	32.5	33.8	26.8	27.4	54.2	69	2.1	4.3
Jharkhand	47.8	39.4	45.3	39.6	40.4	31.5	69.9	67.5	1.5	2.8
North East										
Arunachal Pradesh	19.4	15.4	29.4	28	25.3	19.6	54.2	56.6	4.9	9.7
Assam	29.8	32.8	36.4	35.3	23.2	30.8	35.7	68.4	2.3	4
Manipur	13.8	13.3	28.9	23.4	9	13.3	23.9	42.8	3.1	3.4
Meghalaya	28.9	26.6	43.8	46.5	21.8	16.8	48	45.1	3.9	4
Mizoram	12	12.7	28.1	28.9	8.4	14.7	19.3	46.4	4.2	10
Nagaland	16.7	26.9	28.6	32.7	15.5	27	26.4	42.7	3.8	4.9
Tripura	24.1	25.6	24.3	32.3	23.1	25.5	48.3	64.3	3	8.2
West										
Goa	23.8	24	20.1	25.8	31.4	26.6	48.3	53.2	3.7	2.8
Gujarat	39.3	39.7	38.5	39	35.9	35.7	62.6	79.7	1.9	3.9
Maharashtra	36	36.1	34.4	35.2	34.9	36.5	53.8	68.9	1.9	4.1
South										
Andhra Pradesh	31.9	29.6	31.4	31.2	21.7	35.6	58.6	63.2	1.2	2.7
Karnataka	35.5	32.9	36.2	35.4	35.6	27.9	60.9	65.5	2.6	3.2
Kerala	16.1	19.7	19.7	23.4	22.2	21.6	35.7	39.4	3.4	4
Tamil Nadu	23.8	22	27.1	25	27.6	20.1	50.7	57.4	5	4.3
Telangana	28.4	31.8	28	33.1	22.9	30.2	60.7	70	0.7	3.4
Union Territories										
Delhi	27	21.8	31.9	30.9	20.5	16.1	59.7	69.2	1.2	4
Jammu & Kashmir	16.6	21	27.4	26.9	17.8	28.7	53.8	72.7	5.7	9.6
Andaman and Nicobar Islands	21.6	23.7	23.3	22.5	20.8	26.5	49	40	3	5.4
Chandigarh	24.5	20.6	28.7	25.3	14.8	10.7	73.1	54.6	1.1	1.9
Dadra & Nagar Haveli and Daman and Diu	35.8	38.7	37.2	39.4	38.2	25.9	82	75.8	3.9	1.9

	NFHS-4	NFHS-5	NFHS-4	NFHS-5	NFHS-4	NFHS-5	NFHS-4	NFHS-5	NFHS-4	NFHS-5
	Under-weight	Under-weight	Stunted	Stunted	Waste d	Wasted	Anaemic Children	Anaemic Children	Over-weight	Over-weight
Ladakh	18.7	20.4	30.9	30.4	14.4	26.6	91.4	92.5	4	13.4
Lakshadweep	23.6	25.8	26.8	32	16.6	26.3	53.6	43.1	1.6	10.5
Puducherry	22	15.3	23.7	20	31.4	16.1	44.9	64	2.2	3.8

Red Colour = Highest in India; Yellow Colour = Highest in Region; Green Colour = Lowest in India; Blue Colour = lowest in region

Table 3: Patterns of Malnutrition among men and women across states in India

Gender	Women						Men					
Data	NFHS-4	NFHS-5	NFHS-4	NFHS-5	NFHS-4	NFHS-5	NFHS-4	NFHS-5	NFHS-4	NFHS-5	NFHS-4	NFHS-5
Name of the State	BMI<18.5	BMI<18.5	Anaemic	Anaemic	BMI>_25 Overweig ht	BMI>_25 Overweig ht	BMI<18.5	BMI<18.5	Anaemic	Anaemic	BMI>_25 Overweig ht	BMI>_25 Overweig ht
North												
Haryana	15.8	15.1	62.7	62.3	21	33.1	11.3	14.5	20.9	18.9	20	28.3
Himachal Pradesh	16.2	13.9	53.5	53	28.6	30.4	18	11.8	20.1	18.6	22	30.6
Punjab	11.7	12.7	53.5	58.7	31.3	40.8	10.9	12.5	25.9	22.6	27.8	32.2
Rajasthan	27	19.6	46.8	54.4	14.1	12.9	22.7	14	17.2	23.2	13.2	15
Central												
Madhya Pradesh	28.4	23	52.5	54.7	13.6	16.6	28.4	23	25.5	22.4	10.9	15.6
Uttar Pradesh	25.3	19	52.4	50.4	16.5	25.3	25.9	17.9	23.7	21.5	12.5	18.5
Chhattisgarh	26.7	23.1	47	60.8	11.9	14.1	24.1	17.4	22.1	27	10.2	14.9
East												
Bihar	30.4	25.6	60.3	63.5	11.7	15.9	25.4	21.5	32.3	29.5	12.6	14.7
Orissa	26.5	20.8	51	64.3	16.5	23	19.5	15.3	28.3	28.5	17.2	22.2
West Bengal	21.3	14.8	62.5	71.4	19.9	22.7	19.9	15.1	30.3	38.9	14.2	16.2
Jharkhand	31.5	26.2	65.2	65.3	10.3	11.9	23.8	17.1	29.8	29.6	11.1	15.1
North East												
Arunachal Pradesh	8.5	5.7	43.2	40.2	18.8	23.8	8.3	4.9	18.7	21.4	20.6	27.6
Assam	25.7	17.6	46	65.9	13.2	15.2	20.7	13.4	25.4	36	12.9	16.2
Manipur	8.8	7.2	26.4	29.4	26	34.1	11.1	8	9.5	6	19.8	30.3
Meghalaya	12.1	10.8	56.2	53.8	12.2	11.5	11.6	9	32.4	25.5	10.1	13.9
Mizoram	8.4	5.3	28.4	34.8	21	24.2	7.3	5.1	12.1	15.6	20.9	31.9
Nagaland	12.3	11.1	27.9	28.9	16.2	14.4	11.5	7.5	11.7	10	13.9	23.9
Tripura	18.9	16.2	54.5	67.2	16	21.5	15.7	12.4	24.7	36.9	15.9	23.4
West												
Goa	14.7	13.8	31.3	39	33.5	36.1	10.8	12.5	11	12	32.6	32.6
Gujarat	27.2	25.2	54.9	65	23.7	22.6	24.7	20.9	21.6	26.6	19.7	19.9
Maharashtra	23.5	20.8	48	54.2	23.4	23.4	19.1	16.2	17.7	21.9	23.8	24.7
South												
Andhra Pradesh	17.6	14.8	60	58.8	33.2	36.3	14.8	16.5	27	16.2	33.5	31.1

Table 3: Patterns of Malnutrition among men and women across states in India

Gender	Women						Men					
Data	NFHS-4	NFHS-5	NFHS-4	NFHS-5	NFHS-4	NFHS-5	NFHS-4	NFHS-5	NFHS-4	NFHS-5	NFHS-4	NFHS-5
Name of the State	BMI<18.5	BMI<18.5	Anaemic	Anaemic	BMI>_25 Overweig ht	BMI>_25 Overweig ht	BMI<18.5	BMI<18.5	Anaemic	Anaemic	BMI>_25 Overweig ht	BMI>_25 Overweig ht
Karnataka	20.7	17.2	44.8	47.8	23.3	30.1	16.5	14.3	18.3	19.6	22.1	30.9
Kerala	9.7	10.1	34.3	36.3	32.4	38.1	8.5	10	11.8	17.8	28.5	36.4
Tamil Nadu	14.6	12.6	55	53.4	30.9	40.4	12.4	12.1	20.4	15.2	28.2	37
Telangana	22.9	18.8	56.6	57.6	28.6	30.1	21.5	16.2	15.3	15.3	24.2	32.3
Union Territories												
Delhi	14.9	10	54.3	49.9	33.5	41.3	17.7	9.1	21.7	12.6	24.6	38
Jammu & Kashmir	12.2	5.2	48.9	65.9	29.3	29.3	11.5	4.3	20.4	36.7	20.5	31.6
Andaman and Nicobar Islands	13.1	9.4	65.7	57.5	31.8	38.1	8.7	4	30.8	16.1	38.2	45.3
Chandigarh	13.3	13	75.9	60.3	41.5	44	21.7	15.1	19.3	8.1	32	34.4
Dadra & Nagar Haveli and Daman and Diu	23.4	25.1	72.9	62.5	23.3	26.8	16.3	18.3	27.6	24.6	26.3	21.4
Ladakh	10.5	4.4	78.4	92.8	16.3	28.3	11.2	2.1	41.2	75.6	18.8	37.8
Lakshadweep	13.5	8	46	25.8	40.6	33.5	8.2	5.5	11.4	5.6	24.1	41.3
Puducherry	11.3	9	52.4	55.1	36.7	46.2	10.2	11.1	15.9	19.5	37.1	43.3

Red Colour = Highest in India; Yellow Colour = Highest in Region; Green Colour = Lowest in India; Blue Colour = lowest in region

Table 4: Patterns of Best performing and worst performing states in Malnutrition in India

Region	Malnourished Children				Malnourished Men and Women			
	Worst Performing States in Malnutrition		Better Performing States in Malnutrition		Worst Performing States in Malnutrition		Better Performing States in Malnutrition	
North	Rajasthan		Haryana		Haryana & Rajasthan		Himachal Pradesh	
Central	Madhya Pradesh		Uttar Pradesh		Chhattisgarh & Madhya Pradesh		Uttar Pradesh	
East	Bihar		Odisha		West Bengal & Odisha		Bihar	
North East	Assam		Manipur		Assam & Tripura		Meghalaya	
West	Gujarat		Goa		Gujarat		Goa	
South	Karnataka		Kerala		Andhra Pradesh & Telangana		Kerala	
Union Territories	Ladakh and Dadra & Nagar Haveli		Chandigarh		Ladakh		Lakshadweep	

➤ Anaemic condition of children, women and men compared with Spending on Micronutrient Supplementation

The spending on supplementation of micro nutrients programme across states in India shows that there is lot of difference and variation in the spending and this has to be increased in most of the states in India. Table 5 presents the state wise data on spending of micronutrient supplementation and table 6 presents the ten yearly average

of amount spent on supplementation programmes across states in India (Ref: India stat table 2009-10 to 2018-19 spending on micro nutrients programme across states in India). The ten yearly averages on micronutrient supplementation programme is taken as an independent variable and anaemic children, anaemic women and men are taken as dependent variable. Regression was computed on SPSS and the results are shown as below:

Table 5: Model Summary<sup>b</sup>

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.641 <sup>a</sup>	.412	.351	339.08201	.412	6.759	3	29	.001

a. Predictors: (Constant), Anaemic Men, Anaemic Children, Anaemic Women

b. Dependent Variable: Ten Years Average Rs in Lakhs

As indicated in table 5, we can see that R-Square is 0.412, which means that the independent variable 10 year average spending on supplementation causes 41.2 percent change in dependent variable.

Table 6: ANOVA<sup>a</sup>

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	2331477.670	3	777159.223	6.759	.001 <sup>b</sup>
	Residual	3334321.664	29	114976.609		
	Total	5665799.333	32			

a. Dependent Variable: Ten Years Average Rs in Lakhs

b. Predictors: (Constant), Anaemic Men, Anaemic Children, Anaemic Women

The table 6 Anova results shows that p-value is 0.001 which is less than 0.05, hence there is a significant relationship between the independent variable spending on supplementation and dependent variable anaemic children, women and men.

Table 7: Coefficients<sup>a</sup>

Model		Un standardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-400.518	337.926		-1.185	.246
	Anaemic Children	-1.022	7.147	-.028	-.143	.887
	Anaemic Women	-12.667	22.909	-.189	-.553	.585
	Anaemic Men	68.776	29.484	.826	2.333	.027

a. Dependent Variable: Ten Years Average Rs in Lakhs

The table number 7 shows the coefficients results as indicated by the beta value which is -0.28 for anaemic children, -0.189 for anaemic women and 0.826 for anaemic men. The first beta value for anaemic children -0.28 shows that for every additional unit spent on supplementation programme, the anaemic condition of children reduces by 0.28 cases. Similarly for women for every unit spent there will a reduction in anaemic cases by 0.189. In case of anaemic men the beta has a positive value that shows there is no reduction on anaemic cases of men. Further the beta value is negative for children and women that show an increase in a rupee on supplementation program will reduce the anaemic cases.

#### IV. CONCLUSIONS

There is a continuous growth in food production of major crops in India and the per capita consumption expenditure shows that more expenditure is spent on cereals and less on fruits, vegetables and meat. As per Recommended Daily Intake (RDI) roots and tubers are consumed more and sugar and green leafy vegetables are consumed less than RDI. There a deficiency among Indian population in Vitamin A, Riboflavin, Calcium and Niacin and over consumption of Vitamin C as per NNMB report. As per NFHS data, anaemic cases are alarming among children across states followed by stunting and underweight children. Among women also anaemic cases are on high

rise. In overweight cases both men and women are also rising. The hip-to-waist ratio shows that more than 60 percent of women and 48 percent of men are prone to diseases like diabetes, heart problems and premature deaths. The worst performing states in malnutrition (see table 4) among children are Rajasthan in north; Madhya Pradesh in central; Bihar in east; Assam in north east; Gujarat in west; Karnataka in south; and Ladakh and Dadra & Nagar Haveli among union territories. The better performing states in malnutrition are Haryana in north; Uttar Pradesh in central; Odisha in east; Manipur in north east; Goa in west; Kerala in south; and Chandigarh in UTs. When it comes to worst performing states for men and women, it is Haryana and Rajasthan in north; Chhattisgarh and MP in central; West Bengal and Odisha in east; Assam and Tripura in north east; Gujarat in west; AP and Telangana in south; and Ladakh in UTs. While the better performing states in malnutrition are in Himachal Pradesh in north; Uttar Pradesh in central, Bihar in east; Meghalaya in north east; Goa in west and Kerala in south; and Lakshadweep in UTs. Under-nutrition, micronutrient deficiencies, and over-nutrition all these three problems need immediate attention. Policy interventions are needed in nutritional awareness, changes in PDS systems, and a continuous monitoring to curb the malnutrition across states in India. The spending on supplementation of micro nutrients programme across states in India shows that there is lot of difference and variation in the spending and this has to be increased in most of the states in India to curb the

micronutrient deficiencies (Ref: India stat table 2009-10 to 2018-19 spending on micro nutrients programme across states in India).

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ANNEXURE

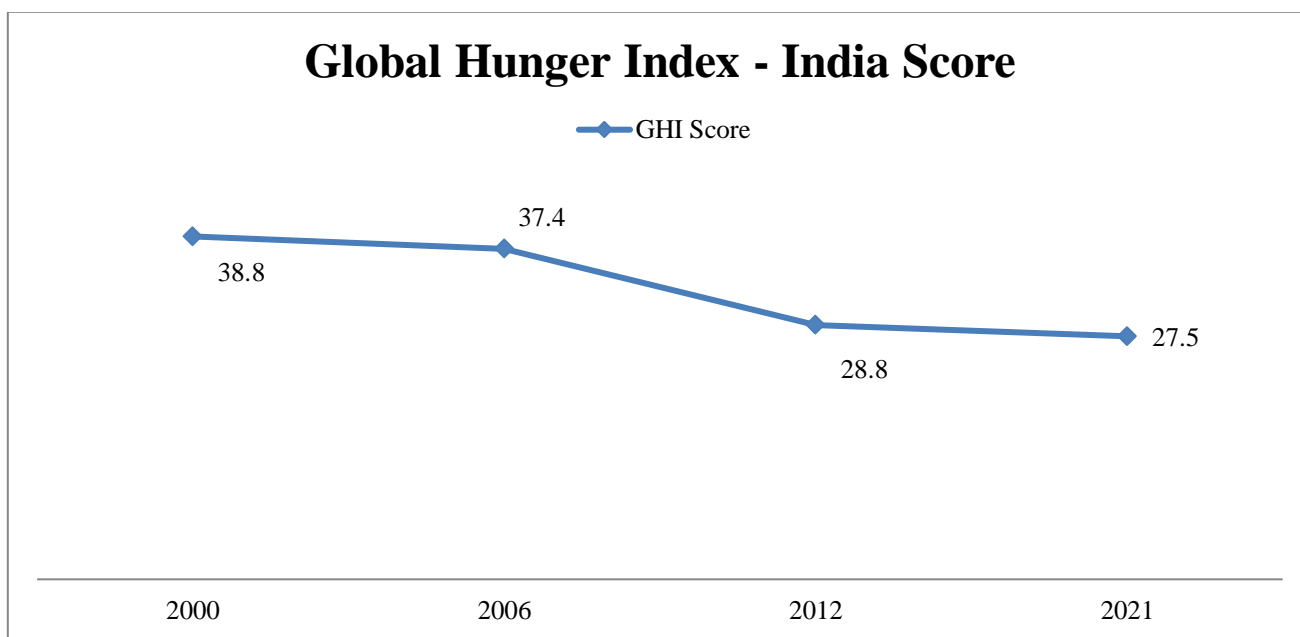


Fig. 1: Global Hunger Index – India Score

Source: (Global Hunger Index Report, 2021)

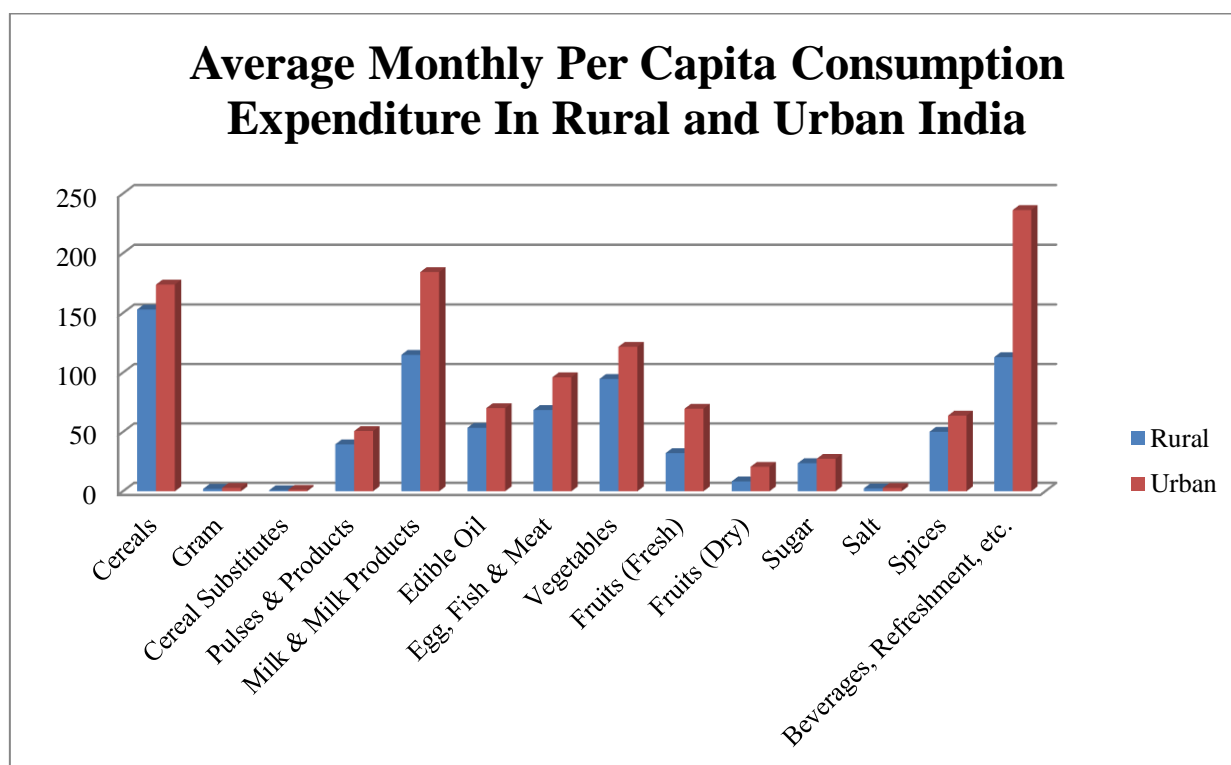


Fig. 2: Average Monthly Per Capita Consumption Expenditure of persons per 1000 in Rural and Urban India

Source: (IndiaStat, July 2011 to June 2012)

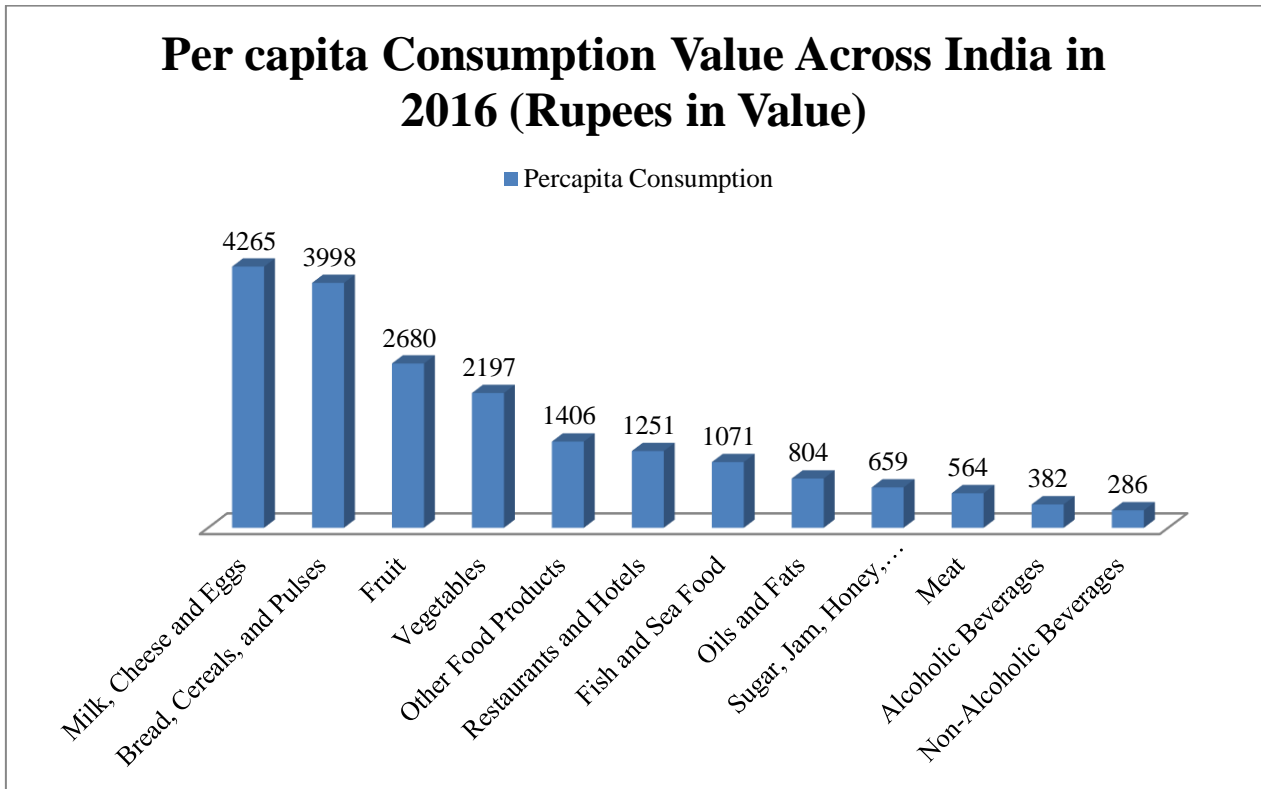


Fig. 3: Per capita Consumption value across India in 2016

Source: (Statista.com)

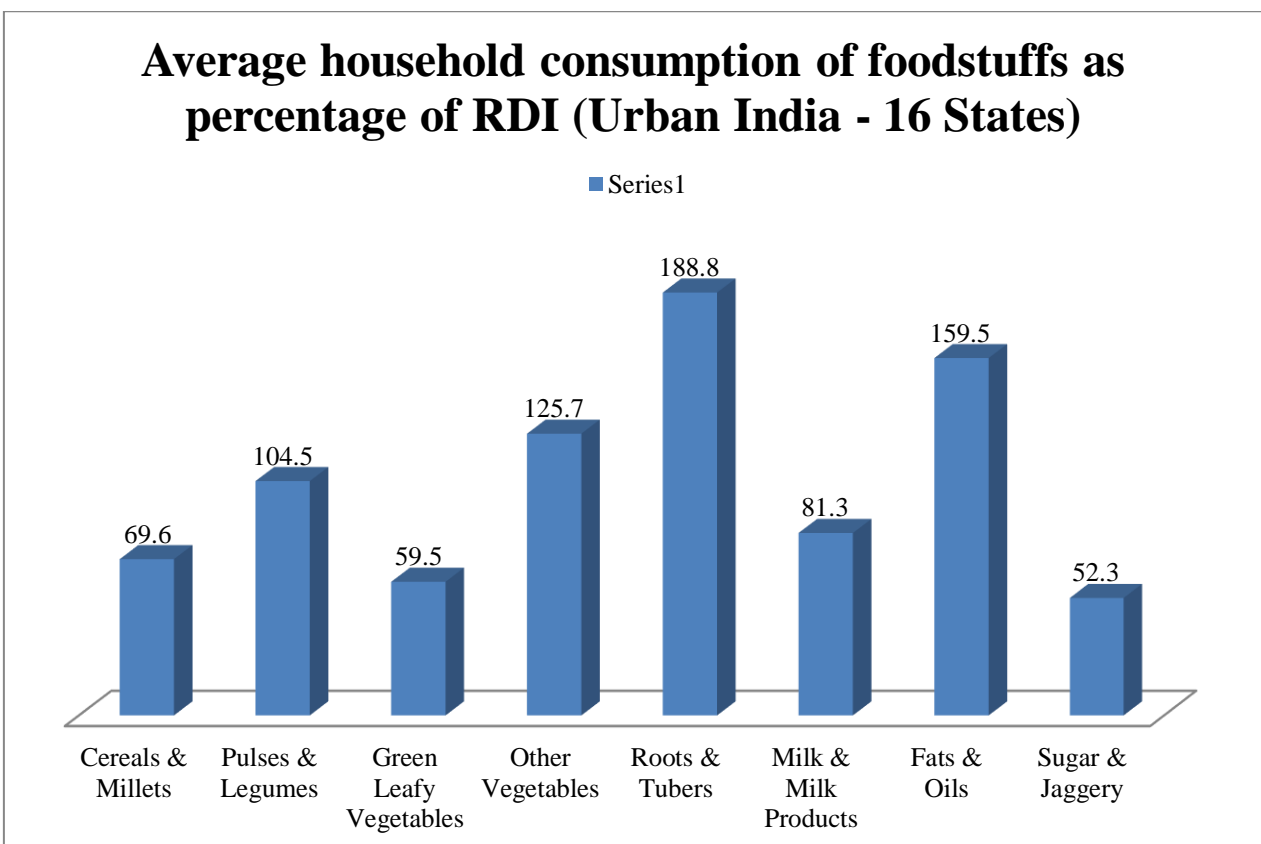


Fig. 4: Average household consumption of foodstuffs as percentage of Recommended Daily Intake in Urban India (16 States)

Source: (National Nutrition Monitoring Bureau, 2017)

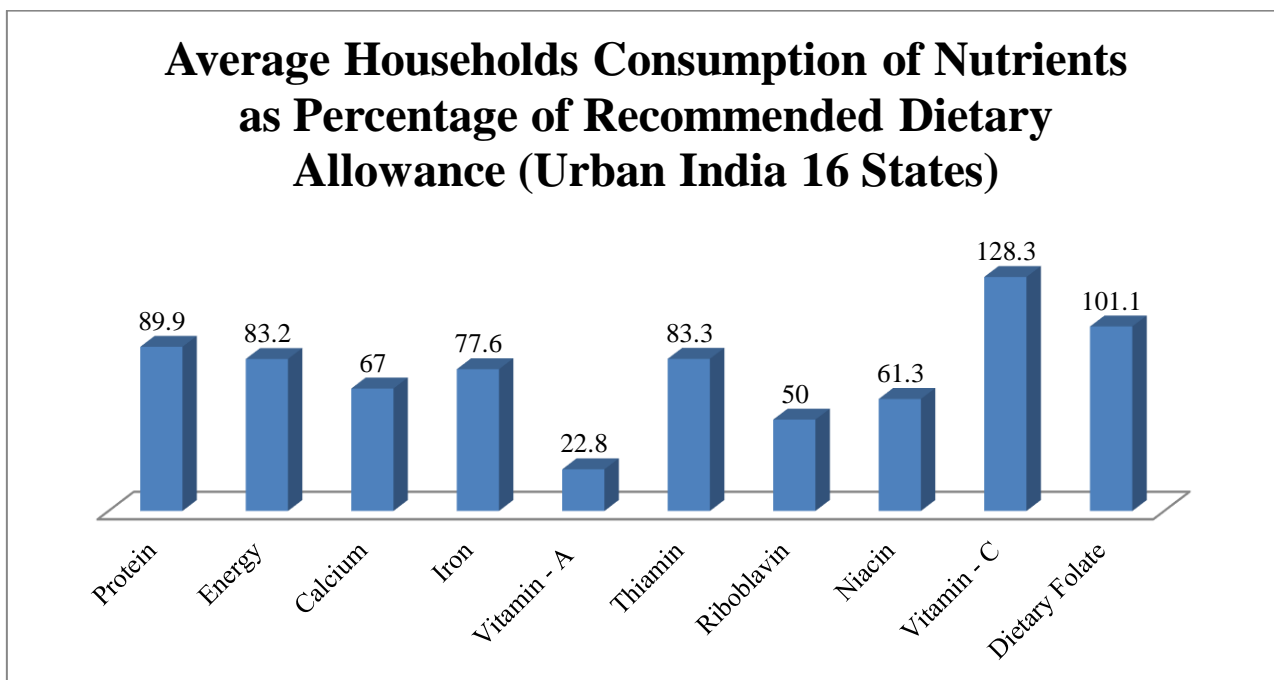


Fig. 5: Average Household Consumption of Nutrients as percentage of Recommended Dietary Allowance (Urban India 16 States)

Source: (National Nutrition Monitoring Bureau, 2017)

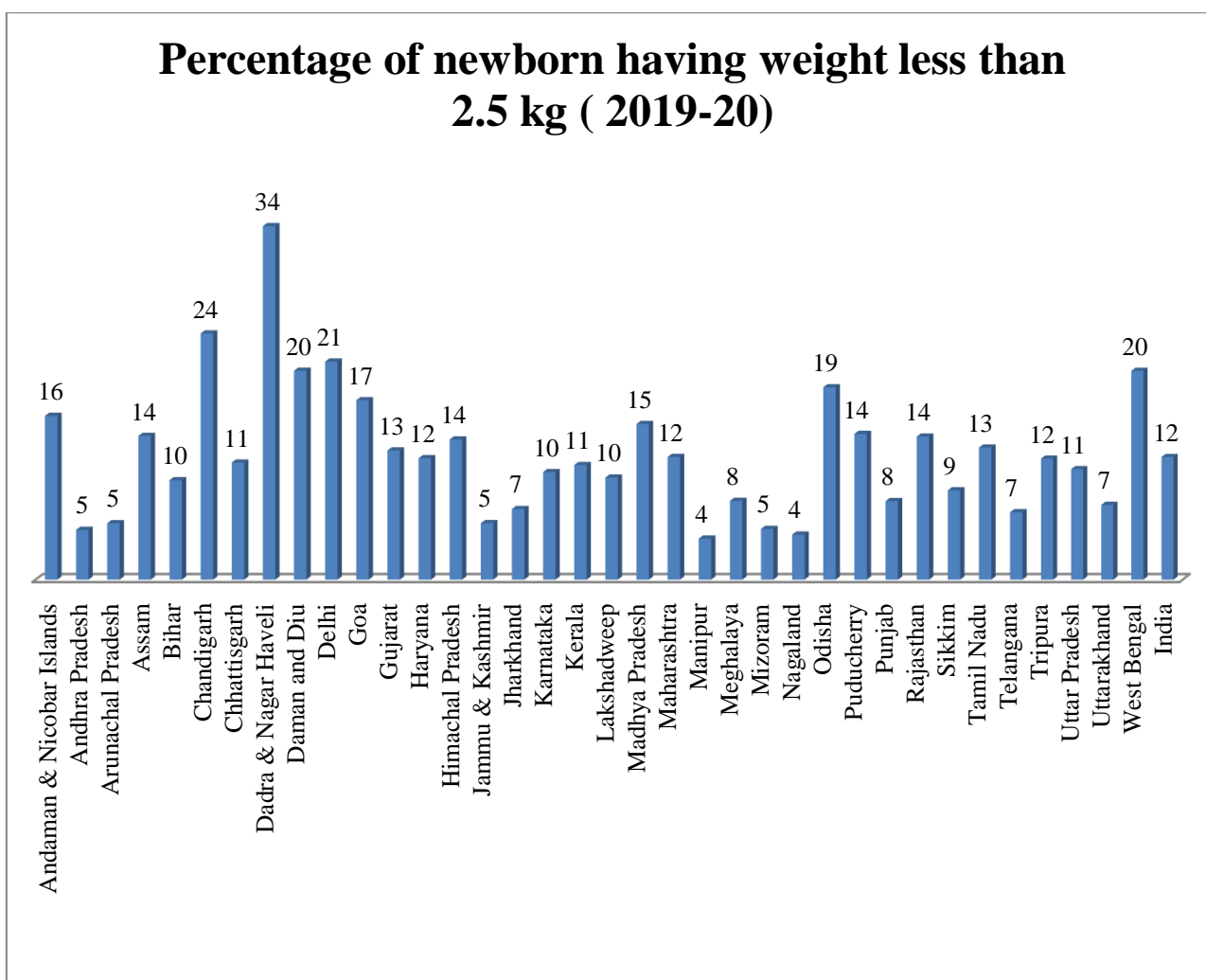


Fig. 6: New born children having weight less than 2.5 kg during 2019-20

Table 8: State wise funds spent on micronutrient supplementation programmes

State-wise Funds Spent in Micronutrient Supplementation Programmes, Infant and Young Child Feeding (IYCF) Practices, Nutrition Rehabilitation Centres (NRCs) and Diarrhoea Control Activities in India (2009-2010 to 2018-2019)										
(Rs. in Lakh)										
States/UTs	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19*
<b>A. High Focus States</b>										
Bihar	34.79	41.45	469.52	1009.30	2049.37	675.15	437.29	540.98	1007.20	515.55
Chhattisgarh	44.37	159.74	174.92	217.87	362.34	298.99	393.30	451.02	534.06	544.97
Himachal Pradesh	0.90	0.00	0.00	25.00	0.00	0.07	20.64	34.83	14.10	7.81
Jammu and Kashmir	0.26	20.95	55.53	6.35	29.21	12.54	27.32	24.57	71.98	30.45
Jharkhand	28.18	115.35	201.68	207.33	399.34	484.83	565.24	436.14	419.70	685.61
Madhya Pradesh	1572.43	1939.24	1667.88	1745.90	2637.80	1815.16	1907.71	2854.19	2657.04	2668.95
Odisha	354.54	365.47	107.49	315.34	124.28	281.24	194.58	247.63	306.46	1040.53
Rajasthan	6.09	168.08	172.95	256.89	111.20	205.92	390.16	437.15	302.23	460.25
Uttar Pradesh	211.20	154.58	19.85	76.15	129.42	189.39	570.83	1004.69	980.34	714.33
Uttarakhand	0.00	0.00	0.00	23.17	0.00	9.63	19.39	59.36	30.55	157.03
Sub Total	2252.76	2964.86	2869.82	3883.30	5842.96	3972.92	4526.46	6090.55	6323.66	6825.50
<b>B. NE States</b>										
Arunachal Pradesh	0.00	2.07	0.12	2.00	13.03	20.08	29.42	118.62	49.08	15.45
Assam	52.53	35.20	65.65	50.59	92.33	75.49	270.20	246.69	183.83	209.25
Manipur	3.00	9.03	15.24	1.18	8.93	110.72	24.05	163.63	10.29	99.77
Meghalaya	1.85	3.17	7.98	8.62	3.01	20.44	13.75	68.76	11.38	85.13
Mizoram	0.13	0.00	0.91	0.00	47.25	14.06	112.42	71.60	4.20	6.75
Nagaland	0.00	0.00	12.96	19.76	8.09	4.32	77.41	110.79	4.10	87.86
Sikkim	0.54	0.38	0.00	3.01	0.00	2.56	8.34	10.66	1.83	1.70
Tripura	47.67	0.34	18.40	9.90	50.52	8.75	52.59	14.18	21.31	7.14
Sub Total	105.72	50.19	121.26	95.05	223.16	256.43	588.19	804.92	286.02	513.05
<b>C. Non-High Focus States</b>										
Andhra Pradesh	0.00	0.00	0.00	80.62	21.58	29.20	316.43	279.09	122.57	380.00
Goa	1.30	2.46	107.76	8.01	10.25	8.47	0.97	15.12	8.24	1.11
Gujarat	41.38	587.13	565.30	750.53	655.75	988.83	1231.48	1043.31	913.46	926.01
Haryana	45.94	2.59	7.46	4.34	103.88	130.51	9.51	18.31	37.41	512.61
Karnataka	0.00	117.04	23.91	281.98	69.77	48.93	73.54	72.50	79.56	106.47
Kerala	172.22	102.70	18.97	58.99	1.91	10.72	3.69	38.65	50.29	118.09
Maharashtra	328.53	1105.73	2539.46	1799.34	1521.83	768.28	162.55	201.21	225.05	188.34
Punjab	0.00	104.62	4.03	92.96	11.44	58.76	18.76	49.35	72.03	0.69
Tamil Nadu	0.00	0.00	0.00	2.45	89.73	353.57	53.18	199.53	242.32	194.97
Telangana	-	-	-	-	-	4.38	45.61	39.85	123.97	55.67
West Bengal	49.19	340.50	148.66	548.14	389.70	248.55	1478.36	893.42	933.68	1125.91
Sub Total	638.56	2362.77	3415.55	3627.36	2875.83	2650.21	3394.07	2850.33	2808.58	3609.87
<b>D. Small States/UTs</b>										
Andaman and Nicobar Islands	0.00	0.00	0.00	0.00	0.00	0.72	0.00	2.18	0.06	0.00
Chandigarh	9.98	0.00	0.00	0.01	0.05	0.21	0.00	0.00	0.88	0.21
Dadra and Nagar Haveli	0.00	0.00	0.00	2.66	1.74	1.33	59.20	0.93	0.26	0.11
Daman and Diu	1.24	0.60	0.00	0.33	0.00	0.00	0.00	0.08	0.00	1.13
Delhi	11.19	9.69	3.05	24.40	2.81	3.51	4.91	3.78	4.78	16.42
Lakshadweep	0.00	0.00	0.00	0.00	0.00	0.00	0.66	0.97	1.24	0.00
Puducherry	1.38	1.00	9.29	3.50	0.80	0.00	15.00	24.98	1.40	13.63
Sub Total	23.79	11.29	12.34	30.90	5.39	5.77	79.77	32.92	8.62	31.50
India	3020.83	5389.11	6418.98	7636.62	8947.35	6885.33	8588.49	9778.73	9426.88	10979.91

Source: Indiatat.com

Table 9: State wise Spending of funds on Micronutrients supplementation (10 years average)

Name of the State	10 years average spending on micronutrient and IYCF &NRC	Anaemic Children NFHS-5	Anaemic women NFHS-5	Anaemic men NFHS-5
Haryana	87	70.4	15.1	14.5
Himachal Pradesh	10	55.4	13.9	11.8
Punjab	41	71.1	12.7	12.5
Rajasthan	251	71.5	19.6	14
Madhya Pradesh	2147	72.7	23	23
Uttar Pradesh	405	66.4	19	17.9
Chhattisgarh	318	67.2	23.1	17.4
Bihar	678	69.4	25.6	21.5
Orissa	334	64.2	20.8	15.3
West Bengal	616	69	14.8	15.1
Jharkhand	354	67.5	26.2	17.1
Arunachal Pradesh	25	56.6	5.7	4.9
Assam	128	68.4	17.6	13.4
Manipur	45	42.8	7.2	8
Meghalaya	22	45.1	10.8	9
Mizoram	26	46.4	5.3	5.1
Nagaland	33	42.7	11.1	7.5
Tripura	23	64.3	16.2	12.4
Goa	16	53.2	13.8	12.5
Gujarat	770	79.7	25.2	20.9
Maharashtra	884	68.9	20.8	16.2
Andhra Pradesh	123	63.2	14.8	16.5
Karnataka	87	65.5	17.2	14.3
Kerala	58	39.4	10.1	10
Tamil Nadu	114	57.4	12.6	12.1
Telangana	54	70	18.8	16.2
Delhi	8	69.2	10	9.1
Jammu & Kashmir	28	72.7	5.2	4.3
Andaman and Nicobar Islands	0	40	9.4	4
Chandigarh	1	54.6	13	15.1
Dadra & Nagar Haveli and Daman and Diu	7	75.8	25.1	18.3
Ladakh		92.5	4.4	2.1
Lakshadweep	0	43.1	8	5.5
Puducherry	7	64	9	11.1

Source: Indiatat.com; NFHS-5