# STUDY OF PERCENTAGE OF OBESE PEOPLE IN LOCALITY OF WANI, YAWATMAL DISTRICT, M.S.

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## ABSTRACT

*Recent studies around the world have reported that more than 1.9 billion adults are overweight and 650 million are obese, which is the matter of concern. It is estimated that approximately 2.8 million deaths are reported as a result of being overweight or obese. Due to the consumption of unhealthy and energy dense food , sedentary life style, lack of health care services and financial support, most of the developing countries in the world are facing high risk of obesity as well as their adverse consequences (i.e. diabetes, ischemic heart disease, etc.). In India, more than 135 million individuals were affected by obesity. The prevalence of obesity in India varies due to age, gender, geographical environment, socio-economic status, etc. In India, abdominal obesity is one of the major risk factors for cardiovascular disease (CVDs). Various studies have shown that the prevalence of obesity among women were significantly higher as compared to men. This problem of obesity can be preventable by spreading awareness among the peoples and its health consequences. Governmental agencies should promote the benefits of healthy life style, food habits and physical activity. The aim of this article is to report the prevalence of obesity in different regions of India and highlight the problem areas. This study revealed the occurrence of obesity among the people of Sindhi Colony of Wani.*

## Introduction

An excess body fat is responsible for Obesity which is a chronic and multi-factorial disease. The Body Mass Index (BMI) is most commonly used to define what is regarded as an "excess". Obesity has been evident in human records for over twenty thousand years which affects numerous aspects of human life and society.

WHO defines overweight and obesity as "abnormal or excessive fat accumulation that presents a risk to health"? Obesity can be viewed as the first wave of a defined cluster of NCDs (Non communicable diseases) called New World Syndrome, creating an enormous socio-economic and public health burden associated with an increased risk for type 2 diabetes mellitus, hypertension, dyslipidemia, cardiovascular diseases, obstructive sleep apnea, musculoskeletal disorders, some cancers, as well as mortality.

What is the size and nature of burden of the disease?

Classification of body weight according to the Body Mass Index (BMI)

| BMI | Classification |
|---|---|
| >18.5 | Underweight |
| 18.5-24.9 | Normal weight |
| 25.0-29.9 | Over weight |
| 25.0-29.9 | Obesity class I |
| 35.0-39.9 | Obesity class II |
| 40 and above | Obesity class III |

**Table. 1**

According to The World Health Organization (WHO) , adults can be consider as overweight when the BMI is equal or greater than 25 and obese when the BMI is equal or greater than 30.

In 1980, fewer than, one in ten people were classified as obese. Since then, the global numbers on obesity have doubled, and in some countries it has tripled. In 2008, worldwide more than half a billion adults were obese. According to survey of this study among 284 population, 144 peoples are obese patients. As Dr. T.V. Vaswani, the main disease found among Sindhi community are obesity, Osteoporosis, heart disease and thalassemia minor and the common problems, feeling of laziness, diabetes, schemic heart diseases and gabrahat. All these are some way or the other related to overweight, which is quite high among the Sindhis. Food habits are one of the major factors for the obesity. Sindhis by and large consume heavy food, do very little

exercise, and love a lavish life style. Lack of exercise is what leads to osteoporosis and Femur bone fractures in middle age. Most of the Sindhis today are overweight, and few are even obese (minimum 30% above their ideal weight). There are several factors contributing to this trend, such as: -

**Food habits:** Sindhi diet consists of fried foods, tikkis, pakodas, mithais, dry fruits, nonvegetarian food. Parties are frequent among the community members where there is red wine, snacks that are fried, like wafers, nuts, samosas, kebabs, organ meats, etc. Very few are interested in eating salads. Drinking in moderation is fine, but beyond the permitted level it is certainly harmful.

**Life style problems:** Basically high society Sindhi families are going through this high stress, high competition syndrome, which in simple words means running after wealth, and comparing oneself with others in the community, or within the families itself. Sindhis are known to slog to earn their money, but they are also known to disregard discipline of time. NRI Sindhwarkis particularly, keep going on in their shops and offices till late in the evening and night, unlike in China and Japan where the working hours are more decent. After all this heavy work the Sindhis are known to come home, take heavy drinks and sleep. Though the Sindhis are predisposed to being overweight, much can be done to achieve and maintain an ideal body weight. A simple dedicated walk of just 20 to 30 minutes daily is beneficial for health. Women working in the kitchen or going marketing do not burn as many calories as while walking. Lack of exercise in both the sexes is what leads to overweight, and subsequently to Diabetes and Blood Pressure etc.

### Materials and Methods

Study Area:A large municipality of Wani in eastern Maharashtra has the population exceeding 55,000 people. The town is located in Yavatmal District and it is about 60 miles east from Yavatmal city. Coal mining and related activities are taking place in the area, with a few old non-working and many operating new mines. This town is known as 'Black Diamond Town'. The latitude of Wani,

Maharashtra, India is 20.067541, and longitude is 78.958054.

**Sampling Station A**- Government Hospital. It is the only Government hospital in Wani. It is located in Telifail, near Kabristan, R.H.Wani, Yavatmal, Maharashtra. Its latitude is 20°03'39.9"N and longitude is 78°57'31.5"E.

**Sampling Station B**- Sindhi Colony. It is located 500m away from bus stand and situated at the Centre of Wani. There exists a population of 1000 people residing in the colony.

### Results & Discussion

The study revealed the occurrence of obesity among 284 people of Sindhi Colony. Occurrence of obesity is Maximum in Females than in Males because of high availability of luxuries at home for females with little exercise, while males go out for work, walk and compensate their cholesterol to normal weight. Among the obese population found in this study the number of Females, Males, Children, 80, 58, and 06 respectively. It was concluded that age group of

Age group of 10 to 30- 18
Age group of 31 to 50- 82
Age group of 51 to 70- 40
Age group of 71 to 90- 04

Totally several age groups were observed from which the age group of 31-50 had maximum number of obesed patients. It was also concluded that obesity is less dominant in lower age groups. The prevalence of Overweight and Obesity adolescent ranged 144 from 283.Previous studyshowed the factor affecting prevalence of overweight Urban adolescent in Hyderabad, India found that the prevalence overweight among adolescent was 7.2% and prevalence of obesity was 1.3%[6].The prevalence of overweight/obesity to be 2.2% in rural areas of Wardha District[7].The prevalence of overweight and obesity as 9.9% and 4.8% respectively amongst the adolescent school children of Mangalore city, Karnataka[8].The school based cross sectional study on thousand adolescent, having equal number of boys and girls are reported overall incident of obesity 3.4%, however a significantly greater number of boys (15%) as compared to girls (10.2%)

were overweight[10].The correlation of overweight and obesity among school going children were found 4.3% of the children were overweight/obesity[11]. The prevalence of obesity related indices and prevalence of obesity was 4.5% while there were 20% overweight subjects [12]. The study was aimed to review systematically the available literature on overweight and obesity prevalence amongst the adolescents in Sindhi colony, Sindhi diet consist of junk food and their life style problems are the most important cause of obesity in them also lack of exercise and bad habits like smoking and drinking tend to increase the effects of obesity in them. Sindhi's belonging to affluent group are more pre-pondered towards sedentary lifestyle and luxurious living pattern and therefore are mostly obesed.

## Tables and Figures
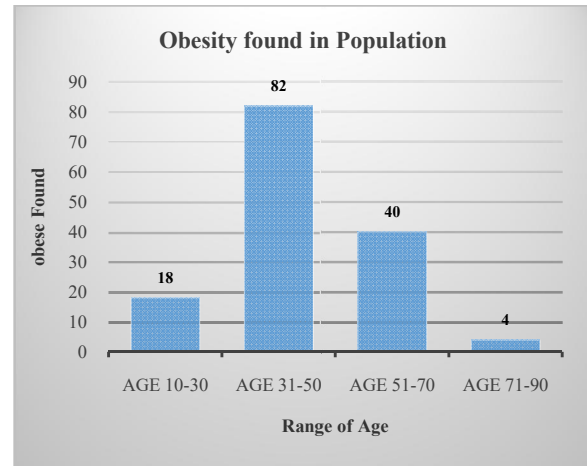


**Graph. 1**

| S.N | Patient name | Gender | Age | Height | Weight | BMI | Diseases |
|-----|--------------|--------|-----|--------|--------|-----|----------|
| 1 | GirdhariAmarwani | M | 82 | 5.7 | 91 | 31.42 | BP, Osteoarthritis |
| 2 | ReshmaAmarwani | F | 49 | 5.2 | 87 | 35.08 | Osteoarthritis |
| 3 | VidyaAmarwani | F | 75 | 4.8 | 62 | 30.64 | BP, Osteoarthritis |
| 4 | SarlaNagdeo | F | 47 | 5.2 | 77 | 30.92 | BP |
| 5 | Uma Wadhwani | F | 46 | 5.1 | 77 | 32.08 | BP |
| 6 | DivyaKeshwani | F | 22 | 5.4 | 89 | 33.02 | |
| 7 | komalKeshwani | F | 47 | 5.3 | 103 | 40.22 | BP, Heart disease |
| 8 | PayalKeshwani | F | 34 | 4.8 | 65 | 32.13 | |
| 9 | BhagiBhawnani | F | 69 | 4.11 | 70 | 30.31 | |
| 10 | KartikShugwani | M | 14 | 5.2 | 84 | 33.87 | |
| 11 | SangitaShugwani | F | 31 | 5.7 | 92 | 31.77 | |
| 12 | RukiMohnani | F | 76 | 4.8 | 61 | 30.15 | BP, Diabetes |
| 13 | Harsh Aswani | M | 13 | 5.1 | 77 | 32.07 | |
| 14 | KavitaShugwani | F | 39 | 4.7 | 79 | 40.48 | Osteoarthritis |
| 15 | NishaNagdeo | F | 47 | 5.2 | 76 | 30.65 | Diabetes |
| 16 | Shankar Nagdeo | M | 52 | 5.8 | 90 | 30.17 | |
| 17 | Vishal Nagdeo | M | 29 | 5.7 | 89 | 30.73 | |
| 18 | Maya Nagdeo | F | 55 | 5.1 | 73 | 30.41 | |
| 19 | SonuNagdeo | M | 32 | 5.8 | 98 | 32.85 | |
| 20 | Krishna Taruna | F | 44 | 5.1 | 74 | 30.83 | |
| 21 | PalakNagdeo | F | 31 | 5.1 | 74 | 30.83 | |
| 22 | ManoharlalNagdeo | M | 56 | 5.5 | 86 | 31.55 | |
| 23 | MeenaTaruna | F | 50 | 5.1 | 88 | 36.66 | BP, Heart disease |
| 24 | SoniyaTaruna | F | 46 | 5.4 | 89 | 33.68 | |
| 25 | KashishTaruna | F | 35 | 5.1 | 74 | 30.83 | |
| 26 | DeepaTaruna | F | 36 | 5.3 | 79 | 30.85 | |
| 27 | PrakashTaruna | M | 42 | 5.6 | 85 | 30.25 | |
| 28 | Indira Chawla | F | 69 | 4.11 | 79 | 35.81 | Osteoarthritis |
| 29 | KajalChawla | F | 43 | 5.2 | 85 | 34.27 | BP |
| 30 | MuskanKeshwani | F | 32 | 5.3 | 77 | 30.07 | Osteoarthritis |
| 31 | Sony Keshwani | F | 52 | 5.3 | 78 | 30.46 | BP |
| 32 | KamlaKeshwani | F | 47 | 4.11 | 69 | 30.72 | Osteoarthritis |
| 33 | Latabatra | F | 60 | 5.2 | 78 | 31.45 | Diabetes |
| 34 | Devi Ahuja | F | 48 | 4.11 | 80 | 35.62 | Hypertension |
| 35 | SavitriAhuja | F | 50 | 5.1 | 78 | 32.49 | Hypertension |
| 36 | KomalAhuja | F | 40 | 5.5 | 85 | 31.18 | |
| 37 | Rani Nawlani | F | 44 | 4.9 | 65 | 31.01 | |

| 38 | KuliWadhwani | M | 41 | 5.2 | 98 | 39.52 | Osteoarthritis |
|---|---|---|---|---|---|---|---|
| 39 | ChandaniChawla | F | 22 | 5.2 | 72 | 30.24 | |
| 40 | GautamChawla | M | 19 | 5.6 | 89 | 31.67 | |
| 41 | VanshitaChawla | F | 33 | 4.11 | 69 | 31.72 | |
| 42 | DakshaLalwani | F | 39 | 5.4 | 83 | 31.41 | Osteoarthritis |
| 43 | SapnaSundrani | F | 54 | 5.1 | 83 | 34.57 | BP, Diabetes |
| 44 | TulsidasSundrani | M | 58 | 5.5 | 84 | 30.82 | BP, Heart disease |
| 45 | RamchandraSundrani | M | 56 | 5.7 | 90 | 30.71 | BP |
| 46 | BhartiSundrani | F | 54 | 4.11 | 84 | 37.4 | BP |
| 47 | ShivalamalShugwani | M | 68 | 5.5 | 83 | 30.45 | BP, Heart disease |
| 48 | RoshanBhawnani | M | 31 | 5.8 | 98 | 32.85 | |
| 49 | RekhaNagdeo | F | 45 | 5.6 | 89 | 31.87 | Breathing Problem |
| 50 | SushilaNagdeo | F | 42 | 4.11 | 68 | 30.28 | BP |
| 51 | LaxmiNagdeo | F | 46 | 4.11 | 69 | 30.72 | Diabetes |
| 52 | DhanvantiNagdeo | F | 47 | 4.9 | 69 | 32.92 | BP, Thyroid |
| 53 | Vijay Bharwani | M | 45 | 5.11 | 100 | 30.75 | BP |
| 54 | SheelaBharwani | F | 66 | 5.1 | 73 | 30.42 | BP, Diabetes |
| 55 | Jaya Ferwani | F | 39 | 5.2 | 78 | 31.45 | BP |
| 56 | RekhaNawani | F | 43 | 5.5 | 83 | 30.45 | |
| 57 | PriyaNanwani | F | 40 | 5.3 | 82 | 35.3 | BP, Osteoarthritis |
| 58 | Jaya Paraswani | F | 49 | 4.9 | 74 | 35.3 | BP |
| 59 | ChandrakalaNagdeo | F | 60 | 5.1 | 78 | 32.49 | BP,Osteoarthritis |
| 60 | RajkumariAswani | F | 60 | 4.1 | 68 | 31.33 | |
| 61 | PavitraAswani | F | 34 | 5.1 | 74 | 30.83 | |
| 62 | PoojaAswani | F | 35 | 5.2 | 76 | 30.65 | |
| 63 | RajniKeshwani | F | 50 | 5.3 | 71 | 31.61 | BP, Heart disease |
| 64 | GarimaNagdeo | F | 30 | 4.9 | 66 | 31.49 | |
| 65 | ManjuWadhwani | F | 48 | 5.4 | 104 | 39.36 | BP, Diabetes |
| 66 | Ashok Wadhwani | M | 57 | 5.6 | 90 | 32.02 | |
| 67 | RiyaWadhwani | F | 26 | 5.4 | 86 | 35.82 | |
| 68 | PuranNagdeo | M | 47 | 5.9 | 93 | 30.28 | Osteoarthritis |
| 69 | Vijunagdeo | M | 66 | 5.2 | 90 | 36.29 | Osteoarthritis |
| 70 | ChandarlalFerwani | M | 63 | 5.7 | 93 | 32.11 | |
| 71 | SeemaFerwani | F | 58 | 4.11 | 93 | 36.32 | |
| 72 | JitendraFerwani | M | 35 | 5.6 | 85 | 30.25 | |
| 73 | NilamSadhwani | F | 47 | 4.11 | 72 | 32.06 | |
| 74 | SushilaSadhwani | F | 60 | 5.1 | 85 | 35.41 | |
| 75 | Santoshbhawnani | M | 45 | 5.6 | 88 | 31.31 | |
| 76 | ShyamWadhwani | M | 67 | 4.11 | 75 | 33.4 | Osteoarthritis |
| 77 | LaxmiGyanchandani | M | 60 | 4.9 | 74 | 35.3 | |
| 78 | Kiranchawla | F | 35 | 4.11 | 68 | 30.28 | |
| 79 | MohitChawla | F | 14 | 3.11 | 44 | 30.57 | |
| 80 | VishakhaFerwani | F | 16 | 4.11 | 74 | 32.95 | |
| 81 | PiyushNagdeo | M | 17 | 5.5 | 83 | 30.45 | |
| 82 | RakhiKeshwani | F | 38 | 5.4 | 102 | 38.6 | |
| 83 | AmitKeshwani | M | 45 | 5.8 | 98 | 32.85 | |
| 84 | RadhaBhawnani | F | 39 | 4.11 | 71 | 31.61 | |
| 85 | PravinBhawnani | M | 41 | 5.2 | 78 | 31.45 | |
| 86 | Roma Bhawnani | F | 35 | 5.2 | 96 | 38.71 | |
| 87 | MotilalBhawnani | M | 80 | 5.1 | 87 | 36.24 | Osteoarthritis |
| 88 | BhagchandNagdeo | M | 60 | 5.7 | 91 | 31.42 | BP, Diabetes |
| 89 | Vicky Taruna | M | 28 | 5.9 | 94 | 30.6 | |
| 90 | PreetTaruna | F | 26 | 5.6 | 92 | 32.74 | |
| 91 | Deepak Shugwani | M | 32 | 5.8 | 102 | 34.19 | |
| 92 | KripalShugwani | M | 52 | 5.8 | 93 | 31.17 | |
| 93 | Sanjay Kodwani | M | 60 | 5.7 | 98 | 33.84 | Osteoarthritis |
| 94 | SantoshKodwani | M | 47 | 5.6 | 113 | 40.21 | BP |
| 95 | DeepaliKodwani | F | 42 | 5.5 | 86 | 31.55 | BP, Diabetes |
| 96 | Ashok Kodwani | M | 60 | 5.3 | 84 | 32.8 | |

| 97 | ManjuKodwani | F | 54 | 4.11 | 72 | 32.06 | |
| 98 | AvinashKodwani | M | 32 | 5.5 | 94 | 34.49 | |
| 99 | MishtyKodwani | F | 30 | 5.3 | 78 | 30.46 | |
| 100 | NebhanMotwani | M | 60 | 5.9 | 94 | 30.6 | BP, Osteoarthritis |
| 101 | SantoshMotwani | M | 32 | 5.8 | 93 | 31.17 | Diabetes |
| 102 | RoshanGurnani | M | 29 | 5.9 | 98 | 31.91 | |
| 103 | Sunil Mangtani | M | 45 | 5.5 | 98 | 35.95 | BP, Heart disease |
| 104 | KavitaMangtani | F | 40 | 5.1 | 74 | 30.83 | BP |
| 105 | AjitMayaramani | M | 45 | 5.8 | 98 | 32.85 | BP, Diabetes |
| 106 | SangitaMayaramani | F | 42 | 5.3 | 79 | 30.85 | Osteoarthritis |
| 107 | KishorMulchandani | M | 55 | 5.8 | 92 | 30.84 | BP, Diabetes |
| 108 | NilamMulchandani | F | 54 | 4.9 | 70 | 33.39 | BP, Osteoarthritis |
| 109 | Mahesh Mulchandani | M | 36 | 5.8 | 102 | 34.19 | Back pain |
| 110 | BhagyeshreeMohnani | F | 42 | 5.1 | 86 | 35.82 | Osteoarthritis |
| 111 | Artikeshwani | F | 35 | 4.11 | 75 | 33.4 | Osteoarthritis |
| 112 | LataLambde | F | 45 | 4.9 | 65 | 31.01 | Hypertension |
| 113 | MachindraKadke | M | 51 | 5.4 | 84 | 31.79 | Diabetes |
| 114 | Radhika Ansari | F | 52 | 5.2 | 78 | 31.68 | Hypertension |
| 115 | DushyantMadavi | M | 57 | 5.2 | 86 | 34.68 | BP, Diabetes |
| 116 | Ashok Aitwar | M | 39 | 5.3 | 80 | 31.24 | Osteoarthritis |
| 117 | ManjuBiloriya | F | 32 | 4.9 | 69 | 32.92 | Heart Disease |
| 118 | Sindhu Mahame | F | 60 | 5.2 | 85 | 34.27 | BP, Heart disease |
| 119 | DaneshTiple | M | 38 | 4.8 | 70 | 34.6 | Hypertension |
| 120 | Sanket Sheikh | M | 35 | 4.11 | 74 | 32.95 | Diabetes |
| 121 | MahadevGanande | M | 54 | 5.2 | 90 | 36.29 | Osteoarthritis |
| 122 | Narayan Wakudkar | M | 61 | 5.5 | 104 | 38.15 | BP, Heart disease |
| 123 | RajuMahuve | M | 39 | 5.5 | 100 | 36.69 | BP |
| 124 | Narayan Kulkarni | M | 48 | 5.2 | 89 | 35.89 | BP |
| 125 | ShilpaKulkarni | F | 45 | 4.11 | 74 | 32.95 | Osteoarthritis |
| 126 | KunalKulkarni | M | 46 | 5.1 | 82 | 34.16 | Heart Disease |
| 127 | RanjanaKohle | F | 38 | 5.2 | 80 | 32.26 | Hypertension |
| 128 | JagdishMeshram | M | 45 | 4.4 | 66 | 37.83 | Diabetes |
| 129 | VithalDruge | M | 55 | 4.11 | 80 | 35.62 | Osteoarthritis |
| 130 | TukaramBhedorkar | M | 50 | 5.1 | 76 | 31.66 | Heart Dieases |
| 131 | RasikaDhegnae | F | 50 | 4.9 | 68 | 32.44 | BP, Diabetes |
| 132 | Baby Bhosle | F | 30 | 4.4 | 56 | 33.82 | |
| 133 | DurgaBothle | F | 65 | 4.7 | 79 | 40.48 | |
| 134 | DaulatKumbhar | M | 38 | 4.1 | 56 | 36.15 | Hypertension |
| 135 | SajanJhirsagar | M | 36 | 5.2 | 91 | 36.69 | Heart Dieases |
| 136 | PunchabaiMalkuwar | F | 48 | 4.7 | 79 | 40.48 | Osteoarthritis |
| 137 | SunandaTonge | F | 30 | 4.7 | 67 | 34.33 | |
| 138 | KavitaChandekar | F | 32 | 4.1 | 56 | 36.15 | |
| 139 | NarendraSoyam | M | 50 | 4.3 | 59 | 36.16 | |
| 140 | Sanjay Soyam | M | 32 | 4.4 | 58 | 33.25 | |
| 141 | DilipKapse | M | 28 | 4.11 | 68 | 30.28 | Osteoarthritis |
| 142 | Ashok Momidwar | M | 63 | 4.11 | 70 | 31.17 | Heart Dieases |
| 143 | RasikaLadnge | F | 60 | 5.2 | 98 | 39.52 | BP, Diabetes |
| 144 | BabitaRamtekh | F | 40 | 4.9 | 87 | 41.51 | |

Fig. Table.2

## Conclusions

The present analysis shows that overweight and obesity rates in women and adolescents are increasing not just among higher socio-economic groups but also in the lower income where underweight still remains a major concern. As Obesity is a chronic and multi-factorial condition, obesity will be near the top of public health agenda globally for many years to come quick solutions are not within sight. Pharmacotherapy has not yet played a large part in reducing the burden of the disease, as effects size is small or benefit- risk profiles of different products have not been regarded as acceptable assuming that the products will be used by a large and diverse group of

population. Even though surgery for obese adult has been regarded as cost-effective in a variety of settings, only a small proportion of those in need have received surgery, one major factor being the capacity of health services to carry out the intervention as well as to provide pre and post-operative care. Most research is needed on adherence and the regaining of body weight after discontinuation of pharmacotherapy in order to better evaluate its cost-effectiveness and affordable treatment for those affected by obesity in Europe and Worldwide. Even though the current emphasis on prevention at population level should be focus to fight the epidemic, there is a large unmet need for effective treatment for those affected when lifestyle changes are insufficient. The inference of review indicates towards increasing prevalence of overweight and obesity with the females adolescent residing in urban areas having more susceptibility. The results from emphasis the need for immediate primordial and primary prevention based on intervention so as to prevent the consequences and complication in future.

## Acknowledgments

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