



## A Comparative Study Of Health Related Issues In Rural And Urban Areas Of Rajasthan W.S.R. Lifestyle Disorders

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### ABSTRACT:

**INTRODUCTION:** Life style disorders are one of the raising issues in present era. This is because what we do or what we think is what we are. Lifestyle disorders are set of diseases which are because of modified life style of present generation. That is why these are also known as Diseases of civilization. Obesity, metabolic syndrome, heart disease, asthma, some kinds of cancer, chronic liver disease, Diabetes (Type 2), and depression are some of diseases which are included under this. Incidence and prevalence of these are mainly seen in Urban and semi suburban areas than the rural areas. Drug abuse, sedentary lifestyle, tobacco and smoking are the major culprits among the causes of this. There is significant difference in the lifestyles of people of rural and urban areas. That is why a study was undertaken to highlight the incidence of health related issues particularly the lifestyle diseases in urban and rural areas.

**MATERIAL AND METHODS:** It is a survey study. The mobile medical camp conducted at Gogunda tehsil of Udaipur district in the month of Feb. 2014 and Data recorded in the OPD of National institute of Ayurveda Hospital were taken respectively. The total population of five villages of Gogunda tehsil is Total 12461. In which 555 adult patients were surveyed. Data of 528 adult patients were recorded in NIA Jaipur during Feb.2014.

**RESULTS & DISCUSSION:** Prevalence of some of the Lifestyle diseases like Diabetes2, Hypertension, Obesity, Depression in Urban area in comparison with rural is statistically significant. Even though the Prevalence of Acid peptic diseases in urban area were found to be more, it was found non-significant statistically. Probable reason for the significant prevalence of Lifestyle disorders in urban area could be the varied pattern of life style.

**CONCLUSION:** Diet and lifestyle influence significantly on our health. We are going away from the traditional style of life in this era. This is evident when we look at the prevalence of lifestyle disorders. Urban style of life is mostly the base for these disorders. Whereas the rural style of life gives room for the deficiency disorders, communicable diseases and degenerative disorders. People of urban and sub urban areas are even though sophisticated in comparison with rural areas, they are unaware about the preventive aspects. That is why, awareness of health in terms of preventive aspects through Ayurveda is necessary in these areas. This type of health data should never be restricted for the purpose of statistics rather it need to be utilized in correcting the health related issues.

**KEY WORDS:** Life style diseases, Diabetes2, Depression, Obesity, Gogunda, Jaipur.

## INTRODUCTION:

Life style disorders are one of the raising issues in present era. This is because what we do or what we think is what we are. Lifestyle disorders are set of diseases which are because of modified life style of present generation. That is why, this is also known as Diseases of civilization. These are the diseases included under the group of NCD. NCD is a group of non- communicable and non-infectious diseases. Obesity, metabolic syndrome, heart disease, asthma, some kinds of cancer, chronic liver disease, Diabetes (Type 2), and depression are some of the examples for this. Incidence and prevalence of these are mainly seen in Urban and semi suburban areas than the rural areas. What made them to so popular now a day? Why has it been highlighted since few years? Answer for these questions are made with the evidence in the form of statistics. The latest estimates suggest that NCDs killed a staggering 34.5 million people in 2010 accounting for 65% of the all deaths worldwide<sup>1</sup>. Studies also show that 17 million people die prematurely each year as a result of the global epidemic of largely preventable diseases or life style diseases<sup>2</sup>. This proves that we humans only are the killers of ourselves.

Today more than 5 of 10 biggest killing diseases are caused by carelessness, ignorance and irregularities of our own. According to WHO, It's believed by 2015, deaths from life style diseases will double about unless all out efforts are taken to combat them<sup>3</sup>. India is nowhere lagging behind when it comes to Lifestyle diseases. A report jointly prepared by the World Health Organization and the World Economic Forum says India will incur an accumulated loss of \$236.6 billion by 2015 on account of unhealthy life styles and faulty diet<sup>4</sup>.

There is significant difference in the lifestyles of people of rural and urban areas. In India, most of the life style diseases are believed to be occurring in urban and semi- urban areas, where people have almost incorporated western style of life. Whereas people of rural areas are less prone to be affected by these diseases as traditional style of life has been prevailing among the people of rural area. But as per the recent reports, Lifestyle diseases, including diabetes and hypertension, which were confined to urban areas in the past, have now entered rural areas of India<sup>5</sup>. Impact of globalization and commercialization in rural areas may be the reason for this.

We can understand that almost all the diseases are caused by the *mithyaahara & vihara* which we follow. Drug abuse, sedentary lifestyle, tobacco, smoking, modern day working style like working without break, stress full life style, over eating of junk foods and drinking carbonated beverages, over use of electronic gadgets etc .are the major culprits among the causes of this. Though everyone knows that how much we have to pay if we are not giving importance to our health, in this mechanic century all are treating the body too as a machine. And they are leading a mechanical life without considering their physical, mental, spiritual, social wellbeing. So are suffering later with chronic and incurable disease which is nothing but a product of their ignorance. Ayurveda preaches us how to prevent the diseases in a systemic manner. Each and every aspect of life has been given importance with respect to protect the body from the diseases. But more often we forget to follow this, eventually ending up in diseases.

Present study is an attempt to get the data together with respect to Life style disorders. Though it is not a planned study, significant information has been taken from the data related with the urban and rural areas. Main aim of this study was to know the difference in prevalence of diseases in urban and rural areas. In Ayurveda *Desha* has been given very much importance in diagnosing diseases, to know the prognosis of diseases as well as in treating the diseases. That it is why it has been included in *dashavidha pareekshya bhava*.

## AIM AND OBJECTIVES:

Main objective of this work was to study the difference in the prevalence of diseases in urban and rural areas with respect to lifestyle diseases thus to find the association of these diseases with the urban and rural areas.

## MATERIALS AND METHODS:

- This study is a type of Retrospective Observational Survey study.
- For the purpose of this study of diseases in rural area, Data obtained from the camp conducted at 5 rural areas in Gogunda tehsil of Udaipur district in the month of Feb has been considered.
- To study the diseases of urban area, Data recorded in the OPD of National institute of Ayurveda Hospital during the month of February has been considered.
- The total population of five village of Gogunda Tehasil is 12461.
- Data of total 555 adult patients have been considered in rural area and 528 in urban areas.
- Data were analyzed descriptively, including frequencies and percentages.
- To test the significance of association of diseases with two different areas Chi- square with/ without yate's correction was applied.

## OBSERVATIONS:

- Total of Data of 555 adult patients has been taken under rural area and 528 under urban area. Out of 555 patients of rural area 290 (43.21%) patients were of *madhyamavastha* and 265(39.49%) were of *vrudh'avastha*.
- Out of 528 adult patients of Gogunda Tehsil 248 (44.68%) were Male and 307(55.31%) were Female.
- Out of 528 patients of urban area, 357(53.20%) were of *Madhyavastha* and 171(25.48%) were of *vrudh'avastha*.
- Out of 528 adult patients of Urban area, 298(56.43%) were Male and 230(34.277%) were Female.

## OBSERVATION RELATED WITH SOME OF THE LIFE STYLE DISEASES

### ➤ HYPERTENSION:

- Out of 555 adult patients in Gogunda, total of 31 patients were suffering from Hypertension. Out of this 37, 21 were suffering from only Hypertension without the association of any other diseases and 16 were associated other diseases.
- Out of 254 male patients of Gogunda Tehsil, 5.11% male were suffering from Hypertension. And out of 301 female patients of this region, 5.98% were suffering from Hypertension.
- Out of 528 adult patients of Jaipur, Total 56 patients were suffering from Hypertension. Out of this, 27 were suffering from Hypertension alone and other 29 were associated with other diseases.
- Out of 254 male patients of this area, 11.40% and Out of 301 female patients, 9.56% were suffering from Hypertension.

### ➤ DIABETES MELLITUS

- Out of 11 patients of *Sthaulya* in Jaipur, 5 were suffering from only Diabetes without the association of any other diseases and 6 were associated other diseases

- Out of 555 adult patients in Gogunda total of 11 i.e. 1.63% patients were suffering from Diabetes mellitus.
- Out of 254 male patients of Gogunda Tehsil, 4 patients i.e. 1.57% male were suffering from DM. And out of 301 female patients of this region, 7 females i.e. 2.32% were suffering from DM.
- Out of 63 cases of Diabetes, 36 were suffering from DM alone and other 27 were associated with other diseases
- Out of 528 adult patients of Jaipur, Total 62 i.e.9.23% patients were suffering from DM.
- Out of 298 male patients of this area, 41 i.e. 20.80% and Out of 230 female patients, 21 i.e.17.82% were suffering from Diabetes.

➤ **STAULYA:**

- At Gogunda area all the 18 patients of Sthaulya were associated with on or other diseases.
- Out of 555 adult patients in Gogunda total of 11 i.e. 3.24% patients were suffering from *Sthaulya*.
- Out of 254 male patients of Gogunda Tehsil,4 patients i.e. 1.57% male were suffering from DM. And out of 301 female patients of this region, 7 females i.e. 2.32% were suffering from DM.
- At Jaipur out of 74 *Sthaulya* patients, 16 were not associated any diseases. Rest of the 58 patients was associated with one or other diseases.
- Out of 528 adult patients of Jaipur, Total 53i.e. 10.03% patients were suffering from *Sthaulya*.
- Out of 298 male patients of this area, 22 i.e. 7.38% and Out of 230 female patients, 31 i.e.13.47% were suffering from Sthaulya.

➤ **DEPRESSION:**

- Out of 555 adults and 116 children of Gogunda region, No cases of depressions was recorded.
- Out of 528 adult patients of Jaipur, 07 i.e. 1.32% were suffering from Depression. Total 05 i.e. 1.677 men out of 298 and 2 women i.e. 0.86% out of 230 women were suffering from Depression.

➤ **ANIDRA:**

- Out of 555 adult patients of Gogunda, Total 3 i.e. 0.54% patients were suffering from Insomnia. Out of this, 1 i.e. 0.39% were men and 2 i.e. 0.66 were women.
- In Jaipur region, Total 11 i.e. 2.08% cases of Insomnia were found. Out of this 5 i.e. 1.677% were men and 6 i.e. 2.60 were women.

➤ **AMLA PITTA:**

- Out of 555 adult cases of Gogunda, total 19 i.e. 3.42% cases of *Amla pitta* were found. Out of this 7 i.e. 2.75% were male and 12 i.e. 3.98 % were female.
- Out of 528 adult cases of Jaipur, total 27 i.e.5.11%cases were found. Out of this, 17 i.e. 5.70were men and 10 i.e.4.34% were women.

➤ **VATAVYADHI:**

- Out of 555 adult cases Gogunda, total 131 cases i.e. 23.60 *Vatavyadhi* cases were recorded. Out of this 59 i.e.23.22 were men and 72 i.e. 23.920 were women.

- Out of 528 adult cases of Jaipur, total 74 i.e. 14.01 cases of *Vatavyadhi* were noted. Out of this 41 i.e. 13.75 were men and 33 i.e. 14.34 were women.

## RESULTS:

Significance of Association of prevalence of diseases with variation in areas was tested statistically using Chi- square test.

- **HYPERTENSION:** Chi-square without Yates correction; Chi squared equals 9.231 with 1 degree of freedom. The two-tailed P value equals 0.0024. The association of Gogunda and Jaipur with cases of Hypertension and non-Hypertension is considered to be very statistically significant.
- **DIABETES:** Chi-square without Yates correction; Chi squared equals 41.006 with 1 degree of freedom. The two-tailed P value is less than 0.0001. The association of Gogunda and Jaipur with cases of Diabetes and non- diabetes is considered to be extremely statistically significant.
- **STHAULYA:** Chi-square without Yates correction; Chi squared equals 33.382 with 1 degree of freedom. The two-tailed P value is less than 0.0001. The association Gogunda and Jaipur with cases of *Sthaulya* is considered to be extremely statistically significant.
- **DEPRESSION:** Chi-square with Yates correction. Chi squared equals 5.485 with 1 degree of freedom. The two-tailed P value equals 0.0192. The association between Gogunda& Jaipur with Depression is considered to be statistically significant
- **ANIDRA:** Chi-square with Yates correction. Chi squared equals 3.911 with 1 degree of freedom. The two-tailed P value equals 0.0480. The association between gogunda& Jaipur with Cases of Anidra is considered to be statistically significant
- **AMLAPITTA:** Chi-square without Yates correction. Chi squared equals 1.901 with 1 degree of freedom. The two-tailed P value equals 0.1680. The association between Gogunda& Jaipur with cases of *Amlapittais* considered to be statistically non-significant
- **VATAVYDHI:** Chi-square without Yates correction; Chi squared equals 16.211 with 1 degree of freedom. The two-tailed P value is less than 0.0001. The association between Gogunda and Jaipur with cases of *Vatavyadhi* is considered to be extremely statistically significant.

## DISCUSSION:

**HYPERTENSION:** In rural area total of 5.58% were suffering from Hypertension whereas in Jaipur it is observed to be 10.60%. Statistically the more prevalence of this in Jaipur is found to significant. As per the recent study, the prevalence of hypertension ranges from 20-40% in urban adults and 12-17% among rural adults<sup>6</sup>. Both the studies clearly show that Hypertension has become a major headache in urban area. The probable reason for this could be the raising western style of Life. Smoking is one of the major reasons along with the alcohol. Even though the smoking is evident in rural area too, the sedentary life style is lacking there. Also other reason could be use of commercial food items, carbonated drinks, And Junk foods etc. Premature aging is also a major reason for this. This is common in the urban area due to the heavy work load and stress related life style. At urban area, men are found to be dominating women in the present study as the stress related life style is very common among working men along with the addictions like alcohol and smoking. Recent study also says that, the number of people with hypertension is projected to increase from 118 million in 2000 to 214 million in 2025, with nearly equal numbers of men and women if at all suitable measures are not taken to control it<sup>7</sup>.

**DIABETES MELLITUS:** It is another most common life style disease in the world. India is going to be the diabetic Capital in the world as per the recent studies. In the present study, the cases of DM were less in rural area with 1.63% of total cases. Whereas in urban area it was found to be total of 62 cases i.e. 9.23% of total cases. Statistically this huge variation is found to be extremely significant. Over 30 million have now been diagnosed with diabetes in India<sup>8</sup>. The CPR (Crude prevalence rate) in the urban areas of India is thought to be 9 per cent<sup>9</sup>. In rural areas, the prevalence is approximately 3 per cent of the total population<sup>10</sup>. The national urban diabetes study NUDS from 6 major Indian cities showed an average prevalence of 12.65 among adults<sup>11</sup>. Our study too shows higher percentage of prevalence of DM in urban area. Reason could be again the western style of lifestyle. It has been shown that Indians have a younger age of onset of diabetes compared to other ethnic groups. An increase in the prevalence of type 2 diabetes in the younger age group has been noted from the epidemiological studies<sup>12</sup>. The reason is obesity. It is the major cause of DM type 2. Along with the varied food pattern and practice of junk food, people of urban area lack the natural exercises. Even though, most of them go for physical exercise in the form gym and artificial exercises more often it has been practiced along with the stress.

**STHAULYA:** Present study showed the prevalence of 3.24% of obese cases at rural and 12.68% at urban areas. Statistically this variation is found to be significant both in adults and in children also the variation is found to be significant statistically with 6.035 of cases in rural and 14.68% in urban areas. Dietary changes associated with urbanization are related to the fact that rural dwellers tend to be more self-reliant in obtaining food and also tend to eat traditional diets that are high in grains, fruit and vegetables, and low in fat. Once they arrive in urban areas, these same people tend to rely more on external forces for sustenance, resulting in a shift from production of their own food to the purchase of processed foods. Together with these changes it has been reported that groups moving from rural to urban areas experience an increased intake of energy, sugar, refined grains and fat. This dietary profile, referred to as a "western" diet, has been reported to be associated with diabetes, heart disease and excessive caloric intake and obesity. Rapid urbanization and globalization in India countries promote mechanization, which leads to sedentariness and major deviations in the dietary pattern which are influenced by the varied cultural and social customs. Traditional dietary patterns are disappearing as Indians are adapting themselves to living in the more industrialized, urban environments that are brought about by globalization. The major dietary changes that urbanization and affluence bring about are substitution of unrefined wheat, rice or millets by highly polished wheat or rice and increased intakes of fat in higher income groups. These changes are associated with increasing obesity. The role of obesity in the pathogenesis of Type 2 diabetes is complex and is confounded by many heterogeneous factors. The results of a study conducted in North India indicated that there was a strikingly high prevalence of abdominal obesity and generalized obesity as determined by body fat percentage in type 2 diabetic individuals<sup>13</sup>. Another study by Singh et al showed that overweight/obesity and central obesity were significantly associated with diabetes<sup>14</sup>.

**DEPRESSION:** In reports obtained from the rural area, No single case has been reported to be suffering from depression. Whereas in urban area, reports say that, 07 i.e. 1.32% patients out of 55 adults were suffering from depression. This variation between areas in prevalence of depression is found to be statistically significant. The main reason could be the stress full style of life, busy workload, educational stress, increased no. of affairs etc. There are so many reasons other than this. Even increased physical ailments are also a reason. Even though, our study shows no cases of depression, as per the studies it far from truth. Study say that, People of rural area have fewer guts to face the life in stressful situation. But in real stress is far better less in rural area. Increased no. of suicides, Failure marriages and eventual depression are the live

evidences in urban area. Increased men suffering depression in the present study is a difficult task to be explained as several large epidemiological studies have shown that women have higher depression rates than men. A meta-analysis of studies conducted in various countries has shown that women are roughly twice as likely as men to experience or report depression<sup>15</sup>.

**ANIDRA:** In the present study, it is reported that 0.54% of people of rural and 2.08% of urban area adult people are suffering from *Anidra*. Even this difference between two areas is found to be statistically significant. Insomnia is a condition wherein individual has difficulty in getting some sleep. Especially in urban area it is quite common. The basic reason has been the mental aspect. Deprived of enough rest is the reason for this. The most sought after cause of insomnia is mental tension. This happens when a person has worries and anxiety. Over work and over excitement is also part of the causes. Feelings that are suppressed are also a cause of insomnia. In urban areas the prevalence of insomnia is considerably more for the fact that over eating, constipation, dyspepsia, excessive intake of stimulants like coca, coffee, tea, energy drinks and caffeine etc. are common practices in urban areas. In both rural and urban areas of present study, Women are found to be dominating men. This is also true as per the recent study. It says that, Indian women (6.5%) outnumber men (4.3%), when it comes to disturbed sleep<sup>16</sup>. This study also says that, 1 out of every 20 Indian suffers from sleep disorders. For years, sleep disorders was thought to be a western-developed world problem but this study has debunked that myth. Sleep disorders are usually linked to mental health issues like depression and anxiety.

**AMLA PITTA:** In present study, total 19 cases i.e. 3.42% of Gogunda region and 27 cases i.e. 5.11 % were reported to be suffering from *Amlapitta/ dyspepsia/ acidity*. But this difference between the two regions is not statistically significant. In real, even though these cases are common in both the urban as well as in rural people of urban are more prone for this. Reason for this is the practice of junk food, masala and chilly based food items, fermented, carbonated drinks. Another common practice is the consumption of preserved items. Ayurveda strictly prohibits *sankernabhojana* for the fact that they cause the diseases more often. But today's generation are going more ahead, mad this *sankeernabhojana* as a part and parcel of life.

**VATAVYADHI:** In the present study, total of 131 i.e. 23.60% cases have been reported with various *vatavyadhi* in rural area, and in Urban it is found to be 14.01%. The reason for the people suffering from increased *vatavyadhi* could be the increased physical stress. More often these people depend on agriculture and hard work. Apart from this, the less nutritional diet may also influence *apatarpna*. Whereas, in Urban area the no. is not too less. This is because higher cases of sciatica etc. are more common in urban areas. Increased use of vehicles, improper posture, prolonged sitting posture etc. is the main causes in urban area.

## CONCLUSION:

Ayurveda speaks of *Dinacharya* and *Ritucharya* for the purpose of preventing the Lifestyle diseases. We are in an Era where in people are in extreme shortage of time for their health. So virtually following these *charya* becomes impossible for many of the people especially for the people of urban areas. That is what evident in the form of significant evidence of prevalence of Lifestyle diseases in Urban areas. Present study though has many limitations, highlighted some important areas of lifestyle diseases. Since it was not a planned study, it failed to get some clear picture regarding the differentiation of various diseases. No doubt there is significant difference in prevalence of Lifestyle diseases between urban and rural areas. Urban area gives room for the occurrence of Lifestyle diseases in general whereas rural area gives room for more of the

communicable diseases. Communicable diseases are the direct killers but Lifestyle diseases are silent killers. In total, we can conclude that, the prevalence of Lifestyle diseases like Type 2 DM, Hypertension, Obesity, Depression, Heart diseases, Insomnia is more in urban and rural areas due to the faulty lifestyle. Also the cure for Lifestyle diseases is a tough job so the only option left behind is the prevention. This option whenever raised, door of Ayurveda are knocked at the first. So, it's our duty to not only preach these preventive measures but also we need to practice it for the better future.

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