

Pattern of Dietary Intake and Physical activity among Obese adults in Rural vs Urban areas in West Bengal: A Cross - Sectional Study

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ABSTRACT:

Background: Unhealthy diet like intake of little or no dietary fibre but excess calorie, saturated fat and dietary salt along with sedentary activities is the prevailing factor behind emerging obesity and other non-communicable lifestyle related diseases in this modern era. Urbanization, industrialization, globalization caused a rapid transition in food habit, style of living and consequent elevated incidences of obesity and related health issues even in rural India. **Aims and objectives:** To compare the pattern of dietary intake, physical activities and anthropometric parameters as predictors of cardio-metabolic risks between rural and urban obese male adults in selected parts of West Bengal. **Method:** A cross sectional study was done on total 150 obese male [age group- 20-50 years and Body Mass Index (BMI)-25-30kg/m²] randomly selected from both the rural and urban areas of Hooghly district in West Bengal (75- rural and 75-urban). Background information, physical activity and dietary records were collected. Anthropometric parameters like height, body weight, BMI, waist circumference (WC), waist to height ratio (WHtR) and Waist to hip ratio (WHR) were measured. **Result:** Significant differences (p value <0.05) were found regarding consumption of various food groups (cereals and pulses, fruits, vegetables, animal protein, visible fats and added sugar) and calorie intake between the two geographic areas. 58.7% of urban sample and 52% of rural sample failed to meet the minimum global recommendation for physical activity across all domains (work, travel and recreation). Mean time spent in travel and recreation domains were significantly higher (p value < 0.05) in rural males than urban. Between the both groups, body weight, BMI and WHR were significantly higher (p value < 0.05) in urban subjects than rural ones. WHtR was 0.57 for both groups, which indicates escalated cardio-metabolic risks for both these groups. **Conclusion:** compared to those urban subjects, rural subjects had better dietary habit or physical activity profile but as regard to healthy lifestyle, both the group is poor and their anthropometric profiles urge to immediate clinical intervention.

KEYWORDS: dietary intake, physical inactivity, rural and urban male, obesity, non-communicable diseases.

INTRODUCTION:

Non communicable diseases (NCDs) can be defined as a wide spread group of diseases those are chronic in nature, progress gradually over the years and the leading causes of disabilities, morbidity and mortality among the adult population across the world. Lifestyle disease is also not a single disease but a diverse group of different non communicable diseases which are the by-products of our recently adopted fast paced modern lifestyle^{1,2}.

Thus, lifestyle diseases are the diseases, resulting from the way people live their day to day lives, the habits they adopted through the course of modern living that take them away from physical activities and healthy eating and pull them towards sedentary routine, accompanied with unhealthy eating and habits which in turn lead to the development of certain non-communicable diseases³⁻⁴.

According to World Health organization (WHO 2018), 71% of all 'premature death' (death between the age group- 30 years and 70 years) in low-income countries. Thus, the disease which used to be the health problem of the past now has become major threat to the blooming economy as well as to poor health system for those economically backward nations which have already been struggling against undernutrition related problems. WHO reported (2015) that every year NCDs bring about almost 5.8 million deaths in India and one out of four Indians has the chance of 'premature death' from different NCDs. Report from National Health Policy India (2019) on NCDs revealed a marked epidemiological transition, where NCDs contributed to 30% of all disease burden in India dismally it is expected to rise to 60% by 2030.

NCDs result from the interplay between one's genetic make-up and lifestyle factors. WHO all the risk factors have been grouped into three main classes- 1. non-modifiable, 2. modifiable and 3. metabolic risk factors; the non-modifiable factors are age, sex, race and family history; modifiable factors are typically the behavioral factors like use of tobacco, alcoholism, physical inactivity and unhealthy diet characterized by high fat and sodium intake and low consumption of fruits and vegetables. And these factors interacting with each other, further lead to metabolic changes in body like high blood pressure, overweight or obesity, hyperglycemia and hyper lipidemia and consequently result to the prognosis of NCDs^{2,5-9}.