
Review Article

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**SUPERIORITY OF TRADITIONAL RURAL LIFESTYLE IN MINIMIZING
THE OCCURRENCE OF MADHUMEHA (DIABETES MELLITUS)
WITH SPECIAL REFERENCE TO HALEALASUR VILLAGE,
HAVERI DISTRICT, KARNATAKA, INDIA***¹Guheshwar B Patil, ²T B Tripathy¹Department of Swasthavritta, SDM college of Ayurveda and Hospital, Hassan, Karnataka, India²Post Graduate Department of Swasthavritta, SDM college of Ayurveda and Hospital,
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Abstract

Diabetes Mellitus is a common disorder of fuel metabolism which is serious global health problem. In India prevalence of disease in adults was found to be 2.4% in rural and 4.1 – 11.6 % in urban dwellers. Madhumeha (Diabetes Mellitus) occurs due to faulty diet habit as well as faulty life style such as day sleep (Divasvapna), not doing exercise (Avyayama), laziness (Alasya) and excessive intake of heavy food and malnutrition. This study was carried out during 2010-2011 to evaluate impact of role of traditional rural lifestyle in the incidence of Diabetes Mellitus with special reference to Halehalasur village of Haveri district, Karnataka, India. The health survey was carried out on the basis of special questionnaire and totally 152 people were interviewed for their daily regimen. People who do not belong to 35-55 years, Juvenile Diabetes Mellitus, Patients with IDDM were excluded. It was observed that 93.42% were hard workers, 87% people had normal BMI, 7.89% had family history of Diabetes Mellitus and 7.26 % were smokers. The socio economical status of the people is low in turn making them devoid of no luxurious food and sedentary life style. The nature of work is hard having more manual power which makes them to have normal BMI along with their daily diet rich in fibrous but less of fat and protein. All the observations were documented and analysed which revealed that the traditional rural life style plays a major role in minimizing the prevalence of Diabetes mellitus.

Keywords: Madhumeha, Divasvapna.

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Introduction

Diabetes Mellitus is a common disorder of fuel metabolism which is serious global health problem. Currently the number of cases of Diabetes worldwide is estimated to be around 150 million. This number is predicted to be double by 2025, a prevalence rate of about 5.4% with the greatest number of cases being excepted in China and India. In India prevalence of disease in adults was found to be 2.4% in rural and 4.1 – 11.6 % in urban dwellers.¹

Madhumeha described in Ayurveda is equivalent to Diabetes mellitus. It is one of the 20 types of Prameha which occurs due to faulty diet habit as well as faulty life style such as day sleep (Divasvapna), not doing exercise (Avyayama), laziness (Alasya) and excessive intake of heavy food and malnutrition.² WHO expert committee on diabetes has issued a clarion call to workers around the world to carry out the epidemiological survey of diabetes with a view to identify, before it is too

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late, the cultural, social and the other factors which may contribute to diabetes. Population survey is the best means to detect large number of hitherto undiagnosed diabetics, as well as to create awareness regarding the disease among the masses.

Materials and Methods

The present study was carried to evaluate impact of role of traditional rural lifestyle in the incidence of Diabetes Mellitus.

- The Halealalur villagers is On the bank of Varada River in Haveri taluk 15 kms away from Haveri situated between 14.18 & 14.39 latitudes and 74.09 & 74.97 longitudes, consisting of 84 houses.³

- A field team was formed consisting of 2 doctors, 7 housemanship students and NSS students of Government Pre University village for the interview and screening programme.
- People of age more than 35 years and below 55 years were interviewed for their daily regimen on the basis of special questionnaire along with a consent letter. Questionnaire include their wakening time, food pattern, habits, rituals, nature of work, daily regimens, family history and all other personal history.
- The data sheets were documented analysed scientifically and results were drawn.

Results and Discussion

During the survey intotal 152 people were interviewed aged between 35-55 years.

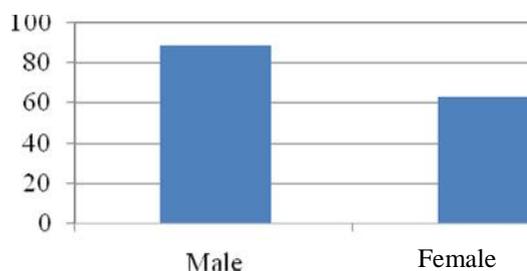


Fig. No. 01: Graph showing Incidences in relation to sex

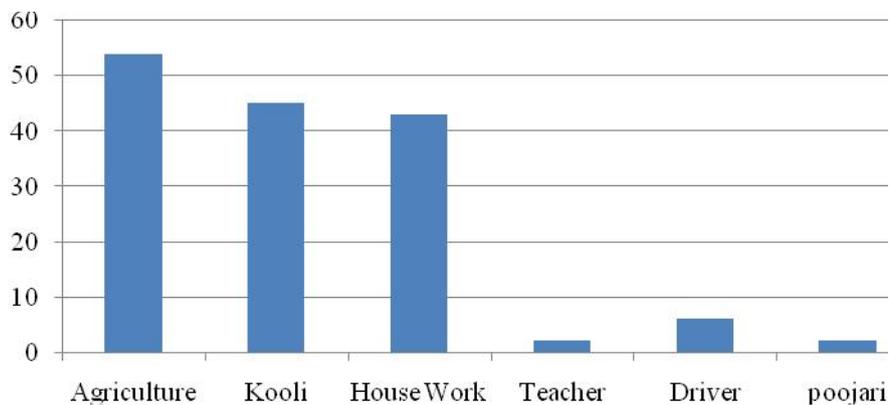


Fig. No. 02: Graph showing Incidences in relation to occupation

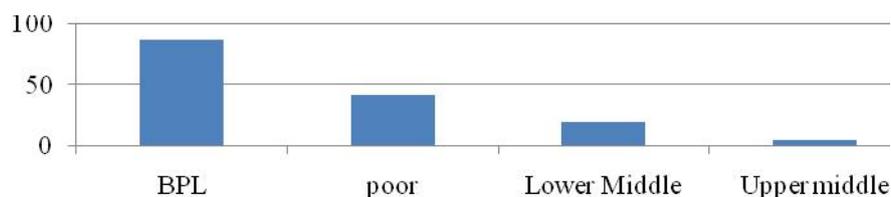


Fig. No. 03: Graph showing Socio economical status

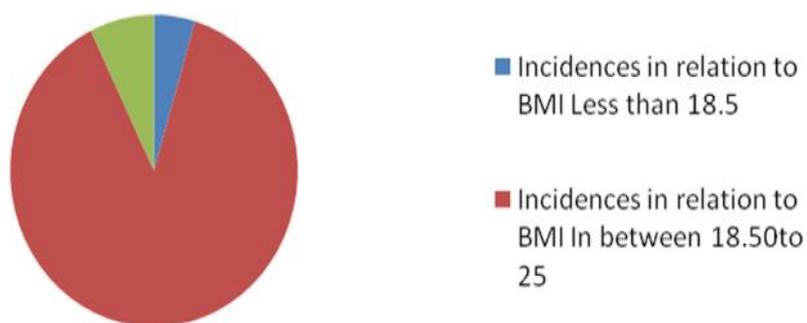


Fig. No. 04: Graph showing Incidences in relation to BMI

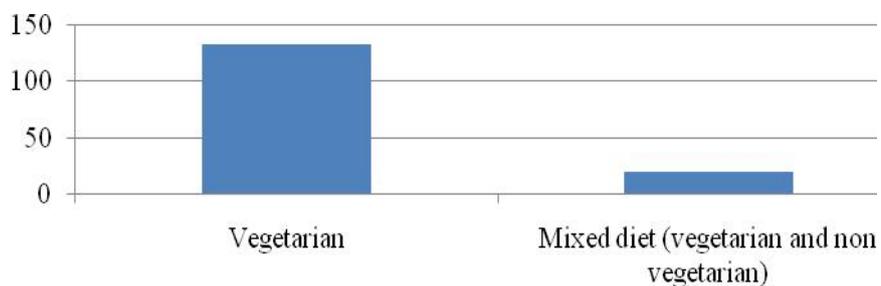


Fig. No. 05: Graph showing Incidences in relation to food habit

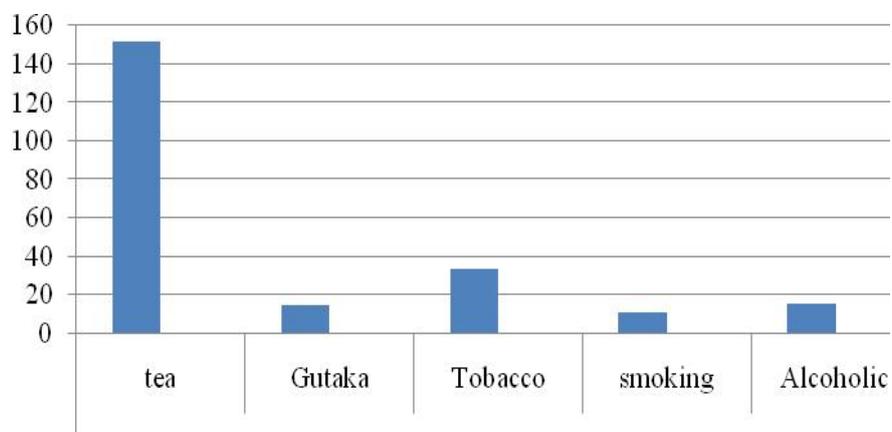


Fig. No. 06: Graph showing Incidences in relation to habits

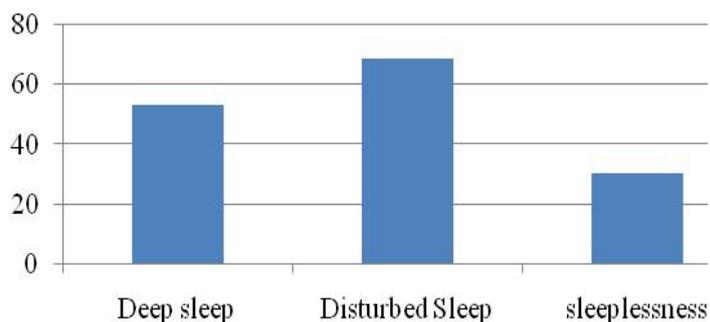


Fig. No. 07: Graph showing Incidences in relation to sleep

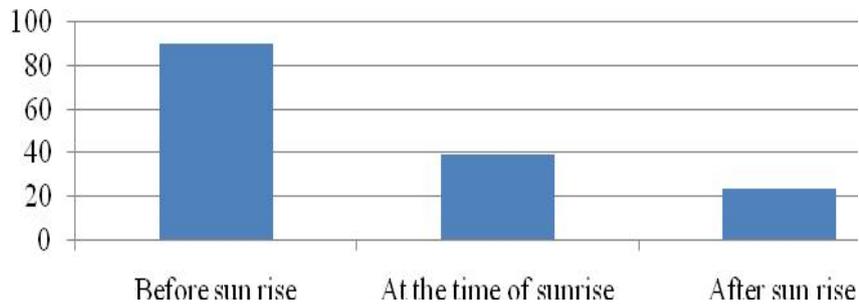


Fig. No. 08: Graph showing Incidences in relation to wake up time

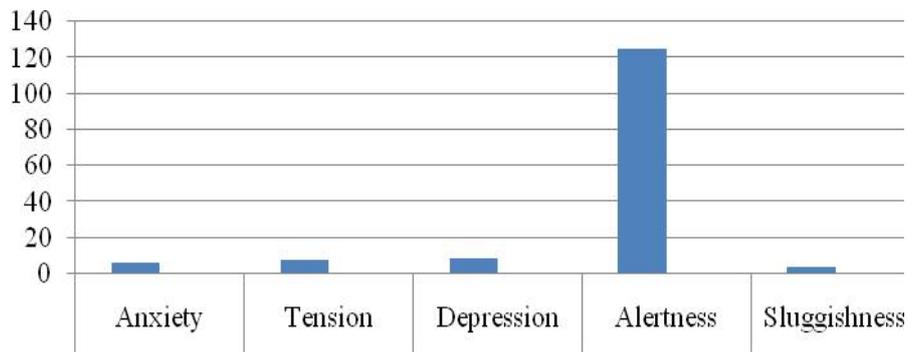


Fig. No. 09: Graph showing Psychological status

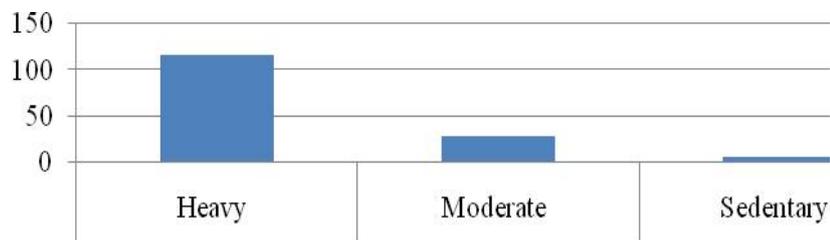


Fig. No. 10: Graph showing Incidences in relation to Nature of work

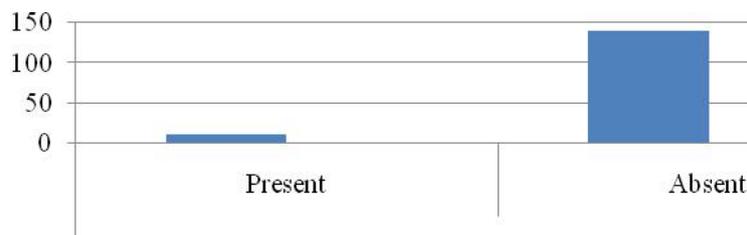


Fig. No. 11: Graph showing Incidences in relation to Family history

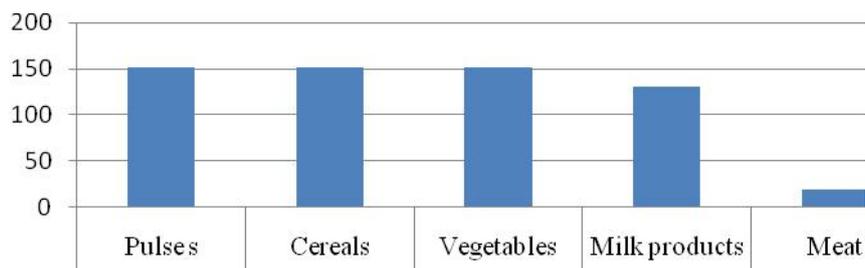


Fig. No. 12: Graph showing Incidences in relation to Dietary items

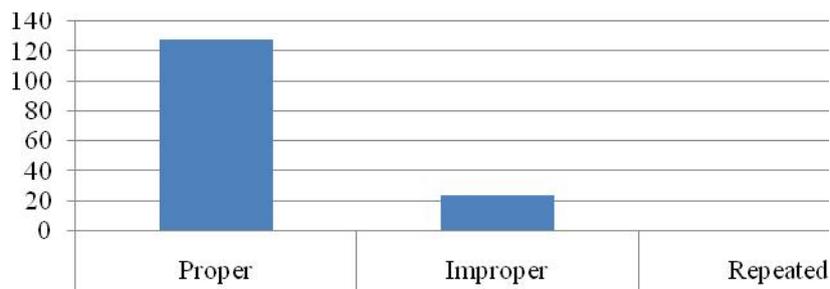


Fig. No. 13: Graph showing Incidences in relation to food time

During the present research survey the total eligible populations was 152 (aged between 35-55 years) and among them 89 were male and 63 were female. Among 152 screened population 142 people conduct hard work. Tyakta vyayama (sedentary lifestyle) and assyasukham (repeated eating) are the main causative factors for diabetes mellitus. Lack of exercise may alter the interaction between insulin and its receptors and subsequently lead to NIDDM.⁴

The socio economic status of the study reveals that 85 % of the population belongs to poor and below poverty line devoid of any luxurious food and life style and in turn make them to work hard. Exercise is a relevant component in a program of weight loss. It improves glucose tolerance, lowers glycemia, increases peripheral insulin sensitivity and reduces risk factors of NIDDM. Reveal of BMI showed 4.5 % of population had malnutrition, 87 % had normal BMI and 8.5% were obese. NIDDM is associated with high body mass index and also with a particular pattern of body fat distribution. Insulin resistance is probably fundamental between obesity and diabetes. Hyper insulinemia is correlated with the increasing body mass index and central obesity.⁵

Among 152 people 133 were vegetarians and 19 people had mixed diet. A high saturated fat intake has been associated with higher risk of impaired Glucose tolerance, and higher fasting glucose and insulin levels. Higher unsaturated fatty acids from vegetable source and polyunsaturated fatty acids have been associated with reduced risk of type 2 diabetes. High intake of dietary fibre has been shown to result in reduced blood glucose and insulin level in type 2 diabetes. 32.34% of people were habituated for tobacco chewing, 10.5 % were alcoholic and 7.26% were smokers. Tobacco use can increase blood sugar levels and lead to insulin resistance. The risk for development of NIDDM in

current smokers is higher than in non smokers. Excessive intake of alcohol can increase the risk of diabetes by damaging the pancreas and the liver and by promoting the obesity.

Among 152 people 53 had sound sleep, 69 have disturbed sleep and 30 suffer sleeplessness. Sleep deprivation could lead to pre-diabetic state as the body's reaction to sleep loss can resemble insulin resistance, a precursor to diabetes. Insulin's job is to help the body use glucose for energy. In insulin resistance, cells fail to use the hormone efficiently, resulting in high blood sugar. The present survey showed that all the people consume the vegetables, cereals, pulses and limited dairy products. Pulses like beans, peas and lentils are high-fiber, low-fat foods with a low glycaemic index (GI) that may help people to control their blood glucose levels. Cereals are low in fat and high in carbohydrates. A 50% reduction in glycemic peak can be achieved with a concentration of 10% β -glucan in a cereal food.

During this survey 12 people reported the family history of diabetes and 140 people had no family history of diabetes. There is a strong genetic element in the development of NIDDM and a genetic susceptibility probably predisposes individuals to the changes caused by life style factors. An individual's risk of developing diabetes is doubled if one member of their family already has the disease. It was found that 125 people had alertness with their normal psychological status. Stress is a potential contributor to chronic hyperglycemia. Stress has long been shown to have major effects on metabolic activity. Stress stimulates the release of various hormones, which can result in elevated blood glucose levels.⁶

WHO expert committee on diabetes has issued a clarion call to workers around the world to carry out the epidemiological survey of diabetes with a

view to identify, before it is too late, the cultural, social and the other factors which may contribute to diabetes. The present research work results in showing the superiority of traditional rural lifestyle in minimizing the occurrence of Madhumeha (diabetes mellitus). Survey data also alarms us towards the occurrence of diabetes in future as the people under survey follow the risk factors like smoking, alcoholism, tobacco chewing along with the genetic background of NIDDM.

Acknowledgement

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