



A Study to Assess the Prevalence Rate of Diabetes mellitus, Obesity and Hypertension among Population of Nadiad city

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ABSTRACT

The global prevalence of chronic illnesses like diabetes Mellitus, hypertension and obesity is increasing day by day. The Healthy People 2010 objectives identify diabetes Mellitus, hypertension and obesity as one of the most significant current health promotion and disease prevention priorities in this country because it is a major contributor to many preventable causes of death. India is experiencing a rapid health transition, with large and rising burdens of chronic diseases, which were estimated to account for 53% of all deaths in 2005 so the study was conducted to assess the Prevalence rate of Diabetes Mellitus, Obesity and Hypertension among population of Nadiad city. A Quantitative Descriptive survey research design research design was used. The population comprises of 1000 sample across the 7 areas from Nadiad city are selected by multistage simple random sampling. The data collection tool include various parameters to assess Blood sugar level, Blood pressure level and Body Mass Index. This community based study demonstrated high prevalence of diabetes and mild to moderate prevalence of Hypertension and obesity among the population of Nadiad city.

KEYWORDS

Prevalence, Diabetes Melitus, Hypertension, Obesity, Infertility, Stress, Counseling

INTRODUCTION

BACKGROUND OF THE STUDY

“Health is Wealth – Keep this treasure Safe.”

The global prevalence of chronic illnesses like diabetes Mellitus, hypertension and obesity in increases day by day.

The Healthy People 2010 objectives identify diabetes Mellitus, hypertension and obesity as one of the most significant current health promotion and disease prevention priorities in this country because it is a major contributor to many preventable causes of death. Non-communicable disease continues to be an important public health problem in India, being responsible for a major proportion of mortality and morbidity. Demographic changes, changes in the lifestyle along with increased rates of urbanization are the

major reasons responsible for the tilt towards the non-communicable diseases.

In India, there is no regular system for collecting data on non-communicable diseases (NCDs) which can be said to be of adequate coverage or quality.

NEED OF THE STUDY

India is experiencing a rapid health transition, with large and rising burdens of chronic diseases, which were estimated to account for 53% of all deaths in 2005. Earlier estimates projected that the number of deaths attributable to chronic diseases would rise from 3.78 million in 1990 (40.4% of all deaths) to 7.63 million in 2020 (66.7% of all deaths).

1. Many of these deaths occur at relatively early ages. Compared with all other countries, India suffers the highest loss in potentially productive years of life, due to deaths from cardiovascular disease in



people aged 35 - 64 years (9.2 million years lost in 2000).

2. By 2030, this loss is expected to rise to 17.9 million years - 940% greater than the corresponding loss in the USA, which has a population a third the size of India's.

3. Obesity is one of the important risk factors for non-communicable diseases. Obesity is a most prevalent malnutrition all over the world. It is estimated by the WHO that globally, over 1 billion (16%) adults are overweight and 300 million of these (5%) are obese. The highest rise in the number of obese is noted in the countries with fast growing economies especially of South East Asia. In India the prevalence of obesity is 12.6% in women and 9.3% in men. In other words, more than a 100 million individuals are obese in India.

Diabetes Mellitus

Type-2 diabetes mellitus has been rising rapidly, with the country until recently being often labeled as the 'diabetes capital' of the world. Most recent estimates of the International Diabetes Federation (IDF), report that there are about 65 million people with diabetes, with projected increase to 109 million by 2035.⁶ Moreover, diabetes is an important risk factor for CVD and CVD is the major cause of death and disability in persons

with diabetes. Diabetes currently accounts for almost a million deaths annually.

Hypertension

Hypertension is the leading risk factor for CVD and accounts for nearly 10% of all deaths in India. There are currently 20-40% adults in urban areas and 12-17% in rural areas who suffer from it. The number of hypertensive's in India is projected to nearly double from 118 million in 2000 to 213 million by 2025. Besides, nearly 40% adults have Pre-hypertension, a precursor condition with high likelihood of converting into hypertension if left unaddressed.

OBJECTIVES

1. To identify the prevalence rate of DM among population of Nadiad City.
2. To identify the prevalence rate of hypertension among population of Nadiad city.
3. To identify the prevalence rate of obesity among population of Nadiad city.

HYPOTHESES / ASSUMPTION

1. There will be mild to moderate prevalence rate of Diabetes Mellitus among population of Nadiad city.
2. There will be mild to moderate prevalence rate of Hypertension among population of Nadiad city.
3. There will be mild to moderate prevalence rate of Obesity among population of Nadiad city.



METHODOLOGY

➤ RESEARCH APPROACH:

Quantitative research approach

➤ **RESEARCH DESIGN:** Descriptive survey design

➤ **RESEARCH SETTING:** Various 7 areas from Nadiad city

➤ Ramdevpir mandir, pij road

➤ Jawahar nagar

➤ SRP campus

➤ Mahadev mandir

➤ Jain derasar

➤ Santram mandir

➤ Jalaram mandir

➤ **POPULATION:** All residents of Nadiad city, whose age above 20 years.

➤ **SAMPLE:** Sample consisted of residents of Nadiad city who fulfilled the selection criteria.

➤ **SAMPLE SIZE:** 1000 samples from Nadiad City.

➤ **SAMPLING TECHNIQUE:** Multi stage simple random sampling technique was used to get the samples. Study was done at seven different places of Nadiad city.

CRITERIA FOR SAMPLE SELECTION

- Age above 20 all people
- Samples those are willing to participate in the study
- Pregnant mothers are excluded

SELECTION OF TOOLS FOR DATA COLLECTION

To collect the data for the present study followin tools has been selected and constructed.

Tool includes two sections:

- Section – I: Demographic Data
- Section – II: Measuring of parameters

➤ Blood sugar level:

➤ Blood pressure level:

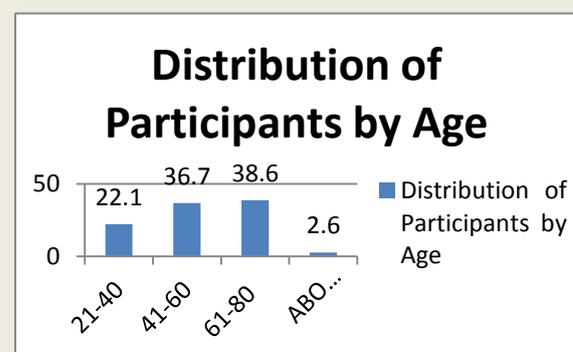
➤ Body Mass Index:

ANALYSIS AND INTERPRETATION

Descriptive statistics was used to analyze the data which was presented in tables and charts.

Table – 1 Socio-demographic Profile of Subjects

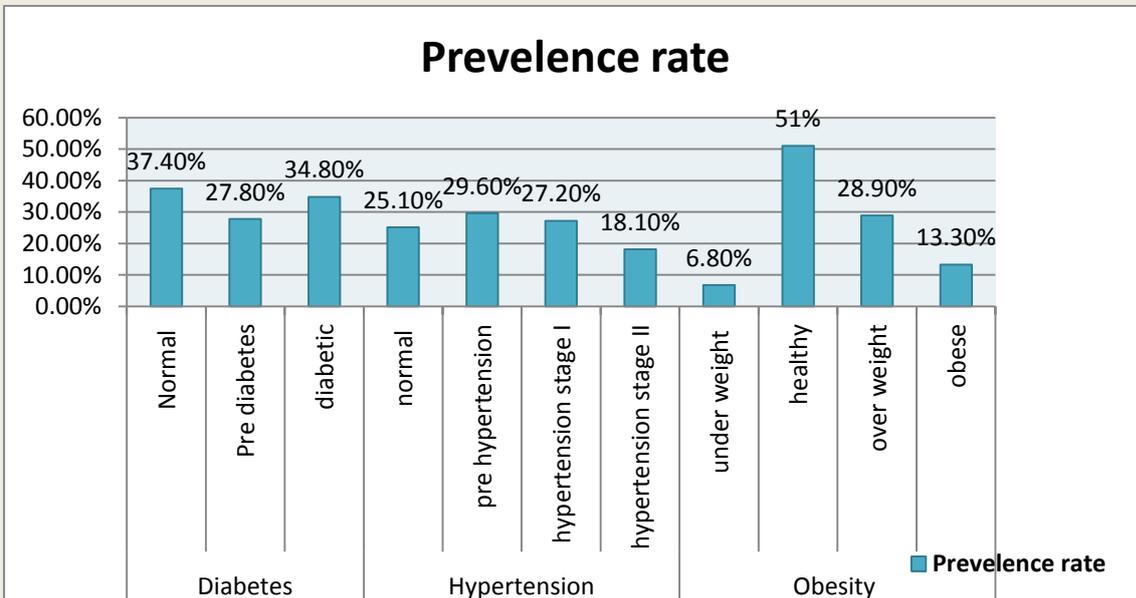
Age	Number	Percentage (%)
21-40	221	22.1
41-60	367	36.7
61-80	386	38.6
ABOVE 81	26	2.6
TOTAL	1000	100



Gender	Number	Percentage
MALE	635	63.5
FEMALE	365	36.5
TOTAL	1000	100

Distribution of Participants by
Table 2 Prevalence Rate of Diabetes, Hypertension, Obesity

Prevalence Rate				
Sr No.	components		No of cases	Prevalence rate
1	Diabetes	Normal	374	37.40%
		Pre diabetes	278	27.80%
		diabetic	348	34.80%
2	Hypertension	normal	251	25.10%
		pre hypertension	296	29.60%
		hypertension stage I	272	27.20%
		hypertension stage II	181	18.10%
		under weight	68	6.80%
3	Obesity	healthy	510	51%
		over weight	289	28.90%



CONCLUSION

This community based study demonstrated high prevalence of diabetes and mild to moderate prevalence of Hypertension and

obesity among the population of Nadiad city.

A nationwide initiative has to start to create awareness among the people of community regarding the harmful effects



of diabetes, Hypertension and obesity, with main focus on adolescents and adults.

RECOMMENDATION

It is recommended that there is need for the government to initiate to identify cases of DM, HT and Obesity.

A comparative study can be conducted in order to compare the prevalence rate in:

- Urban and rural areas
- Different states of the India.

A study can be conducted to identify the factors responsible for DM, HT and Obesity.

A true experimental study may be carried out to standardize the planned teaching programme.

Same study can be replicate on larger number of samples.



BIBLIOGRAPHY

1. Abdellah, F. and Levine, E. (1965). *Better Patient Care through Nursing Research. London: Macmillan Company.*
2. Agarwal S, Basannar DR, Bhalwar R, Bhatnagar A, Bhatti VK, Chatterjee K et al. Textbook of Public health and Community Medicine. Pune: AFMC in collaboration with WHO, India. 2009 :1041-101. 2.
3. Basvanthappa, B. T. (2005). *Medical Surgical Nursing. New Delhi: Jaypee Publications.*
4. D' Agostino, R. B. (2004). *Tutorials in Biostatistics: Statistical Methods in Clinical Studies (Vol. I). England: John Wiley & Sons. Ltd.*
5. Dhaar GM, Robbani I. Foundations of Community Medicine. 2nd ed. Noida (UP): Elsevier; 2008: 544- 63. 4. Baride JP, Kulkarni AP. Text Book of Community Medicine. 3rd ed. Mumbai: VORA Medical Publications; 2006. p 497-98
6. Fawcett, Jacguline. (2000). *Analysis and Evaluation of Conceptual models of Nursing. Philadelphia: F.A.Davis Company,*
7. Park K. Textbook of Preventive & Social Medicine. 20thed. Jabalpur: Banarsidas Banot. 2009: 315-349. 3.