Socio demographic profile of Diabetic cases attended at Diabetic clinic of a tertiary hospital of western Rajasthan India

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Abstract—*Diabetes Mellitus is a lifestyle disease it is increasing with increase of urbanization. It is a side effect of development. Nowadays with the development of community it is also on increase trend. So this study was conducted on 250 patients of diabetes attended at Diabetic Clinic of SMS Hospital Jaipur, with the aim to find out socio-demographic profile of these diabetes cases. General information about the these case was gathered in a pre-designed semi-structured performa. It was found in this study that majority of cases were in age group of 31 to 45 years with slight male dominance. Education wise majority were Graduate followed by secondary educated and others. Likewise occupation wise majority were either unemployed of professional. Majority of cases were from Socio economic Class II and III. So it can be concluded that diabetes is a disease of middle age slight male dominance and of educated middle class individuals. Further studies are required to establish this fact.*

Keywords— Diabetes Mellitus, Socio-demographic profile

I. INTRODUCTION

Diabetes is a progressive disease with a complex hormonal background and multiple potential outcomes and therapeutic options. Diabetes and its management are increasing health problems with major morbidity and mortality burdens, both nationally and globally and consequent implications for social welfare and healthcare delivery and cost. Diabetes can lead to complications, the consequences of which can include blindness, kidney damage, and foot ulcers that can result in amputation.[1]

Prevalence of diabetes mellitus is growing rapidly worldwide and is reaching epidemic proportions[2,3] IDF estimated diabetes prevalence for 2010 has risen to 285 million, representing 6.4% of the world's adult population, with a prediction that by 2030 the number of people with diabetes will have risen to 438 million[4]

"India leads the world in the looming epidemic of diabetes", was told in the 20th annual World Diabetes Congress of International Diabetic Federation (IDF) [5]. WHO has also acknowledged that India has the maximum number of diabetic patients. India is thus the "Diabetic Capital of World".[4]

According to Diabetes Atlas published by the International Diabetes Federation (IDF), there were 7.12% (of their adult populations) with diabetes in India in 2007.[5]

Diabetes is the single most important metabolic disease which can affect nearly every organ system in the body. Diabetes related complications are coronary artery disease, peripheral vascular disease, neuropathy, retinopathy, nephropathy, etc. People with diabetes are 25 times more likely to develop blindness, 17 times more likely to develop kidney disease, 30-40 times more likely to undergo

amputation, two to four times more likely to develop myocardial infarction and twice as likely to suffer a stroke than non-diabetics.[6]

Diabetes is growing alarmingly in India, home to more than 65,1 million people with the disease, compared to 50.8 million in 2010.[7] It is predicted that by 2030 diabetes mellitus may afflict up to 79.4 million individuals in India, while China (42.3 million) and the United States (30.3 million) will also see significant increases in those affected by the disease.[8,] India currently faces an uncertain future in relation to the potential burden that diabetes may impose upon the country. So observing diabetes as public health problem this study was designed to study the socio demographic pattern of Diabetes cases attending at Diabetic Clinic of SMS Hospital Jaipur (Rajasthan) India.

II. METHODOLOGY

This case series type of descrptive study was conducted on diabetic cases attended at conducted on patients attending at endocrinology outdoor of Sawai Man Singh (SMS) Hospital, Jaipur (Rajasthan) India. This hospital is a state government of Rajasthan and is attached with S.M.S. medical college. This is a apex hospital of Rajasthan providing tertiary care not only to the people of this state but to the people of nearby state.

Sample Size: Sample size was calculated 204 subjects at 95% confidence limit and 5% allowable error assuming prevelence of diabetes 15% (In India prevalence of Diabetes is recorded 7 % in 2007[2] but 12% in 2008[8] so for sample size calculation prevalence of diabetes is accepted 15%). With the addition of 10% it comes out to 224, so to make it rounded of sample size for this study was accepted **250** diabetes mellitus.

Study Population

For the study purpose among all the cases attended at endocrinology outdoor, diagnosed cases of diabetes mellitus by endocrinologist as per WHO criteria for diagnosis for diabetes were taken. Among these identified diabetic cases, cases that are drug induced, physiologically diabetics and those who are not able to communicate were excluded from the study.

Diabetes mellitus is diagnosed as per diagnostic criteria issued by World Health Organization (WHO) recommendation.[9] For socio-economic status of cases updating of B.G. Prasad's classification by Kumar P (1993) method was taken.

Every eligible cases of diabetic were interrogative as per pre designed proforma to gather desired information about case in detail. Data thus collected were summaries and analyzed in percentage and proportions on MS Excel.

III. RESULTS

Out of these 250 cases of diabetes, majority were in age group of 31 to 45 years with age range 18 years to 60 years. Mean age was 43.5 ±7 years. Slight male predominance were found in this study i.e. 56.8% v/s 43.2%. (Figure 1& 2)

Figure 1

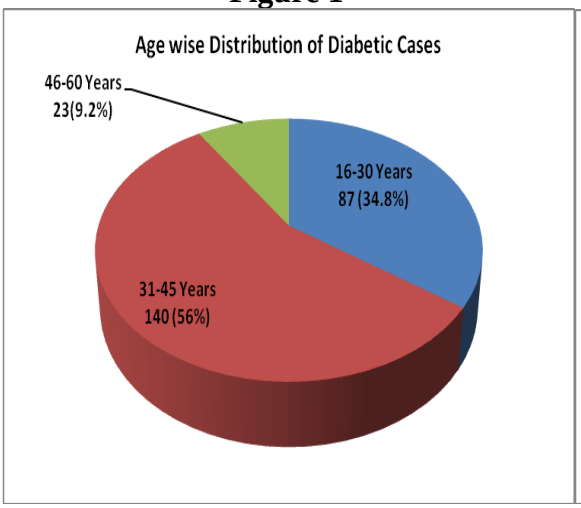
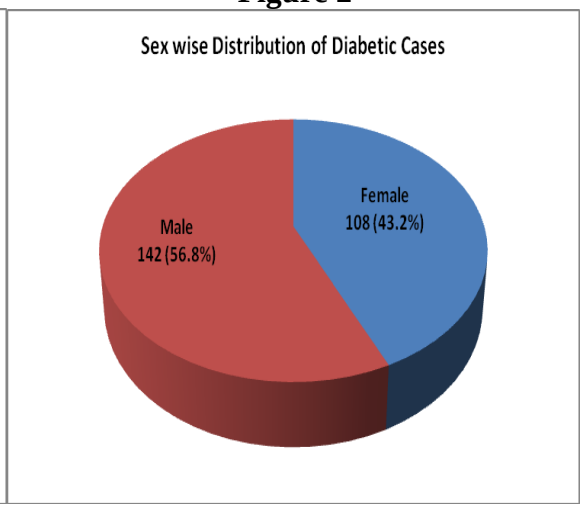


Figure 2



Out of these 250 cases, majority were married (94.5%) and very few were either unmarried or widows or divorcees. (Figure 1)

When type of family of these cases was inquired it was found that majority (58%) belongs to nuclear family. (Figure 2)

Figure 3

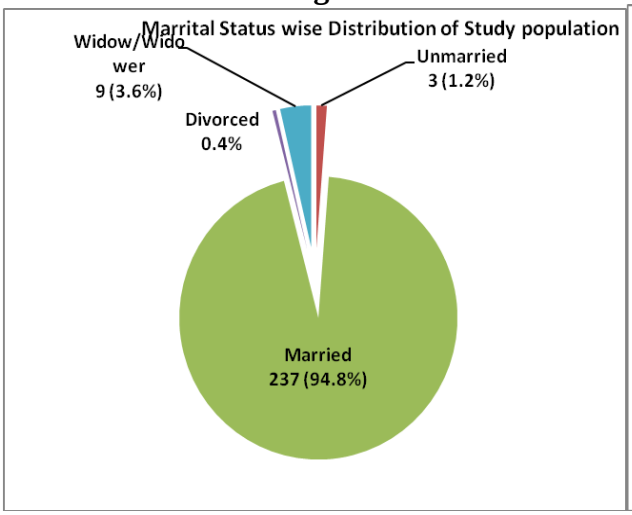
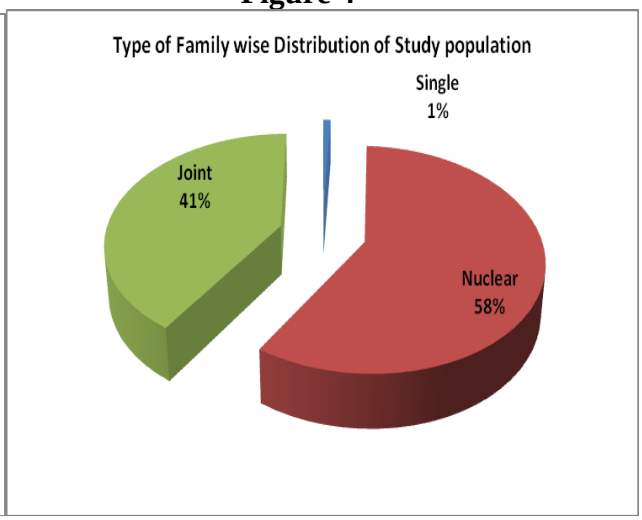


Figure 4



When education status of these cases was observed it was found that majority i.e. 101 (40.4%) were graduate followed by secondary educated, illiterates, postgraduates etc. (Table 1)

Table No. 1
Education wise distribution of diabetes cases (N = 250)

S. No.	Education	Number	%
1	**Illiterate**	41	16.4
2	**Up-to Primary**	24	9.6
3	**Middle**	18	7.2
4	**Secondary**	41	16.4
5	**Graduate**	**101**	**40.4**
6	**Postgraduate**	25	10
	Total	250	100

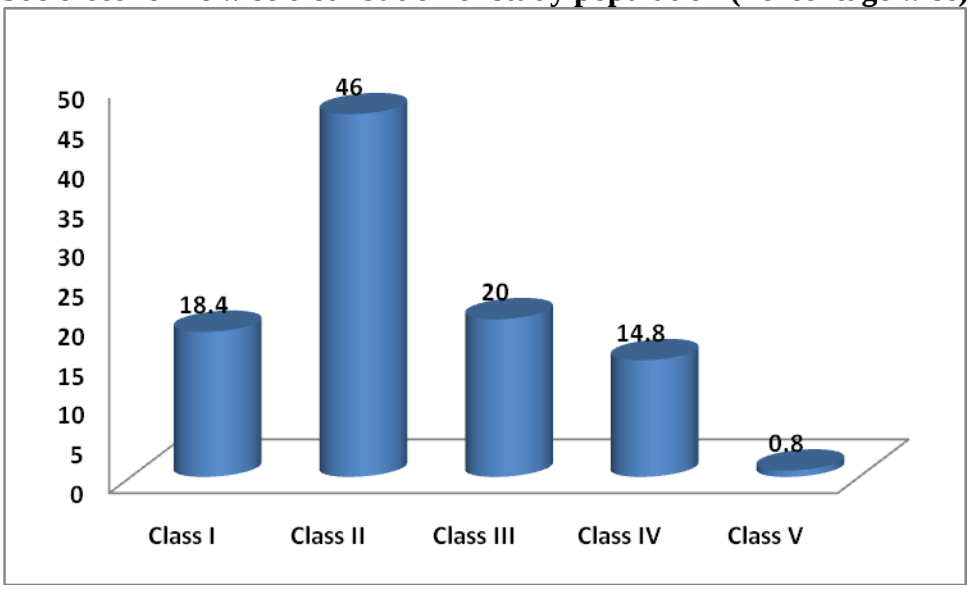
When occupation of these cases was inquired it was found that majority (39.6%) were unemployed followed by professional (24%), unskilled workers etc. (Table 2)

Table No. 2
Occupation wise distribution of diabetes cases (N = 250)

S. No.	Occupation	Number	%
1	**Unemployment**	**99**	**39.6**
2	**Unskilled**	29	11.6
3	**Semiskilled**	10	4
4	**Skilled**	17	6.8
5	**Semiprofessional**	26	10.4
6	**Professional**	60	24
7	**Farmer**	9	3.6
	Total	**250**	**100**

When socioeconomic status of these cases was observed it was found that majority (66%) belongs to middle class either SES Class II or Class III. (Figure 5)

Figure 5
Socio-economic wise distribution of study population (Percentage wise)



Class I	46	18.4
Class II	**115**	**46**
Class III	50	20
Class IV	37	14.8
Class V	2	0.8

Out of these 250 diabetic cases, majority (57.2%) were of 1-5 years of duration followed by 5-10 years, 10-15 years and more than 15 years with mean duration of diabetes 4.8±7.6 years. (Table 3)

Table No. 3
Duration of diabetes wise distribution of diabetes cases (N = 250)

S. No.	Duration of diabetes (in Years)	Number	%
1	**1-5**	**143**	**57.2**
2	**5-10**	74	29.6
3	**10-15**	20	8
4	> **15**	13	5.2
	Total	250	100

IV. DISCUSSION

In this present study, majority of diabetic cases belongs to were 31 to 45 years of age group with age range 18 years to 60 years and mean age was 43.5 ±7 years. Other studies[10,11] were also reported well comparable observations that diabetes is a disease of middle age. A study[10] surveyed 2269 diabetic cases and found mean age 53.3 ±13 years and another study [11] reported majority of cases above 15 years of age. Even Slama et al[12] found mean age 55±5 years

Present study observed slight male predominance i.e. 56.8% v/s 43.2%. In contrast to findings of present study, A number of studies reported that diabetes mellitus is more common in females than males .[13,14,15] But Slama et al[12] found Sex ratio was 1. So this slight difference may be either because this study is a hospital based study, where males are more expected to come than females, or may be diabetes is more common in males in Rajasthan. This fact was supported with study conducted by Dharmesh at all[16] in Jaipur only who also reported male predominance in his study. Dharmesh at all[16] found prevalence of diabetes 18.33% in males whereas 13.15% in females.

When education status of these cases was observed in this study it was found that majority i.e. 101 (40.4%) were graduate followed by secondary educated, illiterates, postgraduates etc. So no definate pattern was observed in this present study. Slama et al[12] observed frequency of illiteracy 32% whereas in present study frequency of illiterates were 16.8%. Again reason of lower frequency of illiterates in present study may be its being hospital based study where health conscious persons are more expected to come. If would have been a community survey the result may differ.

When occupation of these cases was inquired it was found that majority (39.6%) were unemployed followed by professional (24%), unskilled workers etc. This may be because of more stress in this group may be due to either unemployment or professional pressure.

In this study majority (66%) belongs to middle class either SES Class II or Class III. As middle SES class in main stress pressure so this class is more prone to have diabetes than Upper Class I and Lower Class.

In this study majority were married (94.5%) and very few were either unmarried or widows or divorcees. This may be because it is a disease of middle age and in Indian scenario upto middle age majority get married.

When type of family of these cases was inquired it was found that majority (58%) belongs to nuclear family. So cases are more or less equally distributed in nuclear and joint families.

Out of these 250 diabetic cases, majority (57.2%) were of 1-5 years of duration followed by 5-10 years, 10-15 years and more than 15 years with mean duration of diabetes 4.8±7.6 years. Reports of other studies[11,12] were well in resonance with the observations of present study. A[11] reported mean duration of diabetes 10±6.9 and Slama et al[12] found Sex ratio was 1 in both groups; in group-1, mean diabetes duration was 14±6 years.

V. CONCLUSION

So it can be concluded that diabetes is a disease of middle age and of middle class. It is more common in urban areas. Further studies are required to establish this fact.

CONFLICT

None declared till date.

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