

A Study on Clinical History and Dietary Patterns among the Selected Diabetic Respondents

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Abstract--- According to the IDF Diabetes Atlas Committee (2019), there are 463 million diabetics worldwide, with 9.0 percent of women and 9.6 percent of men. Men make up 11.8 percent of the population, while women make up 10.1 percent. Diabetes mellitus is a long-term metabolic condition. There are various forms of diabetes, with Type 1 diabetes, Type 2 diabetes, and gestational diabetes mellitus being the most common (GDM). The most significant risk factors for diabetes were lifestyle choices and heredity. Based on the findings of these recent studies, a pilot survey was conducted in Coimbatore among a diabetic community of n=50 (both male and female) to determine the diabetic population's profile using an interview schedule. The ABC [Anthropometry (Height, Weight, BMI, Waist to Hip Ratio), Biochemical (Fasting Blood Glucose, Postprandial Blood Glucose, HbA1C), and Clinical] profile of the patients can be determined using this interview schedule. This individual's anthropometry and biochemical profile aid in deciding the diabetes population's prevalence in Coimbatore. Finding out the prevalence rate raises public awareness about the causes of diabetes and warns people that they are at the risk of developing diabetes due to a lifestyle change.

Keywords--- Diabetes, Lifestyle Practices, Blood Glucose, Male, Female.

I. Introduction

Diabetes is a long-term metabolic disorder distinguished by excessive blood sugar levels that can harm the heart, blood vessels, eyes, kidneys, and nerves. Type 2 diabetes predominantly affects adults and arises when the body develops insulin resistance or does not generate enough of it (WHO, 2019). Year after year, the prevalence rate rises, becoming a global scourge.

According to Saeedi et al. and IDF Diabetes Atlas Committee (2019), "Diabetes affects around 463 million individuals worldwide, representing 9.3 percent of the global adult population between the ages of 20–79 years. In 2030, this is predicted to rise to 578 million (10.2 percent) and 700 million (10.9 percent) in 2045. Diabetes is predicted to affect 9.0 percent of females and 9.6 percent of males in 2019. The increase of diabetes prevalence with age leads to a prevalence of 19.9percent (111.2 million) in people aged 65–79 years”.

"In 2019, the global prevalence of IGT was expected to be 7.5 percent or 373.9 million people. IGT is anticipated to affect 8.0 percent (453.8 million) of the population by 2030 and 8.6 percent (548.4 million) by 2045. Most patients with IGT (72.2 percent) live in low- and middle-income nations. Generally, there are no variations in IGT prevalence between males (7.5 percent) and women (7.5 percent). Almost half (48.1 percent) of persons aged 20 to 79 who have IGT are under 50 years. (180 million). In 2030 (204.1 million) and 2045, this age group will continue to have many people with IGT (231.8 million). It's worth noting that nearly a third (28.33percent) of all people with IGT are between the ages of 20 and 39, putting them at a high risk of acquiring diabetes and cardiovascular disease for many years" Saeedi et al. and IDF Diabetes Atlas Committee (2019).

"The pooled prevalence of diabetes among the male population of India after evaluating 63,132 male subjects from forty-nine studies was 11.8 percent," according to meta-analysis research by Kumar et al. (2020). (95 percent CI: 10.5 percent -13.1 percent). Similarly, after evaluating 69,424 female individuals from 48 trials, the prevalence of diabetes was 10.1 percent (95 percent CI: 8.8 percent -11.7 percent)."

People are more likely to get diabetes due to inactive lifestyles, eating unhealthy foods, losing exercise, and taking drugs, alcohol, and cigarettes. This unhealthy lifestyle pattern increases the risk of causing diabetes. Continuous after diagnosis will lead to diabetic complications such as diabetic retinopathy, diabetic neuropathy, diabetic nephropathy, diabetic foot, etc. Surveying the prevalence of diabetes helps determine the lifestyle pattern and causes behind the disease.

II. Materials and Methods

Selection of the Respondents

This study includes 50 participants, all of whom were over the age of 25, and all of them had diabetes. The respondents were chosen by a procedure known as purposive random sampling. In this study, the number of male respondents was 18, and female respondents were 32. The participants were enthusiastic about taking part in the survey.

Collection of Data

The interview schedule is the method used to gather data. It elicits information such as the respondent's age, type of diabetes, fasting blood glucose level, food pattern, and lifestyle behaviors. The information gathered was compiled and statistically analyzed.

III. Results and Discussion

BMI and Types of Diabetes

Table 1: BMI and Types of Diabetes

BMI of the respondents N=50 (Male-18, Female-32)	Type of Diabetes					Total (%)	
	Type 1 Diabetes (%)		Type 2 Diabetes (%)		Gestational Diabetes (%)	Male	Female
	Male	Female	Male	Female	Female		
Below 18.5 (Underweight)	-	9.4	-	-	-	-	9.4
18.6-24.9 (Normal weight)	11.1	18.8	44.4	18.8	3.1	55.6	40.6
25.0-29.9 (Pre Obesity)	5.6	9.4	27.8	21.8	3.1	33.3	34.4
30.0-34.9 (Obesity Class I)	5.6	3.1	5.6	12.5	-	11.1	15.6
Total	22.3	40.7	77.8	53.1	6.2	36	64

The table 1 states that increase among total 36 percent of male respondents 55.6 percent (Type 1 diabetes- 11.1 percent, Type 2 diabetes- 44.4 percent), 33.3 percent (Type 1 diabetes- 5.6 percent, Type 2 diabetes- 27.8 percent), 11.1 percent (Type 1 diabetes- 5.6 percent, Type 2 diabetes- 5.6 percent) falls under Pre-obesity (25.0-29.9) and Obesity Class I (30.0-34.9) condition respectively and among 64 percent of female respondents 9.4 percent (Type 1 diabetes- 9.4 percent), 40.6 percent (Type 1 diabetes- 18.8 percent, Type 2 diabetes- 18.8 percent, Gestational diabetes-3.1 percent) , 34.4 percent (Type 1 diabetes- 9.4 percent, Type 2 diabetes- 21.8 percent, Gestational diabetes-3.1 percent) and 15.6 percent (Type 1 diabetes- 3.1 percent, Type 2 diabetes- 12.5 percent) falls into Normal weight (18.6-24.9), Pre-obesity (25.0-29.9) and Obesity Class I (30.0-34.9) condition respectively. The table's overall result demonstrates that female respondents are more likely to be obese than male respondents. This result correlates with WHO's (2019) assertion that obesity is a complication of diabetes that affects women more than men.

Fasting Blood Glucose Level of the Diabetic Respondents

Table 2: Fasting Blood Glucose Level of the Diabetic Respondents

Fasting Blood Glucose level N=50 (Male-18, Female-32)	No. of diabetic respondents			
	Male		Female	
	Nos.	%	Nos.	%
Normal (99 mg/dL and below)	4	22.2	4	12.5
Prediabetes (100-125 mg.dL)	3	16.7	6	18.8
Diabetes (126 mg/dL and above)	11	61.1	22	68.7
Total	18	100	32	100

From the table 2, it was found that 22.2 percent, 16.7 percent, and 61.1 percent of the male respondents and 12.5 percent, 18.8 percent, 68.7 percent of female respondents fall under Normal (99 mg/dL and below), Prediabetes (100-125 mg/dL), Diabetes (126 mg/dL and above) categories of blood glucose level respectively. This reveals that only a quarter of male and female respondents control their blood glucose levels, while the other three-quarters cannot regulate their blood glucose levels.

Comparison of Year of Diagnosis of Diabetes and Types of Diabetes

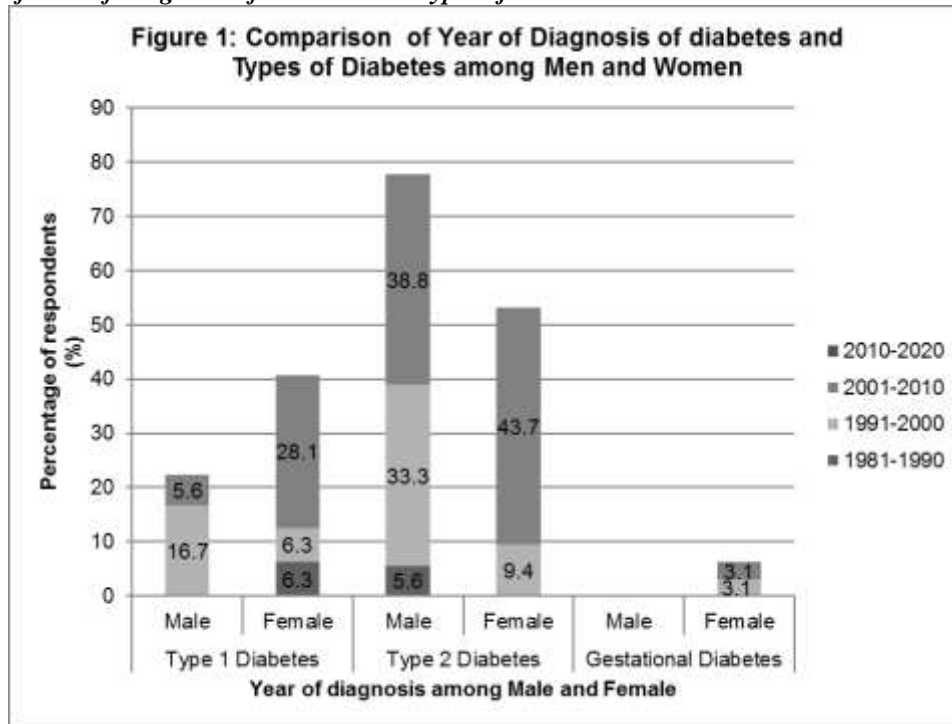


Figure 1 states that from 2001-2010, diabetes was raised primarily type 2 diabetes among men and women (40-50 percent).

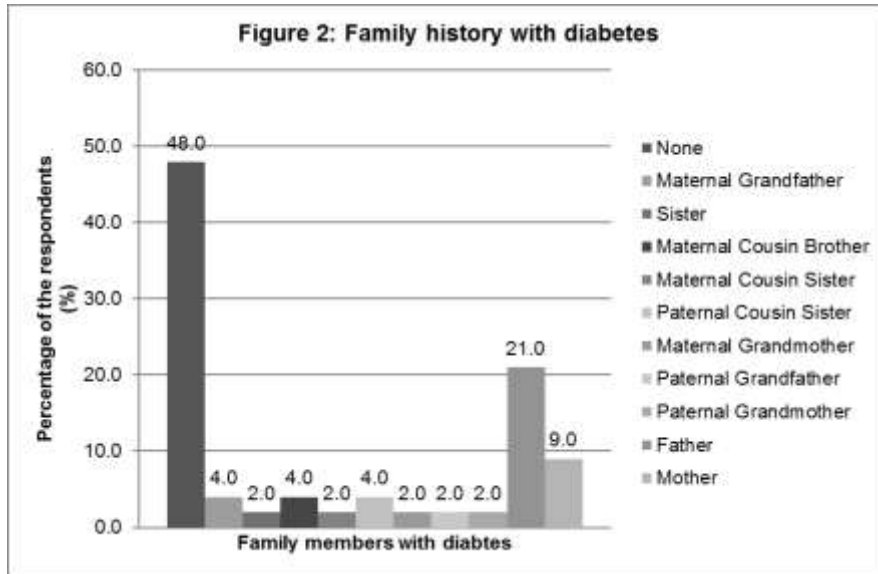
Comparison of Age of Diagnosis and Types of Diabetes

Table 3: Comparison of Age of Diagnosis and Types of Diabetes

Age of diagnosis of diabetes	Type 1 Diabetes		Type 2 Diabetes	Gestational Diabetes		Total (%)	
	Male (%)	Female (%)	Male (%)	Female (%)	Female (%)	Male (%)	Female (%)
36yrs-55yrs	22.2	37.5	72.2	53.1	6.3	94.4	96.9
Above 55yrs	0	3.1	5.6	0	0	5.6	3.1

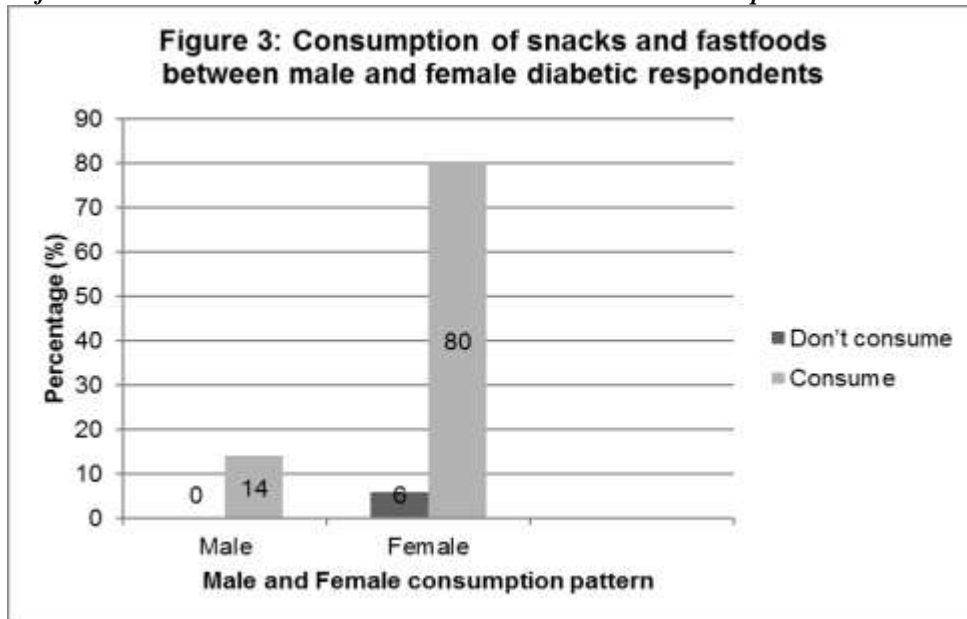
The table 3 shows that type 1 (Male-22.2 percent, Female-37.5 percent), type 2 (Male-72.2 percent, Female-53.1 percent), and gestational Diabetes (Female-6.3 percent) were prevalent among middle-aged adults. And 3.1 percent of older individuals, with type 1 accounting for 3.1 percent of females and type 2 accounting for 5.6 percent of males. Female middle-aged people (96.9%) were more impacted by diabetes than male middle-aged adults.

Family History with Diabetes



Among the selected respondents, 52 percent (31 percent were male and 21 percent were female) of diabetic respondents' had a family history of Diabetes (Figure 2). Family members with diabetes include maternal grandmother, Paternal grandfather, Paternal grandmother, paternal grandmother, paternal grandfather, Mother, Father, Sister, and Brother.

Consumption of Snacks and Fast Foods between Male and Female Diabetic Respondents



From the figure 3, we can understand that eating fast foods and snacks in between meals has some relationship with the cause of diabetes. Eighty of females and 14% of males consume fast foods and snacks. It correlates with a study by Odegaard (2012) that fast food increases the risk of diabetes and cardiovascular diseases.

IV. Conclusion

Diabetes is a deep-rooted metabolic disorder that affects 463 million people globally. And this study was carried out to find out the incidence and effect it has among males and females in the area near our own living space. This study identified that females were more affected by diabetes and its complications than males. Briefly saying, middle-aged female respondents were more likely to be involved with diabetes and fall under obesity conditions than male respondents. Both males and females lack in controlling blood glucose levels. Snacking, eating fast foods, and doing less exercise impacted their blood glucose level and diabetic complications. It was also found that the lack of a healthy lifestyle and family history of diabetes was the leading cause behind this incidence of diabetes.

Author's Contribution

Conceptualization and designing of the research work (LV); Execution of data collection (LV); Analysis of data and interpretation (LV); Preparation of manuscript (LV).

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