LIFE STYLE PRACTICES AMONG PEOPLE WITH TYPE 2 DIABETES ATTENDING OUTPATIENT DEPARTMENT BAHAWAL VICTORIA HOSPITAL BAHAWALPUR

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ABSTRACT

Background: Diabetes Mellitus, is a disease that requires life style changes for its better management.

Objective: To investigate the lifestyle practices of people with type 2 diabetes attending outpatient department, Bahawal Victoria Hospital Bahawalpur.

Methodology: Study Design: Descriptive cross sectional study. Place and duration of study: Outpatient department BVH, Bahawalpur from January to June 2018. Subject and duration of Study: Patient who attended OPD for routine follow-up were investigated by pre-designed questionnaire. Medical students of Quaid-e-Azam Medical College Bahawalpur were trained to collect data of people with type 2 diabetes. At the end of one month students filled a pre-designed questionnaire of 15 questions to assess the life style of diabetics. Data of questionnaire was collected by non-probability convenient sampling method (100 questionnaires) after taking consent. Patients of both genders who were willing to give data were included in study and those unwilling were excluded. Researchers translated the form and added answers for convenience of subjects.

Results: In this study, a sample of 100 patients with type 2 diabetes was taken. The results showed 64% were male, 26% were smoker, 63% showed positive family history, 68% respondents were taking fruits for 1-3 days per week, 56% of total were having one time fruit serving in a day and 76% had vegetables for 4-6 day in a week. Regular walk was a habit of 49% of respondents and 50% were involved in physical activity for more than 10 minutes in a day. In this study, 62% oral medication and 38% were using insulin injections, whereas, 85% were taking medicine regularly. HbA1c was analyzed in 59% of all respondents. 52% came to know about their diabetes by routine visits.

Conclusion: Life style of people with type 2 diabetes was found to be according to the recommended guidelines by American Diabetes Association. It was estimated that most of them were fully aware of their preferences for fruits and vegetables. A significant number of participants were conscious in avoiding smoking, taking medications on regular basis and also committed in performing regular exercise.

Key Words: Type 2 diabetes, Life style, HbAlc, Exercise

INTRODUCTION

Diabetes is defined as an accumulative disorder of metabolism associated with high levels of blood glucose.[1] It is related with two main types of which are Insulin dependent diabetes mellitus (IDDM) or type I DM, and non Insulin dependent diabetes mellitus or types 2 Diabetes Mellitus (T2DM).[2,3]

The people at increased risk of developing T2 DM are generally obese. It is also attributed to the females who have history of gestational diabetes during pregnancy. The studies have identified the associated risk related to the development of T2DM.[4,5] As a result it brings much better understanding of the importance of primary prevention and control of diabetes in the community. So it is worth accessing the people's behavior and attitudes towards.[6] This could be supportive in designing a well-structured diabetes programmed to educate every individual, especially those who are at higher risk.[7]

The healthy and active lifestyle can enhance the life expectancy of these individuals which could lead to lesser risk of developing late complications of diabetes.[8-10] The WHO has an estimation of 4.4% prevalence rate of diabetes in the year 2030 as compared to 2.8% in 2000.[1] There were 285 million new disease individuals were reported in the year 2010 and number of expected new cases is 439 million in 2030.[1,2] T2DM is the common type of diabetes and usually seen in people over 35 years of age.[3] It has been reported that well educated individuals with a positive and proactive attitude practicing a healthy lifestyle, recommended diet and regular exercise can have reduced likelihood of being inflicted with DM. T2DM is 5th major cause of death due to its attribution for cardiovascular diseases as it was ranked at the number six among the

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top devastating diseases among the non-communicable ailments in some Asian countries.[5] Furthermore people with prolonged history of hyperglycaemia are at high risk of developing long term health complications such as ischaemic heart disease, strokes, kidney failure, blindness, amputation.[11-14] Study conducted at out-patient clinics of three family health centers which were chosen randomly in Dakalia Government in 2012. According to this study, some patients were aware of sign symptoms and causes of diabetes while others were responsive to modifiable factors, treatment and management of diabetes. Some have identified the importance of fasting blood sugar levels. Hence, every subject was possessing his peculiar outlook about diabetes and its control.[9] A study reported that reduced dietary intake of fatty products and less consumption of carbohydrates preclude the incidence of chronic ailments such as T2DM. Some studies validated that augmented ingestion of carbohydrates escalate the secretion of insulin to sustain insulin supply in response to the demand.[10-12] Extraordinary carbohydrate intake leads to upsurge insulin secretion, and is linked with higher levels of insulin after a meal. Insulin secretion with high output may be associated with age related decline in insulin secretion, resulting in a more rapid expansion of increased glucose levels.[10]

A study of DM in Pakistan, a major health problem was conducted at North West general hospital and research centre Peshawar in January 2016 reflecting in Pakistan prevalence of diabetes escalating due to expansion of urban areas, reduced bodily exercise, ingestion of highly processed food leading to metabolic derangement and malnutrition.[11] A similar investigation conducted on people with diabetes in Aga Khan University Hospital in Pakistan revealed that almost 53% of the patients had knowledge of the symptoms, treatments and complication of diabetes in urban areas of Karachi.[12] So this study was carried out at outpatient departments, Bahawal Victoria Hospital, Bahawalpur, Pakistan, to get the insights of lifestyle of people in urban and semi-urban areas of south Punjab with T2DM. The aim of this project was to assess the practices of dietary habits, physical activity and medications of people coming to the tertiary care hospital, having type 2 diabetes mellitus.

METHODOLOGY

It was a descriptive cross sectional study, performed in collaboration with physiology department, and Community Medicine department of Quaid-e-Azam Medical College Bahawalpur and Bahawal Victoria Hospital Bahawalpur. The duration of the study was from January to June 2018. Subjects were the patients who attended OPD and were selected by simple random sampling method. Sample size was 100 study subjects. The pre-designed questionnaires were filled by the data collectors (students of second year and fourth year MBBS classes) after taking consent. The subjects from both genders who were willing to give data were included in the study and those unwilling were excluded. Statistical analysis of the data was performed and frequency calculated. Graphs and charts were made using SPSS version 21.

RESULTS

This research was about assessing the influences associated with lifestyle of diabetics. A sample of 100 patients was taken. Out of those, 60% were age of above 50, 23% were 41-50 years old. 14% were 31-40 years old and 3% were 20-30 years old, (Table I) and 64% of respondents were male and 36% were female and (Table I) 26 % were smokers, 74% were non-smokers, (Table I), 63% had positive family history of diabetes and in 37% family history of diabetes was negative. Frequency of fruit intake per week of 1-3 days in 68% of respondents, 4-6 days in 22%, while 10% were not taking fruits in their diet. According to study, 24% respondent were taking vegetables 1-3 days in week and 76% were taking vegetables 4-6 days in a week and 30% of respondents used to take vegetables in diet 1 time per day, 59% were taking 2 servings and 11 % were taking 3 time vegetable servings per day.

The habit of regular walk was found in 50% and were spending more than 10 minutes daily in corporal activity, whereas 50% were involved in doing for 10 minutes or less in such activities. The percentage of the respondents taking medicine in oral form and they were 62% , while 38 % were on insulin therapy. Among 100 diabetics, 85% were taking medicine regularly and 15% showed inconsiderate attitude and 69% of respondents had their blood sugar level was in normal range and 31% thought their sugar level not in normal range. Study revealed 59 % of respondents check their HbA1c level after 6 months, 16% after every 1 year and 25% used to the HbA1c level after 2 year. In this study, 52% of total respondents came to know about their diabetes by routine visits and 20%

Table I: Frequency Distribution of Demographic Data and associated factors.

Variables	Frequency		Variables	Category	%
Age	21-30 years	03 (03%)	**Vegetable intake per week**	1-3 days per week	24%
	31-40 years	14(14%)		4-6 days per week	76%
	41-50 years	23 (23%)	**No. of servings of Vegetables per day**	1 time per day	30%
	>50 years	60 (60%)		2 times per day	59%
Gender	Male	64 (64%)		3 times per day	11%
	Female	36 (36%)	**Time spent for physical activity**	>10 minutes physical activity	50%
Habit of Smoking.	Yes	26 (26%)		<10 minutes physical activity	50%
	No	74 (74%)			
Habit of Regular walk	Yes	49 (49%)	**Regarding regularity of medicine use**	Yes	85%
	No	51 (51%)		No	15%
Source of Confirmation Diabetes.	By yourself	28 (28%)	**Type of medicine used**	Oral	62%
	Routine visits to Doctor	52 (52%)		Insulin	32%
	Any others	20 (20%)	**Blood sugar status**	Normal	69%
Duration of Diagnosis of Diabetes.	1-10 years ago	62(62%)		High	31%
	11-20 years ago	25 (25%)	**Duration of HbA1c checkup in Diabetics**	After Every 6 months	59%
	21-30 years ago	13 (13%)		After Every 1 year	16%
Family History of Diabetes	Yes	63%		After Every 2 years	25%
	No	37%			
Days of Fruit intake per week	1-3 days	68%			
	4-6 days	22%			
	No	10%			
No. of fruit servings per day	1 time per day	56%			
	2 times per day	19%			
	3 times per day	07%			
	None	18%			

came to know by other means. Regarding duration of diagnosed 62% were diagnosed, in 1-10 years, 25% were diagnosed 11-20 years ago and 13% were diagnosed 21-30 years ago.

DISCUSSION

As discussed earlier that the main objective of this study was to assess the lifestyle approaches of people with T2DM in urban areas of Bahawalpur. A sample of 600 patients was taken and data was collected from OPD BVH Bahawalpur. To summarise the results of present study revealed that the most prevalent age group was of 40-60 year. Health practices were satisfactory in those who attended university as compared to those who never want to school. Males had better understanding than their female counterparts. Almost 63% patients were with positive family history. This study showed that 60 % of was above the age of 50 years.. But according to a study conducted in Tehran Iran the diabetes is increasingly growing in young population.[2] In this

research the number of female sufferers were less than the male counterparts as compared to the study conducted in Sweden number females was greater than males.[14] This could be reflection that in this part of Punjab females may be less conscious about attending hospitals for regular follow-up's. According to our study frequency of smokers among diabetics was only 26%. But another study conducted in Pakistan reported that all the diabetics with IHD were smokers.[15] Study revealed that among diabetics only 50% were involved in physical activity for less than 10 minutes in a day. But according to a study conducted in Tehran 30 minutes in the beginning starting with 5-10 min of warm up.[2] Our study revealed that most of the diabetics were taking fruits and vegetables in their diet to be prevented from further complications of diabetes. Similarly studies conducted in Berlin stated that high can consumption of fruits, legumes, nuts, seeds and vegetable oil is associated with low risk of diabetic complications. Moreover intake of fatty food was associated with high risk of mortality in diabetics.[16-18]

Out research concluded that through lifestyle interventions risk for the complications of diabetes for ischemic heart diseases can be reduced. A similar study conducted in United States of America in 2006 determined that the risk of diabetic and heart disease can be reduced by 58% in intervention group as compared to control group.[17] In our research it is noticeable that most of the diabetic are following lifestyle interventions and have controlled blood glucose level healthy life style.

CONCLUSION

The practices regarding type 2 diabetes were according to the WHO guidelines in most of the participants. However, the specific information regarding the amount and timing of the physical activity was found deficient leading to the varied lifestyle practices in that regard only. The major lifestyle preferences regarding eating, physical activity and proper use of medicines among people, who were attending the outpatient department in BVH were health and disease conscious as per recent guidelines. However, these results should be dealt with caution due to the limitations such as small sample size, lack of reliable data that limited the scope of analysis and involvement of integrated additional methods of data collection.

Authors Contribution: IH & GS: Data Collection, Idea generation. **AA & SAI:** Writeup, data analysis, interpretation and supervision of study. **MF & JH**: Helps to acquired the data. All authors critically revised and approved its final version.
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