Original Article

Assessment of Knowledge and Attitude Regarding Dietary Items among Diabetic Patients

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ABSTRACT

Objective: To improve the quality of life for diabetic patient, but doing so necessitates that these individuals get the necessary information and abilities to manage their everyday lives care. Deciding on meals and eating routines are affected by the patients understanding of diet.

Study Design: Cross sectional study

Place and Duration of Study: This study was conducted at the Ayub Teaching Hospital Abbottabad from May 2022 to July 2022.

Materials and Methods: The term knowledge means medical knowledge about particular dietary items. Regular is defined as ≥ 4 days a week or >16 days a month. Critically ill diabetic patients were excluded from study.

Results: 200 patients with mean age of 59.07 were included in present study. The mean systolic blood pressure was recorded as 136 mm of Hg and mean diastolic BP was recorded as 84mmHg. 74 individuals are overweight and 61 are obese. Medical knowledge about vegetables was observed in 92 subjects, 42 used fruits, 85 used white wheat and 34 used brown wheat regularly. 47 used sugars regularly despite medical knowledge. 59 participants lacked knowledge about whole meat and meat without fats. 146 had knowledge about benefits of unsaturated fats but only 91 practiced regularly in their diet.

Conclusion: Participants significantly lacked medical knowledge about vegetables, fruits and white wheat. Respondents having significant medical knowledge practiced regular usage of brown wheat and low consumption of sugar and gur/shakkar. Majority of participants did not consumed meat because they belonged to uneducated group and had very poor income. Respondents had significantly good knowledge about fats but less than half of participants consumed unsaturated fats regularly in their diet.

Key Words: Knowledge, Dietary items, Body mass index, Education

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INTRODUCTION

Diabetes mellitus and hypertension are the two most important non communicable diseases responsible for high mortality worldwide. There is a rising trend of diabetes in both developing and developed countries[1,2]. Diabetes is a lifelong disease with an increased risk of premature deaths as well as acute and chronic complications[3,4].

Diabetes mellitus (DM) is described by the World Health Organization (WHO) as "a metabolic disorder of multiple etiologies characterized by chronic hyperglycemia with change in the metabolism if carbohydrates, fats and proteins as a result if defects in insulin secretion, action of the insulin, or both[5]. The treatment of diabetes is mainly through drugs or lifestyle modifications. Among the modifiable risk factors, careful dietary habits are one of the very effective ways to control diabetes as unhealthy eating habits are one of the major reasons for hyperglycemia. Moreover, adhering strictly to a restricted diet along with regular physical exercise reduces the number and doses of antidiabetic drugs, and in certain cases may be sufficient to control diabetes alone. The patient should have adequate knowledge and strong motivation to observe healthy food practices. Pan et al figures indicate that about 31% to 46% of diabetes can be avoided by the regular use of vegetables and fruits, reduced use of saturated fats, sodium, and refined sugars, by increasing physical activity and controlling smoking habits[6].Low carbohydrates diets are effective way of improving HBA1C and its also reduces obesity, proven by various RCT trials[7,8]. Hyper caloric diet and, western dietary styles also increasing the prevalence of diabetes mellitus in younger age[8,9] group.

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The Hazara region is a northern part of KP comprised of 6 districts (Haripur, Abbottabad, Mansehra, Batgram, Kohistan, and Torghir) and Ayub Teaching Hospital (ATH) is a referral center for them. The people of this region have their own culture and eating habits. The present study is therefore designed to assess the knowledge and attitude towards healthy and unhealthy eating habits in the diabetic population of our area, this will not only help to increase the awareness about dietary habits but will also help the patients to observe healthy food practices[10].

MATERIALS AND METHODS

This will be a cross-sectional study that will be carried out on diabetic patients admitted in the medical units of Ayub Teaching Hospital Abbottabad. A total of 200 diabetic patients will be included in the study. A brief demonstration will be conducted for data collectors and food items which are healthier for diabetes like complex carbohydrates, unsaturated fats etc. were defined and explained to researcher. The term knowledge means retrospective patient medical knowledge about particular food item which he gains from his physician, dietician etc. The regular means consumption of food four are more than four days in a week or consumption of food item 15 or more than 16 days in a month. The income group from 5 thousand to 25000 included very poor category, income group from 30000 to 50 thousand is Borderline group (poor), and income with 51000 to 1 lack is satisfactory, over 1 lack belongs to rich category. Underweight was defined as < 18.5kg/m^2, normal weight as 18.5 to 22.9, overweight as 23 to 24.9, and obese as ≥ 25[10]. The data collectors recruited to cardiology, endocrinology, gastro-enterology and medical units to collect the data from diabetic patients. The study was conducted from 1st May2022 to 15 July 2022 in Ayub teaching hospital Abbottabad.

Critically ill patients and those having serious comorbidities like congestive cardiac failure, end-stage renal disease will be excluded from the study. The information regarding dietary habits will be collected by a personal interview on a pre-designed questionnaire. The data obtained will be analyzed by using SPSS software version 21.

RESULTS

About 200 diabetic patients, age range from 16 to 106 years were included in the study. The mean age of respondents was 59.07±13.1 among which 48.5% (97) were males and 51.5% (103) were females. 42% (84) were residents of Abbottabad, 28.5% (57) from Manshera,10.5% (21) from Batagram,7.5% (15) from Haripur, 5.5% (11) from Kohistan and 6% (12) belonged to other regions. Regarding education 58% (116) were uneducated and 53.5% (107) belonged to urban areas. The mean systolic blood pressure was recorded as 136± 17 and the mean diastolic pressure recorded as 84±10, detail of demographic variables is shown in Table1.

Table No.1: Showing Demographic Characteristics

Variables		Total No
Body mass index (BMI)	<18.5	07
	18.6-23.0	58
	24-27.4	74
	≥27.5	61
Income	5000-25000	100
	30000-50000	31
	51000-1lack	63
	Not mention	06
Occupation	Nothing	54
	Office job	10
	Manual worker	28
	House wife/worker	92
	Businessman	05
	Not disclosed	11
Current Smoking status	Yes	15
	No	81
	Refusal	104
Education	Uneducated	116
	Primary	37
	Secondary	42
	Graduation	05
Dietary advisor	Dietician	02
	Physician	127
	Family member	56
	No advisor	15
Duration of Diabetes	1-10years	125
	11-20years	57
	>20years	17
Physician visits	weekly	02
	Monthly	30
	Yearly	53
	No follow-up	115

Table No.2: Dietary Knowledge of Participants

Diet [Regularly means consumption ≥ 4 days in a week, while never means 1 or No use in a week] (n=200)		Knowledge		P-Value
		Yes	No	
Vegetables	Regularly (125)	98	27	0.006
	Never (75)	45	30	
Fruits	Regularly (51)	42	09	0.02
	Never (149)	97	52	
White Wheat	Regularly (160)	85	75	0.00
	Never (40)	35	05	
Brown Wheat	Regularly (42)	34	08	0.001

	Never (158)	84	74	
Maize	Regularly (07)	02	05	0.445
	Never (193)	96	97	
Barley	Regularly (00)	00	00	-
	Never (200)	77	123	
Sugar	Regularly (58)	47	11	0.00
	Never (142)	138	04	
Gur/ Shakkar	Regularly (13)	03	10	0.001
	Never (187)	131	56	
Carbonated drinks	Regularly (03)	03	00	0.62
	Never (197)	166	31	
Sugar free drinks	Regularly (01)	00	01	0.4
	Never (199)	108	91	
Whole meat	Regularly (12)	08	04	0.751
	Never (188)	133	55	
Meat without fats	Regularly (09)	06	03	0.156
	Never (189)	143	46	
Saturated fats	Regularly (77)	41	36	0.000
	Never (121)	105	16	
Unsaturated fats	Regularly (105)	91	14	0.000
	Never (95)	55	40	

DISCUSSION

Very little literature exists on the knowledge about dietary items among people with diabetes mellitus in Pakistan. Studies which are available about knowledge, beliefs and practices are deficient in highlighting patient's knowledge about dietary items[11-14]. Akber N et al highlighted carbohydrates, proteins and fats in journal but study lacks specific basic dietary items[15].

The mean age of respondents was 59.07 years which is slightly older than study done in Karachi by Rafique G et al and Patel M et al[16] but consistent with FA Olatona et al[17]. The reason could be that most of our patients are inpatients which are admitted for various comorbidities. Male to female ratio is almost consistent with that reported by Rafique G et al. More than half (58%) of participants were illiterate which is coherent with that reported by Gul N et al. Rafique et al reported 14.6% illiteracy ratio in diabatic participants which is quite lower than our figure. Most of our participants (58%) belonged to far flange rural areas, this could be the reason of higher ratio of illiteracy. The mean systolic blood pressure was recorded as 136±17 and mean diastolic pressure was 85±10 which fall near to the patients who are taking drugs, as reported by Patel M et al. We recorded those 135 (67%) patients had BMI over than recommended (18.6-23.0), FA Olatona et al reported 74%. Patel M et al reported that 76% patients had higher BMI than normal, the difference may be due to small sample size of over study.

125 participants regularly ate vegetables, 57 had no medical knowledge about importance of vegetables in diabetic diet (P=0.006). 43 participants who never used vegetables belonged to low-income group (P=0.05). 51 participants used fruits regularly, only 42 had medical knowledge about fruits beneficial for diabetics (P=0.02). 149 never used fruits regularly because majority of them were uneducated (P=0.027). 160 used white wheat regularly, half had no knowledge about regular use of white wheat (P=0.00) and 100 of them also belong to uneducated group (P=0.06). 42 used brown wheat and 34 of them had medical knowledge (P=0.001). Among 158 who did not used brown wheat 99 belonged to uneducated group (P=0.07). 193 never used maize 102 did not had any knowledge about its benefits (P=0.445). 96 who did not used maize regularly were very poor but difference was not significant (P=0.26). 185 had knowledge about sugar. 142 never used sugar regularly in their diet with significance of 0.00. 134 had knowledge about gur/shakkar (brown sugar) only 13 practiced regularly with significance of 0.001.

188 never used whole meat regularly in their diet among which 97 belonged to very poor income group (P=0.02) and 133 were related to uneducated group (P=0.02). No significant difference was observed when compared with medical knowledge about consumption of whole meat (P=0.75)

Only 41 respondents used saturated fats regularly and 146 had good medical knowledge about it with significance of 0.00. 91 participants regularly used unsaturated fats and 54 are unaware of its medical importance with significance of 0.000.

CONCLUSION

67% participants had BMI greater than recommended. 50% diabetics belong to very poor group of income. Participants significantly lack medical knowledge about vegetables, fruits and white wheat. Regular usage of brown wheat and low consumption of sugar and gur/shakkar was done by the respondents who had significant medical knowledge. Respondents lacked medical knowledge about maize but no significant cause was observed. Majority of participants did not consumed meat because they belonged to uneducated group and had very poor income. Respondents had significantly good knowledge about fats but less than half of participants consumed unsaturated fats regularly in their diet.

Author's Contribution:
Concept & Design of Study: Mohsin Khan

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