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DETERMINANTS OF NUTRITIONAL AWARENESS AMONG DIABETIC PATIENTS; TERTIARY CARE HOSPITAL LAHORE, PAKISTAN A STUDY OF 2017

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Abstract

Objectives

The objectives of this study were to determine the awareness (i.e. nutritional knowledge, attitudes and practices) of diabetic patients and identify the factors associated with it.

Methods

A cross sectional survey was conducted to determine the awareness of diabetic patients and identify the factors associated with nutritional knowledge, attitude and practices of diabetic patients. A standardized pre-tested structured questionnaire was developed in order to interview the participants. Simple random sampling technique was used for the selection of study participants., the sample size was 403 after 5% lost to follow-up. Data analyses was done on SPSS version 20.0 and MS excel was also used for tables and graphs.

Results

Diabetes was more prevalent among people of 26-45-year age. Most of the patients were less educated, only few of them were graduates (18.7%). Most of the patients had positive family history of Diabetes (51%). Most of the patients had inadequate knowledge about disease (51%), poor attitude about disease (58.1%) and poor practices about disease (52.1%).

Conclusions

There is lack of knowledge and awareness about diabetes. The study indicates that there is need to organize awareness programs related life style modification of diabetic patients and for the management of diabetes. Prevalence of diabetes has been increasing in Pakistan.

INTRODUCTION

Diabetes mellitus is one of the pervasive unending disease that can be over looked by the way of alteration in life style.[i] At the start of 2013, 382 million individuals have been experiencing diabetes

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in the world. Diabetes mellitus (DM) is a disturbance in the metabolism of carbohydrate, fat, and protein that is caused by owing to lack of cells in pancreas which produce insulin or reduction in insulin susceptibility of tissues which ultimately results in higher blood glucose level.[ii][iii]

Rate of diabetes is more in the countries at developing stage. As identified by World Health Organization, Pakistan as if now eighth on the planet positioning of diabetes. Conceding arising figures of diabetes predominance, this will end up fourth by the year of 2025 and about 14.3 million people with diabetes. Diabetes had fetched about one and half million casualties in 2025, molding it the 8th compelling cause for death.[iv][v][vi]

Diabetes proliferate the chances of death with cardiovascular diseases (particularly heart diseases & strokes), risks of these non-communicable diseases like limb amputation, kidney failure and 4.8% cases of blindness globally.[vii] For the control of diabetes mellitus patient counselling is very important. It depends on medication treatment as well as on physical exercise, slimming down, and other way of life changes. The confusions of diabetes can be decreased by legitimate control of blood glucose which is confirmed through several studies. Way of life changes, worldwide pervasiveness of DM is expanding quickly giving a stressing sign and real risk to worldwide wellbeing. It demolishes the state's health care allowance.[viii]

Through community awareness intercessions are made; in the next 20 years' world's main disablers and killers of the working age groups is predicted to be the diabetes mellitus. Mostly low and middle salary level countries in both urban and rural populations socio-economic status affects by diabetes mellitus ostentations the socio-economic status of both urban and rural population of all established countries, which is overwhelm in the poorest countries.

There it is outmost need to look into the constraints of knowledge, attitude and practices among patients with diabetes in order to develop future effective health education programs. Therefore, the presents study aims to assess the nutritional knowledge,
attitude and practices among patients with diabetes mellitus.

Materials and Methods

A cross sectional study was designed for collecting the data from the patients of diabetes mellitus attending the outpatient therapeutic department at Mayo hospital Lahore. The calculated sample size of the study participants was 403 out of which 7 participants refused to participate in the study. Data was collected through pre structured questionnaire, questionnaire was adopted from previous studies and some modifications were also incorporated to serve the purpose, questionnaire was divided into four parts first was of socio- demographic details, second part of the questionnaire was to assess the knowledge, third part was about the attitude and the fourth part of the questionnaire was related to practices of diabetic patients about the diabetes mellitus. After collecting the data, it was put in to SPSS
20.0 version for getting means, frequencies and chi square tests and analyzed through same software along with drawing table and graphs in Microsoft office in Microsoft word and excels for getting results and conclusion of the study.

The ethical approval was obtained from internal review board of Health Services Academy, Islamabad. Written informed consent was obtained from the patients/participants before
filling the questionnaire. Strict anonymity and confidentiality is maintained for participants as only codes have been used instead of original names of the participants.

Main Findings

Diabetes was more prevalent among people of 26-45-year age. Most of the patients were less educated, only few of them were graduates (18.7%). Most of the patients had positive family history of Diabetes (51%). Sociodemographic details of study participants are given in table1.

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Table 1. Socio-economic and demographic Characteristics

VARIABLES	FREQUENCIES (n-=396)	PERCENTAGES (n=396)
Education of participants	89	22.5%
Primary Middle SSC HSSC	83	21.0%
Illiterate	99	25.0%
	74	18.7%
	34	8.8%
Age	51	12.9
12-25	234	59.1
26-45	83	21.0
46-55	23	5.8
56-65	5	1.3
>65		
Family history of diabetes	202	51%
Yes No	194	49%
Residence	183	46.2%
Rural Urban	213	53.8%
Employment Employed Unemployed	227	57.3
	169	42.7

Majority of participants 54.3% reported that medication is more important than diet and exercise to diabetes. Forty one percent reported that chocolate bars had a lot of sugar while twenty four percent reported about potatoes.34.8% said that brown bread had a lot of fats in them while 28% said butter had a lot of fat in them. Fifty one percent were known about the effect of healthy dietary habit, timing, food intake pattern. Other details about the kknowledge of patients of disease are given below.

Table 2. Knowledge of Diabetic Patients

Statement	Categories	Frequency (N)	Percentage (%)
Diabetes is a condition in which body contains	A high level of sugar in blood then normal	172	43.4
	A low level of sugar in the blood then normal	165	41.7
	Don't know	58	14.6
Symptoms Of DM	Increased frequency of Urination	95	24
	Increased thirst and hunger	150	37.9
	Increased tiredness	104	26.3
	Slow healing of wound	31	7.8

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	Don't know	16	4
Important factors that help in controlling blood sugar	Controlled and planned diet	105	26.5
	Regular exercise	152	38.4
	Medication	116	29.3
	Don't know	23	5.8
Normal Value of fasting blood glucose	40-60	37	9.3
	60-110	183	46.2
	110-150	121	30.6
	150-170	28	7.1
	>170	15	3.8
	Don't know	12	3
Eating too much sugar and other sweet foods in a cause of diabetes	Yes	282	71.2
	No	100	25.3
	Don't know	14	3.5
In untreated Diabetes the amount of sugar in the blood usually increase	Yes	225	56.8
	No	113	28.5
	Don't know	58	14.6
A diabetic diet consist mostly of special food	Yes	232	56.6
	No	106	26.8
	Don't know	58	14.6
The way I prepare my food is important as the food I eat	Yes	242	61.1
	No	53	13.4
	Don't know	101	25.5

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Medication is more important than diet and exercise to control diabetes	Yes	215	54.3
	No	93	23.5
	Don't know	88	22.2
Which of the following foods have lots of sugar in them	Fruit Juice	98	24.7
	Chocolate bars	162	40.9
	Potatoes	98	24.7
	Artificial Sweeteners	38	9.6
Which of the following foods have lot of fats in them	Butter	111	28
	Brown Bread	138	34.8
	Meat	85	21.5
	Junk foods	62	15.7
Do you know the effect of healthy dietary habit (timing, food intake pattern, extra salt intake)	Yes	204	51.5
	No	125	31.6
	Don't know	66	16.7

Participants responded about their attitudes, 35.6% reported that upon normalizing blood glucose level, medicines should be immediately stopped, 37.1% reported that medicines should be stopped gradually while 23.5% reported that medicines should be continued. Majority of the participants 65.4% stated that diabetes can be managed while 26.3% stated no. 42.9% stated that Diabetes if not treated can lead to foot ulcers,23 % stated it can lead to heart problems.

Table 3. Attitude of Diabetic Patients

Variable	Categories	Frequency (N)	Percentage (%)
Upon Normalizing blood glucose level	Medicines should be stopped immediately	141	35.6
	Medicines should be stopped gradually	147	37.1
	Medicines should be continued	93	23.5
	Don't know	14	3.5

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Do you think diabetes can be managed ?	Yes	259	65.4
	No	104	26.3
	Don't know	33	8.3
Diabetes if not treated	Can lead to kidney failure	84	21.2
	Can lead to foot ulcers	170	42.9
	Can lead to heart problems	92	23.2
	Can lead to eye infection	33	8.3
Do you control your weight	Yes	287	72.5
	No	109	27.5
Do you take food timely	Yes	288	72.7
	No	108	27.3
Do you add extra salt to your regular diet	Yes	276	69.7
	No	120	30.3
Do you drink cold drinks	Yes	219	55.3
	No	177	44.7
Do you take a balanced Diet	Yes	245	61.9
	No	151	38.1

About 55% participants occasionally miss taking the doses of diabetic medications, majority of the participants 40.7% stated that they had checked their blood pressure 1 month ago while 33% said one week ago,65.7% said that they exercise regularly. 51.8% participants checked their body weight occasionally.

Table 4. Practices of Diabetic Patients

Variable	Categories	Frequency (N)	Percentage (%)
Do you miss taking the doses of your diabetic medication	Occasionally	218	55.1
	Once a week	146	36.9

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	Once a month	31	7.8
When your blood pressure was last checked	1 week ago	131	33.1
	1 month ago	161	40.7
	2 months ago	65	16.4
	6 month ago	21	5.3
	1 year ago	18	4.5
Do you exercise regularly			
	Yes	260	65.7
	No	136	34.3
How often you check your body weight	Occasionally	205	51.8
	Once a week	125	31.6
	Once a month	65	16.7

Overall awareness i.e. knowledge, attitude and practices score (on the basis of mean score) is given below.

Table 5. Overall Awareness (i.e. knowledge, attitude and practices)

Awareness	Frequency (N)	Percentage (%)
Knowledge		
Poor Knowledge	200	50.5
Good Knowledge	196	49.5
Attitude		
Poor Attitude	230	58.1
Good Attitude	166	41.9
Practices		
Poor Practices	208	52.3
Good Practices	188	47.5

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Statistically significant associations were found between; knowledge and practices and attitudes and practices, of diabetic patients with P values of 0.001 and 0.000 respectively.

Discussion

The study aimed to determine the nutritional knowledge, attitude and practices among patients with diabetes mellitus. In an under developing countries like Pakistan have been facing so many catastrophic problems, but the day by day rising frequency and prevalence of diabetes mellitus is one of the most important obstacle to be anatomize on superiority basis. Care-givers who works at primary and secondary health care level are the back bone of any health care system. Majority of them are working in private sector furthermore they are practicing in their private hospitals. load of Non-communicable chiefly diabetes is larger so health care providers be obliged to high knowledge, proficient and must knew the contemporaneous guidelines of admonishing disease with current medical advancements to handle with recurrent community health issues.

In this study 50.5% participants had good knowledge regarding diabetes mellitus which indicates the higher as compared to community based studies done in Sudan (15%), Malaysia (41.9%), Kenya (27%) and had the allied score in study conducted in Debra Town, Ethiopia (49%) and India (49.9%).[ix] The particular variations elaborate that these studies which were done in Sudan, Malaysia both urban and rural societies involved0 in Kenya.[x] The study which was conducted in Wagodia had higher scores (56.14%) than the others which was just because of the less organized diabetic education facilities and the participants had less involvements towards electronic media and NGO's in an information institution about diabetes mellitus as relevant to Waghodia.[xi] Finding that were highlighted in my studies were almost similar to the findings obtained in KAP studies which were conducted in Islamabad, Rawalpindi and Peshawar cities of Pakistan in which knowledge score of diabetic patients seeking health care was poor.[xii]

Conclusion

The finding of this study indicate that diabetic patients visiting at Mayo hospital Lahore have inadequate knowledge, Attitudes and practices about Diabetes. This study shows that knowledge and attitudes among diabetic patients were strongly associated and similarly attitudes and practices were also strongly associated. The results also indicate that an ambiguity in our health system related patients counselling.

Recommendations

In emerging countries improving the quality of life of diabetic patients and reducing morbidity and mortality are the major health care challenges for health care provider s and governments.

- First and foremost, on a priority basis a policy should be there related to the non- communicable diseases.
- Health professionals should work and follow guidelines regarding management and treatment,
- Health care professionals should be up skill to yield counselling in productive way.
- Proper workout (exercise) should be done.
- Should achieve and maintain healthy body weight
- Should avoid on the use of tobacco, smoking arises the risk of diabetes and so many diseases like cardiovascular diseases, Retinopathy.
- Should eat a healthy diet, avoiding the intake of sugar and saturated fats.
- There is outmost need for educational intervention like public awareness programs related diabetic management.

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