

An Assessment of Knowledge, Attitude and Practices (KAP) towards Diabetes Mellitus and Diabetic Retinopathy among Patients of Nishtar Medical University Hospital Multan, South-Punjab Pakistan

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Abstract

Objective:

This study aimed to determine the Knowledge, Attitude and Practices (KAP) towards diabetes mellitus and diabetic retinopathy among the patients of a tertiary care hospital.

Study design

This study was an observational, cross-sectional study.

Place and duration of study

The current study was conducted at department of General Medicine, Nishtar Medical University Hospital Multan, Pakistan. The time span of the study was from March 2016 to February 2017.

Method

After taking approval from Ethical Review Committee, a questionnaire based descriptive study was conducted on 692 patients. The technique of convenient sampling was used. All the gathered data were retrieved into MS Excel. The data were analyzed by using computer program SPSS 21 version.

Results:

Six hundred ninety two adults were interviewed. Of these, 271 (39.2%) were suffering from diabetes mellitus. Lowest mean knowledge score (5.28 ± 6.09) was seen in illiterate study population. Male's Mean Knowledge score (5.61 ± 5.56) was better than female's (4.46 ± 5.21). Over all mean score of Attitudes towards diabetes was 4.43 ± 2.37 . It was higher (6.62 ± 2.03) in diabetic respondents as compared with non-diabetic respondents (4.70 ± 2.59) with $p < 0.000$. In Practice module majority of the respondents (69.9%) did not exercise, 49% took high caloric snacks between meals and 87% ate outside home once a month, 56.8% diabetics visited ophthalmologist for routine eye examination; but only 9.2% asked for retinal examination.

Conclusion

Poor knowledge of diabetes was found in the community. The problem was more marked in females, illiterate and the individuals not having diabetes mellitus.

Key Words: Diabetes mellitus, Diabetic retinopathy, Diabetic Education Program, Knowledge, Attitude and Practices (KAP)

INTRODUCTION

Diabetic Retinopathy (DR) is a well-recognized complication of diabetes mellitus. Out of 39 million global blindness due to various eye diseases, 4.8% (1.8 million) is due to Diabetic Retinopathy (1-3). Nationally every fourth patient with diabetes has some level of DR (4-5). With improved care the diabetics are living longer and are exposed to the risk of chronic complications like DR resulting in increasing blindness. Health care providers are exploring ways and means to control blindness due to diabetes. Timely treatment of diabetes and regular screening for complications can reduce or delay the complications of diabetes by as much as 50% (6). This needs highly trained human resource and costly sophisticated equipment. In low economy countries Prevention of diabetes through awareness and education of the community is the most cost effective management of diabetes and its related complications (7-8). In order to create awareness in the community, insight into the gaps of knowledge, attitudes and practices regarding diabetes and blindness due to diabetes is important. In order to enhance the information, a study was conducted at Nishtar Medical University Hospital Multan, Pakistan. The aim of this study was to assess the knowledge, attitude and practice of the people in our community.

METHODS

The study design was descriptive cross sectional. A pre-tested questionnaire was developed to investigate community behavior towards key research questions. The questionnaire is based on both quantitative and qualitative research variables

that form basis for use of mix method approach for in-depth contextualization of research question. Before starting study, the permission from Research Ethical Committee (REC) of Nishtar Medical University was obtained. Informed consent was obtained from individual respondents and community leaders. The primary data collection tool was interviewing the patients who were visiting our hospital outdoor patients department during the duration of this study. To measure the levels of various aspects of Knowledge, Attitude and Practice (KAP), the questionnaire was divided into three distinct modules. In each module, relevant questions were asked from the respondents such as in Knowledge module the emphasis was given to assess the level of knowledge of respondents for diabetes and Diabetic Retinopathy. To assess knowledge, attitude and practices, 17, 10 and 16 questions were asked respectively. The analysis of three modules was done on the basis of scalar-scoring method. There were two types of questions. Those questions having two possible answers were given 1 point for correct response and zero point for wrong or uncertain response. The other type of questions had 3 levels of scores, 0, 1, & 2 representing Poor, Fair and Good level of Knowledge, Attitude or Practice. Total KAP score is used to rank the level of knowledge, attitude and practice and subsequent qualitative analysis was conducted to rank high, medium and low scores. All the gathered data were retrieved into MS Excel. The data were analyzed by using computer program SPSS 21 version. The descriptive statistics were used to calculate mean \pm SD for the age of the patients. Frequencies and percentages were calculated for all the variables included in the study.

RESULTS

Six hundred ninety two adults were interviewed. Of these, 271 (39.2%) were suffering from diabetes mellitus. Lowest mean knowledge score (5.28 ± 6.09) was seen in illiterate study population. Male's Mean Knowledge score (5.61 ± 5.56) was better than female's (4.46 ± 5.21). Over all mean score of Attitudes towards diabetes was 4.43 ± 2.37 . It was higher (6.62 ± 2.03) in diabetic respondents as compared with non-diabetic respondents (4.70 ± 2.59) with $p < 0.000$. In Practice module majority of the respondents (69.9%) did not exercise, 49% took high caloric snacks between meals and 87% ate outside home once a month, 56.8% diabetics visited ophthalmologist for routine eye examination; but only 9.2% asked for retinal examination.

Table-I Demographic features of the study population

Features	Frequency (%)
Gender of Respondent	
Male	248 (35.8%)
Female	444 (64.2%)
Presence of Diabetes	
Diabetic respondents	271 (39.2%)
Non -diabetic respondents	421 (60.8%)
Age of Respondent	
20-30	72 (10.4%)
31-40	401 (57.9%)
41-50	188 (27.2%)
>50	31 (4.5%)
Education of Respondent	
Illiterate	377 (54.5%)
Primary	104 (15.0%)
Middle	147 (21.2%)
Graduate	56 (8.1%)
Masters	8 (1.2%)

Table-II: Answers of the respondents claiming to have knowledge regarding diabetes (n=359).

Questions regarding Knowledge of Diabetes	No knowledge	Fair knowledge	Good knowledge
What are the symptoms of diabetes?	37 (10.3%)	79 (22%)	243 (67.7%)
What are the causes of diabetes?	115 (32.0%)	157(43.7%)	87 (24.2%)
What complications diabetes can cause?	13(3.6%)	125(34.8%)	221 (61.6%)
What effects does diabetes have on eyes?	155(43.2%)	170(47.4%)	34 (9.5%)
What is the treatment of diabetes?	54 (15%)	277(77.2%)	28 (7.8%)
How diabetes can be prevented?	110 (30.6%)	235(65.5%)	14 (3.9%)
What foods, if taken frequently, can increase the risk of diabetes?	59 (16.4%)	6 (1.7%)	294 (81.9%)
How can diabetes related eye complications be treated?	108 (30.1%)	239 (66.6%)	12 (3.3%)

Table-III: Stratification of Practices of the respondents

Practice	Percentage
High Calories between meal	49%
Eating out once a month	87%
No exercise	67.9%
Regular blood sugar testing	87.5% in diabetics and 9.3% in non diabetics
Other relevant investigations like HbA1c,lipid profile	22.1%
Healthcare professional seeking habit	77.9%
Visit ophthalmologist	56.8%
Ask for retinal screening	9.2%

DISCUSSION

There exists enough evidence to show that not only risk of diabetes can be reduced by life style change, but the risk of Diabetic Retinopathy (DR) to sight can also be greatly reduced by good blood glucose and blood pressure control, effective screening and laser treatment (9-10). Effective screening and laser will need good infra structure, highly trained human resource, established referral chain and willingness of the diabetic patients to avail the available facility. It is the dilemma of the developing countries that the service- intake by the community is not more than 30% (11) mainly because of the unawareness of the community regarding chronic complications of diabetes and its early management. Gaddap study had shown that over all knowledge of the sample population was 35.2% and only 9.5% of the respondents were aware of any risk factors of diabetes and

diabetic retinopathy (12). BQ study has shown almost similar results. With half of the population (54.5%) illiterate, majority of the respondents (48.2%) did not have any knowledge of diabetes. Most of the people 56.6% did not know if diabetes was related to diet, and 63.7% did not know the impact of disease on the eyes. Poor knowledge was reflected in the attitude of the community as most of the people (69.2%) did not believe that their routine dietary pattern was a risk factor regarding diabetes and Diabetic retinopathy. However few positive attitudes emerged from the study. Importance of exercise in prevention and control of diabetes was recognized by 58.7%, role of frequent blood sugar tests was realized by 85.5% and role of eye examination by an ophthalmologist in prevention and control of diabetic retinopathy was recognized by 58.8%. Practices of the community follow the knowledge and attitude pattern. Strengths noted were frequent blood sugar checking (87.5%), seeking professional help for control of disease in 77.9% and visit to ophthalmologist found in 56.8%. Weaknesses included taking high caloric snacks between meals (49%), eating outside home at least once a month (87%) , poor attention to other blood tests like lipid, glycated haemoglobin HbA1C (22.1%) and retinal screening in 9.2% of the respondents. There existed discrepancy between the belief and practice regarding exercise. Importance of exercise was recognized by 58.7%; but 67.9% did not do any exercise. People believe that physical exercise is good thing but cannot do it for many reasons, which are to be explored. The study has shown that diabetics do visit the physicians and ophthalmologists. Responsibility lies on the shoulders of the family physicians and ophthalmologists to educate the patient regarding control of diabetes and its chronic complications. There exists clinical evidence that increasing awareness in the community regarding management of diabetes is an effective method of controlling chronic complications due to diabetes. In many countries Diabetic education program (DEP) has proved cost effective preventive strategy (13-15).

CONCLUSION

Lack of knowledge of diabetes was found in the surveyed community, more marked in females, illiterate and the individuals not having diabetes. Poor knowledge and practices regarding diabetes and diabetes related blindness in the community are important weaknesses to be addressed. Physician seeking habit, regular blood checking habit and visit to ophthalmologists were strengths to be used by the family physicians and ophthalmologists to educate the patients.

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