Level of Preventive Awareness on Diabetes Mellitus among the Diabetic Outpatient in a Tertiary Level Hospital of Dhaka

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Abstract

Background: Diabetes mellitus (DM) is a silent, imminent global public health disease, which sort an inflict substantial challenge on the healthcare systems.The majority of developing nations are aggressively dealing with its effects.

Objective: To assess the level of preventive awareness about Diabetes mellitus among diabetic outpatients.

Methods: A cross-sectional study was conducted among conveniently selected 360 diabetic outpatients in BIRDEM General Hospital, Dhaka through a pre-tested semi-structured questionnaire by face-to-face interviews.

Results: The mean age of the respondents was 50.0±9.6 years and more than half of the patients (55.6%) were from the age group 41-60 years. The three-fifths of the respondents (60.0%) educational status was ranging from primary to higher secondary level. Most of the respondents (41.7%) were suffering from DM for the period of 5 years and more. 40.0% of the respondents visited hospital >3 times yearly for their treatment and follow-up purpose. Regarding the level of knowledge of preventive awareness on DM, most of the respondents (61.0%) had good knowledge.

Conclusion: It is recommended that effective preventive strategies like awareness and educational campaigns etc. should be implemented to up the level of knowledge.

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Introduction

Diabetes mellitus (DM) is an emerging and most challenging public health problems in the current world.[1] Currently, it affects over 422 million people globally, the majority of whom reside in low-and middle-income (LMI) countries, and it is responsible for 1.5 million annual deaths.[2] The greatest burden of this condition is felt in LMI countries, and these nations account for about 80% of all cases of diabetes. In sub-Saharan Africa alone, there are about 12 million people suffering from this condition and there are projections that this number will reach 18 million by 2030, making the region the one with the fastest growing rates of diabetes mellitus in the world.[3,4] For instance, it has been predicted that the number of cases of DM in Bangladesh will rise from 22,000 in 2012 to 61,000 by 2030.[2,5]

The healthcare systems and economies of the majority of developing countries would face significant challenges as a result of this health issue in the near future.[5]This is due to the fact that a significant proportion of those who have the illness in these nations are women of childbearing age.[6] When the disease affects these individuals, and uncontrolled, it may lead to lifelong complications, which are increased morbidity and mortality. For instance, poorly controlled DM can results in kidney failure, foot problems, eye damage, higher risk of heart disease, stroke, and inadequate blood flow to the limbs. Most of these complications are irreversible and costly to manage, and require in specialized centers for management.[7-9]

Although the importance of educational programs in the prevention and control of DM is well recognized, there are concerns whether these programs are achieving the desired goal of increasing awareness of DM. Patient education considered as a core component in the prevention and control of this disease. Such education need to encourage dietary adjustments, exercise, and other lifestyle modifications. These educational initiatives should encourage people to seek appropriate care and treatment, identify their diabetes risks, and take control of their condition. In addition, it should enable early detection and treatment of complications as well as enhanced early referrals of cases to specialized centers for management and follow-up.[10-15]

Objectives

To assess the level of preventive awareness about Diabetes mellitus among diabetic patients in a tertiary hospital.

Methods

Study design and settings

This is a hospital-based cross-sectional study that was conducted in a tertiary level hospital. The study was initiated from June to November 2015 at the purposively selected in a tertiary level hospital named BIRDEM General Hospital, Dhaka, Bangladesh.

Data collection

A pretested semi-structured questionnaire was used to collect data from the 360 outpaitentswho was suffering from either type 1 or type 2 DM, and attending in outpatient department (OPD) of BIRDEM General Hospital through face-to-face interviews at their convenience. Informed written consent was taken from each respondent, and informed them about the objectives and probable outcomes of this study.

Measure of level of preventive awareness

Level of preventive awareness was assessed as categorical responses. The questionnaire contained 10 categories questions were asked to know the knowledge of preventive awareness which incude history of Diabetes, hereditary factors, treatment pattern, scheduling of treatment, insulin taking, life style modification, physical exercise etc. Each question had a group of answer points, '1' point was awarded for each correct answer and no

took '0'. Correct responses were summed up to get a total knowledge scores for each respondent.

Total scores for all questions reached 10 grade. The level of knowledge was classified as:
Good knowledge: If the score was ≥60%, the knowledge level was considered as good.
Poor knowledge: If the score was below <60%, the knowledge level was considered as poor.

Data analysis
The questionnaire was checked and cleaned after the completion of data collection. All data were computed and analyzed through IBM SPSS v17. Both descriptive and inferential statistics were carried out and the results were presented in tables and charts.

Ethical declaration
The study was validated by the 'Institutional Review Board' of the North South University, Dhaka 1229, Bangladesh..

Results
Table 1 outlines the socio-demographic outlines of the study population. The mean age of the respondents was 50.0±9.6 years with the age range 30-80 years.More than half of the patients (55.6%) were from the age group 41-60 years. Male patients were predominat (62.5%) among the attending OPD patients. Almost cent percent (98.0%) respondents were married. Most of the respondents were service holders (32.0%), businessmen (30.0%) and homemakers (30.0%) respectively. About three-fourths of the respondents (74.0%) were came from low income families (≤30,000 taka).

Table I: Socio-demographic outlines of the patients (n=360)

Outlines	Frequency	Percentage
		Age group (year)
30-40	108	30.0
41-50	108	30.0
51-60	92	25.6
>60	52	14.4
Mean±SD		50.0±9.6
		Gender
Male	225	62.5
Female	135	37.5
		Marital status
Married	355	98.0
Unmarried	5	2.0
		Occupational status
Service holders	115	32.0
Businessmen	108	30.0
Housemakers	108	30.0
Agriculture workers	22	6.0
Day labourers	7	2.0
		Monthly family income (Taka)
≤10,000	86	24.0
10,001-30,000	180	50.0
30,001-50,000	65	18.1
>50,000	29	8.1

Figure 1 illuminates that the three-fifths of the respondents (60.0%) educational status was ranging from primary to higher secondary level of education and only 10.0% was illiterate.

Table II demonstrates that most of the respondents (41.7%) were suffering from Diabetes mellitus for the period of 5 years and more. Only 20.0% of the respondent knewstheir last 3 months status of DM. 40.0% of the respondents visited hospital >3 timesyearly for their treatment and follow-up purpose. Table III describes the positive measures on preventive awareness on Diabetes mellitus.

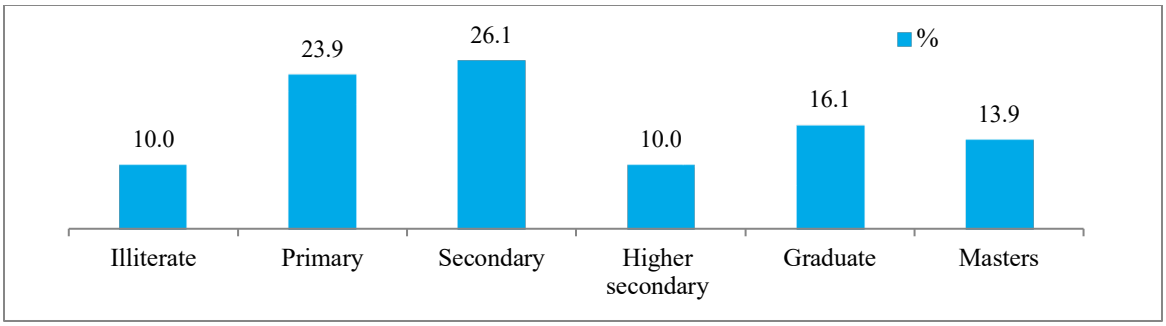

Figure 1. Education level of the respondents (n=360)

Figure 2 displays the level of knowledge of preventive awareness on Diabetes mellitus. Most of the respondents (61.0%) had good knowledge on preventive awareness on DM.

Table II: Status of DM of the patients (n=360)

Status	n(%)
	Duration of sufferings from DM
1 year and more	80(22.2)
3 years and more	130(36.1)
5 years and more	150(41.7)
	Last 3 months status of DM
Yes	72(20.0)
No	288(80.0)
	Frequency of hospital visits (in a year)
1 time	50(14.0)
2 times	111(31.0)
3 times	54(15.0)
>3 times	144(40.0)

Table III: Knowledge of preventive awareness on DM (n=360)

Knowledge of preventive awareness	Positive responses n(%)
Knowledge on etiology of DM	150(41.7)
Family history is a risk factor for developingDM	211(65.8)
Knowledge of knowing the name of the test for diagnosis of DM	272(75.6)
Knowledge of care is important for DM	187(51.9)
Knowledge of taking insulin for the treatment and management of DM	220(61.1)
Knowledge on importance of physical exercise for the management of DM	290(80.6)
Knowledge about food habit for the management of DM	250(85.0)
Knowledge about the complications of uncontrolled DM	145(40.3)
Knowledge about the fatality of uncontrolled DM	98(27.2)
Concencus about the regular monitoring of DM	292(81.1)

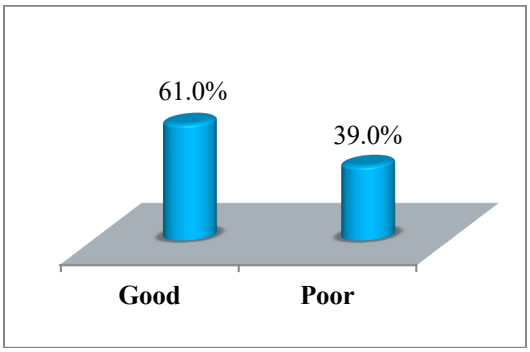

Figure 3. Level of knowledge ofpreventive awareness on DM (n=360)

Discussion

The majority of diabetes complications can be avoided by altering one's food, engaging in regular exercise, changing one's lifestyle, and taking anti-diabetic medications if one is unable to maintain a healthy glycemic level through non-pharmacological means.[2,7]

The mean age of the respondents was 50.0±9.6 years with the age range 30-80 years.More than half of the patients (55.6%) were from the age group 41-60 years.This findings is almost similar with studies in Bangladesh[6], India[16], Pakistan[10],Gambia[17]. Male patients were predominat (62.5%) among the attending OPD patients. Almost cent percent (98.0%) respondents were married. The three-fifths of the respondents (60.0%) educational status was ranging from primary to higher secondary level of education and only 10.0% was illiterate. Most of the respondents were service holders (32.0%), businessmen (30.0%) and homemakers (30.0%) respectively. About three-fourths of the respondents (74.0%) were came from low income families (≤30,000 taka). The socioeconomic conditions of the respondents has immense impact on knowledge and awareness of diabetes.[6,10,16]

The study revealed that most of the respondents (41.7%) were suffering from Diabetes mellitus for the period of 5 years and more. Only 20.0% of the respondent knewstheir last 3 months status of DM. 40.0% of the respondents visited hospital >3 timesyearly for their treatment and follow-up purpose. These findings are comparable with the studies.[17,18]

Regarding the level of knowledge of preventive awareness on DM, three out of five respondents (61.0%) had good knowledge on preventive awareness on DM. The level of knowledge is almost similar with these studies.[16,17]

Conclusion

Both epidemiologically and economically DM poses a major health challenge in Bangladesh. However, health educators can better plan for future programs by having a grasp of the public's level of disease awareness.Awareness of various aspects of DM is essential for the prevention, management and control of the disease.Therefore, it is crucial to evaluate DM expertise in order to achieve a generalized result and avoid issues that could harm the entire nation.

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Competing Interests

The authors declared no competing interest associated with this manuscript.

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