KNOWLEDGE, ATTITUDES AND PRACTICES RELATING TO DIABETES AND DIABETIC RETINOPATHY AMONG PEOPLE WITH DIABETES IN BANGLADESH

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BACKGROUND

According to International Diabetes Federation (IDF), Bangladesh is a least developed country (LDC) with a disproportionately high number of people having Diabetes Mellitus (DM). Of all people living with diabetes in the 48 LDCs, about 40% live in Bangladesh, making it one of the top 10 countries affected by the disease. The prevalence of DM is approximately 6.1% among the population aged 20 - 79, of whom about 46% are undiagnosed. There are approximately 5.7 million people with diabetes in Bangladesh, and this number is expected to double by 2030. Diabetic Retinopathy (DR) is a common complication of diabetes that can result in vision loss – the estimated number of DR cases in Bangladesh is 1.54 million (27% of DM patients). To develop sustainable solutions for managing DM and DR in Bangladesh, The Fred Hollows Foundation (The Foundation) and The Queen Elizabeth Diamond Jubilee Trust are jointly funding a project which aims to integrate eye care into mainstream diabetes care. A baseline Knowledge, Attitudes and Practices (KAPs) survey relating to DM and DR has been carried out in six districts of Barisal Division and in Brahmanbaria district of Chittagong Division, to inform this project.

AIM

This study aims to report on the original findings from a KAP Survey on DM and DR undertaken in seven districts of Bangladesh among people with diabetes.

METHOD

This cross-sectional study employed a mixed method approach. For the quantitative component, a systematic random sampling technique was adopted where 612 people with diabetes who were recruited from diabetes centers completed face-to-face questionnaires. (Mean age=52.19; Age range=24-90; Male=53.8%; Female=46.2%; Mean length of diabetes=6.23 with SD 5.82; Range for length of diabetes=1-50 years;Type 1 diabetes=16.5%, Type 2 diabete=22.2%, Unknown=61.3%). For the qualitative component, focus group discussions were carried out with target groups including people with diabetes, their family members and neighbors, and health service providers. Case studies were carried out for 14 people with diabetes.

RESULTS

Almost all respondents could identify multiple symptoms of diabetes, including increased micturition (72.2%) and increased thirst (57.8%). Knowledge about the measures to control diabetes was good, with 91.5% mentioning diet control, 17.2% mentioning physical exercise, 10.9% mentioning regular intake of medicine, and 3.1% mentioning regular blood glucose monitoring. Three quarters of respondents (74.2%) knew that uncontrolled diabetes can result in complications. Heart and kidney disease was most commonly mentioned by 53.3% and 51.1% respondents respectively as complications of uncontrolled diabetes (multiple responses were provided).Most respondents (88.9%) were willing to seek regular treatment for DM and also spend money for DM care (86.1%). Approximately two-third of the respondents (61.1%) visited a health care provider every month, hence practice relating to DM was found to be satisfactory. Respondents were well aware of measures to actively control their diabetes: 88.4% controlled their diet, 81.7% took part in physical exercise, 70.9% consumed oral anti-diabetic drugs and 29.1% used insulin injection. Awareness of DR was generally very poor: 51.8% respondents did not know that uncontrolled diabetes may lead to blindness and 94.3% respondents did not know that people with diabetes may have DR in future. Only 3.4% knew that DR was preventable and 4.2% knew that DR could be treated. Although 90.2% of respondents took regular treatment for diabetes, 76.1% had never had an eye examination.

Family members and neighbors were found to be the main sources of knowledge about blindness due to diabetes. The poor level of knowledge regarding DR is probably the reason why this survey also found serious reservations among respondents when it came to seeking regular care for DR, willingness to spend money for DR treatment and willingness to share information about DR.Brahmanbaria residents had higher levels of knowledge than Barisal Division residents. Men across all locations were found to have higher levels of knowledge about health care information than women, while women faced more barriers to accessing care. Only 3.2% women had knowledge about DR as opposed to 15.8% men. Women's main barriers to accessing care were work load at home and distance to health facility.

DISCUSSION

The variation between Brahmanbaria and Barisal Division may be attributed to available DR management services in Brahmanbaria district hospital, supported by The Foundation since 2012. The project will use these findings to develop health education messages and deliver gender sensitive program interventions. Findings from this study will be used by The Foundation to develop an integrated model of care for Diabetic Retinopathy in Bangladesh.

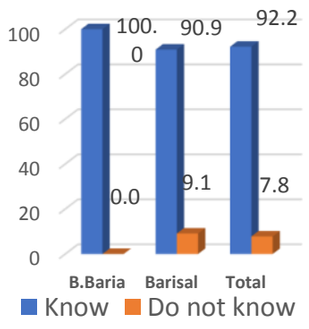

Figure 1: Distribution of the respondent's knowledge on symptoms of diabetes

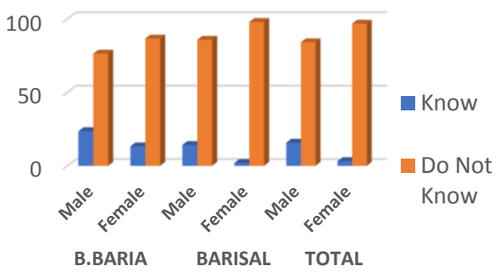

Figure 2: Distribution of the respondents by knowing about diabetic retinopathy

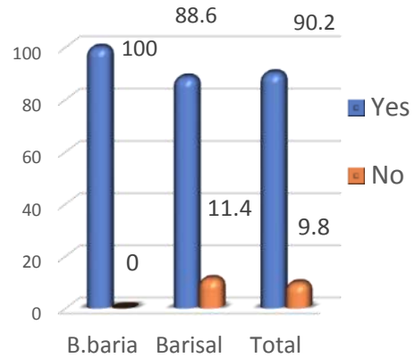

Figure 3: Distribution of the respondents by taking treatment for diabetes regularly

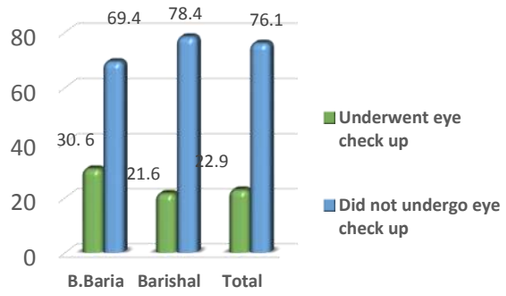

Figure 4: Distribution of the respondents by undergoing eye checkup for diabetes

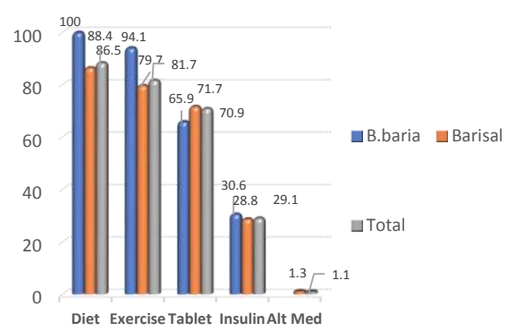

Figure 5: Distribution of the respondents by stating of measures taking to control diabetes

Complications of DM	Brahmanbaria district (n=85)	Barisal division (n=527)	Total (n=612)
	No. (%)	No. (%)	No. (%)
Heart disease	59 (69.4%)	267 (50.7%)	326 (53.3%)
Kidney disease	42 (49.4%)	271 (51.4%)	313 (51.1%)
Brain disease	29 (34.1%)	93 (17.6%)	122 (19.9%)
Eye disease	48 (56.5%)	244 (46.3%)	292 (47.7%)
Gangrene in foot	22 (25.9%)	50 (9.5%)	72 (11.8%)
Skin disease	12 (14.1%)	69 (13.1%)	81 (13.2%)
Others (Specify)	3 (3.5%)	29 (5.5%)	32 (5.2%)

Table 1: Distribution of the respondents by stating complication of uncontrolled diabetes

Opinion	Brahmanbaria district (n=85)	Barisal division (n=527)	Total (n=612)
	No. (%)	No. (%)	No. (%)
Heard about diabetic retinopathy?			
Yes	17 (20.0%)	44 (8.3%)	61 (10.0%)
No	68 (80.0%)	483 (91.7%)	551 (90%)
Know about symptoms of diabetic retinopathy?			
Yes	9 (10.6%)	29 (5.5%)	38 (6.2%)
No	7 (8.2%)	15 (2.8%)	22 (3.6%)
Symptoms of diabetic retinopathy*			
Blurred vision	9 (10.6%)	26 (4.9%)	35 (5.7%)
Vision loss	3 (3.5%)	13 (2.5%)	16 (2.6%)
Sense of coruscation	8 (9.4%)	19 (3.6%)	27 (4.4%)
Black spots	5 (5.9%)	3 (0.6%)	8 (1.3%)
As diabetic may have DR in future?			
Yes	15 (17.6%)	12 (2.3%)	27 (4.4%)
No	0 (0.0%)	8 (1.5%)	8 (1.3%)
Do not know	70 (82.4%)	507 (96.2%)	577 (94.3%)
After how many years do you think you may have DR?			
1-2 years	7 (8.2%)	1 (0.2%)	8 (1.3%)
5-6 years	3 (3.5%)	3 (0.6%)	6 (1.0%)
8-10 years	3 (3.5%)	2 (0.4%)	5 (0.8%)
20 years	4 (4.7%)	9 (1.7%)	13 (2.1%)

Table 2: Distribution of the respondents by stating about diabetic retinopathy

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