



ASSESSMENT OF DIABETES DISTRESS AND DISEASE RELATED FACTORS IN PATIENTS WITH TYPE 2 DIABETES ATTENDING A TERTIARY CARE HOSPITAL, BANGALORE

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Abstract: Diabetes is one of the most serious health concerns worldwide. It is estimated that a 55% increase will occur in the number of patients living with Diabetes from 2010 to 2030. Diabetic patients also suffer from diabetic related distress and prevalence of Depressive symptoms which ranged from 18% - 35%. **OBJECTIVE:** To assess Diabetic distress among type 2 diabetic patients attending Medical OPD at Rajarajeswari Medical College and Hospital, Bangalore by using DSS17 scale. **MATERIALS AND METHODS:** A cross-sectional study was conducted from October to November in 2014. All diabetic patients who met inclusion criteria attending Medical OPD during month of October and November were included in the study, which constituted 134 study subjects. Patient diabetic distress was measured by using DDS 17, which developed by Polonsky et al. in 2005. Data collected was analyzed by using SPSS 20.0. **RESULTS:** Among 134 type 2 Diabetics the proportion of patients with Diabetic Distress was 30. The average score for patients' diabetes distress was 2.15 ± 0.90 ; and the average scores for each domain of DDS-17 scale for Emotion burden was (2.20 ± 1.07) , for physician distress was (1.96 ± 0.92) , regimen Distress was (2.13 ± 0.99) and interpersonal distress was (2.24 ± 1.21) , respectively. It was observed that 'interpersonal distress' was the most significant domain in measuring diabetes-related distress. There was a significant relationship between the total DDS-17 score and patients' related variables such as education ($p = 0.03$) and Years with type 2 Diabetes ($p=0.03$).

Index terms: Diabetes, Diabetes Distress, Tertiary care hospital

I. INTRODUCTION

Diabetes is one of the most serious health concerns worldwide [1]. It is estimated that a 55% increase will occur in the number of adult people suffering from the disease. Living with diabetes poses significant influence on burden on individuals, families and societies [2]. In the face of this situation, particularly when it comes to self-care practices, patients may become disturbed, upset, or depressed [4]. Diabetic patients may also suffer from diabetes-related distress – a condition where patients are concerned with the management of their diseases, getting the support they need, managing the emotional burden of diabetes, as well as access to needed care, conditions that are distinct from depression [5]. In a study done by Anderson RJ et al prevalence of Depressive symptoms were ranged from 18% - 35% [6].

Diabetes-related emotional distress ranges from limited psychological problems to constant diabetes-related self-care behaviors such as regular blood sugar control, medications administration, insulin injection, and adherence to treatment regimen [6]. This study aims to measure the diabetes distress score and its related factors among patients with type 2 diabetes attending one of the Tertiary care hospital in Bangalore.



II. OBJECTIVE

To assess Diabetic distress among type 2 diabetic patients attending medical OPD at Rajarajeswari Medical College and Hospital, Bangalore, by using DSS17 scale.

III. METHODOLOGY

A cross-sectional study was conducted from October to November in 2014. All type 2 diabetic for more than 1 year and aged 30 years and above attending medical OPD during the month of October and November 2014 constituted study subjects, which was 134. The questionnaire consists of two sections including patients' demographic and health-related information and the 17-item Diabetes Distress Scale (DDS-17) which was developed by Polonsky et al. in 2005 [5]. The DDS-17 is a self-report scale with four distinct subscales of diabetes-related distress reflecting emotional burden (5 items), physician-related distress (4 items), regimen-related distress (5 items) and interpersonal distress (3 items). The responses to each item were rated on a 6-point frequency scale (1=not a problem, 2=a slight problem, 3=a moderate problem, 4=somewhat serious problem, 5=a serious problem and 6=a very serious problem). According, the minimum and the maximum of the scores in the scale were 17 and 114, respectively. According to Polonsky et al. (2005) a mean item score of three or more (moderate distress) was used as a level of distress worthy of clinical attention. This would help researchers distinguish high from low distress for each item and for the mean of the 17 items (DDS-17).

Data was entered in Microsoft Excel and analyzed using SPSS-20.0. Chi square test of significance was employed. Fisher's exact test was used when the cell frequencies were less than 5. Informed written consent was taken prior to the study. Institutional Ethical Clearance was obtained.

IV. RESULTS:

In the present study it was observed that out of 134 study subjects 68(50.7%) were males, 125(93.3%) were married and 88(61.2%) were educated up to SSLC. The mean duration of diabetes was 5.6 years (SD ± 3.75). Table 1 shows demographics details of study subjects.

Table 1: Demographic and clinical details of study subjects (n=134)

Variable	Frequency(%)	Variable	Frequency (%)
Gender		Years with diabetes	
Male	68 (50.7)	<5 Yrs.	73 (54.5)
Female	66 (49.3)	6-10 yrs.	45 (33.6)
Marital status		>10 yrs.	16 (11.5)
Married	125 (93.3)	Treatment type	
Unmarried	009 (06.7)	Oral	119 (88.8)
Educational status		Insulin	05 (03.7)
Not literate	23 (17.2)	Oral +	10 (07.4)
Upto SSLC	82 (61.2)	Insulin	
SSLC& above	29 (21.6)		

Among 134 type 2 Diabetics the proportion of patients with Diabetic Distress was 30. Demographic details of patients with Diabetic distress shown in table 2.

Table 2: Demographic Details of patients with Diabetes Distress (n= 30)

Variable	Frequency (%)	Variable	Frequency (%)
Gender		Years with diabetes	
Male	26 (86.7)	<5 Yrs.	12 (40.7)
Female	04 (13.3)	6-10 yrs.	16 (53.3)
Marital status		>10 yrs.	02 (06.0)
Married	26 (86.7)	Treatment type	
Unmarried	04 (13.3)	Oral	02 (06.7)
Educational status		Insulin	15 (50.0)
Not literate	02 (06.7)	Oral +	13 (43.3)
Upto SSLC	15 (50.0)	Insulin	
SSLC& above	13 (43.3)		

The average score for patients' diabetes distress was 2.15 ± 0.90; and the average scores for each domain of DDS-17 scale for Emotion burden was (2.20 ± 1.07), for physician distress was (1.96 ± 0.92), regimen Distress was (2.13 ± 0.99) and interpersonal distress was (2.24 ± 1.21). 'Interpersonal distress' was the most significant domain in measuring diabetes-related distress. Table 3 shows relation between socio demographic factors and distress. There was a significant relationship between the total DDS-17 score and patients' related variables such as



Education (p = 0.03) and Years with Diabetes (p=0.03).

counselling of Patient during each visit to physician will help to reduce Distress.

TABLE 3: Relation between mean score of Diabetes Distress based on socio-demographic and health related variables

Variables	TDD	EB	PD	RD	ID
Age	NS	NS	NS	NS	NS
Gender	NS	NS	NS	NS	NS
Marital status	NS	NS	NS	NS	NS
Education	0.00 3	0.03 2	0.13	0.01 3	NS
Co-morbidities	NS	NS	NS	NS	NS
Treatment type	NS	NS	NS	NS	NS
Yrs with diabetes	0.03 2	NS	0.00 3	0.04 2	NS

TDD= Total Diabetes Distress, EB= Emotional burden, PD= Physician Distress, RD= Regimen Distress; ID= Interpersonal Distress NS = Not significant

V. DISCUSSION

This study was carried out to assess diabetes distress and its related factors in patients with type 2 diabetes in a Tertiary care Hospital Bangalore. It was observed that diabetes distress is multi-factorial. Our findings showed that some patient-related variables including their years with Diabetes, Sex, have significant correlation with DDS-17 total. “Feeling that my doctor doesn’t give me clear enough directions on how to manage my diabetes” was the most dominant choice of physician-related distress subscale. Consistent with this finding Lee et al. reported that the mutual trust between patients and their physicians is an important factor in diabetes control as it enhances self-efficacy, adherence, and diabetes outcomes; indicating that the effective interactions between patients and their health professionals can improve the diabetes outcomes .

VI. CONCLUSION& SUGGESTIONS:

In the present study it was observed that among 134 type 2 diabetics, 30 has Diabetic Distress, Interpersonal Distress was most significant domain in measuring Diabetes related Distress. Better

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