

Psychosocial Distress among People with Type 2 Diabetes in India

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ABSTRACT

Diabetes is a chronic metabolic disorder, a growing concern for public health. Living with diabetes can be stressful not only to the individuals but also to their family members.

Objective: The study aimed at assessing the psychosocial distress experienced by the people with type 2 diabetes in India.

Research design and Methods: Across-sectional descriptive design was used. Participants were recruited from the outpatient department of a hospital with the use of Non-Probability Convenience sampling. Diabetes distress scale (DDS-17) was used to assess Diabetes related distress, including subscales emotional burden(EB), regimen-distress (RD), interpersonal distress(ID) and physician related distress (PD).

Results: One thirty one participants were studied. The mean age was 54.9 and male population was in majority for the study. The participants showed mild distress. The findings showed a significant difference between selected demographic characteristics and psychosocial distress at p 0.05 level.

Conclusion: Diabetes related distress can be assessed as a part of mental health. This assessment could contribute to efficient and less expensive early identification of people prone to develop further psychosocial problems.

Keywords: Distress, Psychosocial, people, type 2 diabetes, regimen related & emotional.

INTRODUCTION

Diabetes is an epidemic which is on rise causing global concern. Type 2 diabetes a chronic metabolic condition, with slow progression and no early clinical manifestation. Lifestyle modification, marked readjustment with daily activities can not only be physically stressful but also psychologically. ^[1] Diabetes related distress is one of the psychological distress affecting the patients. ^[2] Diabetes distress is an outcome related to diabetes mostly emotional which stems from worries and concerns related to diabetes and its management but distinguishable from clinical depression. Diabetes distress can have an effect on the HbA1c level. ^[3] In

previous studies patients with type 2 diabetes show a prevalence of Diabetes distress. ^[4-5]

According to 2017 International Diabetes Federation Atlas, 82 million adults between the age group 20-79 years are diagnosed with diabetes, and 1.1 million deaths occurred due to it. ^[6] India currently ranks 2nd in diabetes and is expected to acquire the first position. According to ICMR-INIAB study, India has a prevalence of 7.3% and mostly seen in urban population. ^[7] A survey in 2017 reviewed that 50% of the diabetics were found to be unaware of their diabetes. A survey reviewed that 50% of the people with diabetes are unaware of their diabetes. ^[8] In

India, most of the diagnosing is done either by general practitioners or the physicians. Distress and psychological problems tend to have an impact on the glycemic control. [9-10] For effective management of diabetes it is necessary to have a good glycemic control. A good glycemic control will also prevent macrovascular and microvascular complications. [11,12]

The study aimed at assessing the psychosocial distress experienced by the people with type 2 diabetes.

RESEARCH DESIGN AND METHODS

Design:-

A cross-sectional descriptive survey design was used to explore the distress experienced by the people with type 2 diabetes including the demographic characteristics and finding their association. [13]

Study participants and setting:-

The people with type 2 diabetes were selected from the outpatient department of a hospital with Non-Probability convenience sampling. The participants were selected based on the following criteria (a) Age between 30-80 years (b) diagnosed with type 2 diabetes and (c) diabetic, not more than seven years (d) able to speak and understand Marathi. Participants who had impaired vision, hearing impairment or any associated complications like diabetic ketoacidosis, depression or any psychiatric illness were excluded.

RESULTS

Procedure

The study was approved by Ethics committee of MGM institute of Health sciences, Navi Mumbai. Informed consent from participants was procured and confidentiality was maintained throughout the study. One hundred and thirty one participants with type 2 diabetes were recruited. Data was collected between the period of June 2017 to August 2017. Self-administered questionnaire which included demographic, diabetes related characteristics and DDS-17 [14] to assess the psychosocial distress in Marathi was used.

The permission to use the DDS scale was obtained. The scale was translated into Marathi and back-translated again by two translators. Through content validity, the researchers selected the most appropriate version. The original scale, as well as the translated version, was tested for reliability by test-retest method with Cronbach's alpha. The overall α value was 0.90. Participants were asked to respond on the basis of their experience in the past month.

The scale is a 6 point likert scale and has following four subscales Emotional burden (EB), Physician-related (PR), Regimen-related distress (RD) and Interpersonal distress (ID). A mean score for each of these four subscale was calculated. The cronbach's alpha coefficient was 0.76 (EB), 0.91(PR), 0.85(RD) and 0.74 (ID) subscales which showed high internal consistency.

Table 1 .Sample characteristics Total=131

Participant's Characteristics	Total (N=131) No (%)	Male (n=92) No (%)	Female (n=39) No (%)
Age (years)	54.7		
Education			
Primary	49(37.4%)	37(40.21%)	12(30.76%)
Secondary	29(22.13%)	18(19.56%)	11(28.20%)
Graduate	51(38.93%)	36(39.13%)	15(38.46%)
Postgraduate	02(1.52%)	01(1.08%)	01(2.56%)
Income			
>20,000	63(48.09%)	42(45%)	21(53.84%)
20,000-30,000	33(25.19%)	23(25%)	10(25.64%)
30,000-40,000	13(9.92%)	10(10.8%)	3(7.69%)
< 40,000	22(16.79%)	17(18.4%)	5(2.56%)
Food Preferences			
Vegetarian	23(17.55%)	14(15.21%)	9(23.07%)
Non-Vegetarian	36(27.48%)	28(30.43%)	22(56.41%)
Both	72(54.96%)	50(54.3%)	22(56.45%)

The data of the general demographic characteristics of the sample is presented in Table no 1. A total of 131 (92 males, 39 females) participants completed the survey. The mean age of the participants is 54.7. Most of the participants belonged to the age group of 55 yrs or older. The people were highly educated. Most of participants had completed their Graduation (Bachelor's degree) 38.93% and rest had completed college and school 38.93% and 37.4% respectively. Participants experienced financial burden as 48.09% belonged to

very low socioeconomic group and earned below 20,000 Rs monthly. 54.96% prefer to have vegetarian and non-vegetarian food based on their needs.

A greater number of participants 24.42 % were diagnosed since past one year. whereas 19.84% were diagnosed since past 3 years. This shows that the number of people with diabetes has increased over the years. The type 2 diabetes people have managed their diabetes with only Oral hypoglycemic agents rest others has managed it with Insulin alone (22.9%).

Table No 2: Diabetes related distress results. N=131

DDS(1-6)	Total(n=131)	Male(n=92)	Female(n=39)
Overall Scale	1.75	1.7	1.81
Regimen related subscale	1.99	1.96	2.06
Emotional Burden	1.98	1.96	2.03
Interpersonal distress subscale	1.61	1.56	1.74
Physician related distress	1.42	1.41	1.44

The overall score for the diabetic distress was 1.75 which shows that participants experienced little or mild distress. The scores in the Regimen related subscale and emotional Burden was 1.99 and 1.98 respectively as compared to other subscales i.e Physician related distress and interpersonal distress. Females experienced more distress as compared to males. In the regimen related distress participants felt that they did not test their blood sugars regularly. They also didn't follow their dietary plan. This could be because of lack

of awareness about monitoring or may be because of financial burden the participants experienced. In the emotional subscale participants felt that diabetes took up most of their mental and physical energy and would always feel fatigued. No support from family and friends or failure to appreciate the difficult to manage diabetes was expressed by the participants in the interpersonal distress. Doctors are not taking their concern seriously was the most stressful for the participants.

Table no 3: Diabetes distress Subscale results

Item No	Subscales	Mean
I	REGIMEN DISTRESS	
Q.5	Feeling that I am not testing my blood Sugars frequently enough.	2.33
Q.6	Feeling that I am often failing with my diabetes routine.	1.89
Q.10	Not Feeling confident in my day-to-day ability to manage diabetes	1.80
Q.12	Feeling that I am not sticking closely enough to a good meal plan	2.25
Q.16	Not feeling motivated to keep up my diabetes self-management	1.84
II	EMOTIONAL BURDEN	
Q.1	Feeling that diabetes is taking up too much of my mental and physical energy everyday	2.3
Q.3	Feeling angry, scared and /or depressed when I think about living with Diabetes	2.24
Q.8	Feeling that diabetes controls my life	1.67
Q.11	Feeling that I will end up with Serious long –term complications, no matter what I do.	2.01
Q.14	Feeling overwhelmed by the demands of living with diabetes	1.80
III	INTERPERSONAL RELATED	
Q.7	Feeling that friends or family are not supportive enough of self-care efforts e.g encouraging me to eat wrong foods, planning activities that conflict with my schedule	1.58
Q.13	Feeling that Friends and family don't appreciate how difficult living with diabetes can be	1.63
Q.17	Feeling that friends or family doesn't give me the emotional support that I would like.	1.58
II	PHYSICIAN RELATED	
Q.2	Feeling that my doctor doesn't know enough about diabetes and diabetes care	1.37
Q.4	Feeling that my doctor doesn't give me clear directions on how to manage my diabetes	1.37
Q.9	Feeling that my doctor doesn't take my concerns seriously enough	1.52
Q.15	Feeling that I don't have a doctor who I can see regularly enough about my diabetes	1.41

Table No 4: Association between distress and demographic variable.

Association of demographic variable with Psychosocial Distress		n	Mean Rank	df	Calc. X ² value	Table X ² value	p value	Remark
Age	35 - 45 years	21	69.24	3	1.62	7.82	0.656	NS
	45 - 55 years	45	68.82					
	55 - 65 years	55	64.80					
	65 - 75 years	10	53.10					
Gender	Male	92	65.11	1	0.03	3.84	0.853	NS
	Female	39	66.45					
Education	Primary	27	76.57	3	8.58	7.82	0.035	S*
	Secondary	51	72.23					
	Graduation	51	55.21					
	Post graduation	2	39.75					
Monthly Income	<Rs 20000/-	63	72.58	3	5.89	7.82	0.117	NS
	Rs 20000/- to Rs 30000/-	33	63.11					
	Rs 30000/- to Rs 40000/-	13	45.81					
	>Rs 40000/-	22	63.43					
Years of DM	1yr	32	67.83	6	11.38	12.59	0.077	NS
	2 yrs	21	63.14					
	3 yrs	26	64.98					
	4 yrs	17	57.47					
	5 yrs	16	51.75					
	6 yrs	9	100.50					
	7 yrs	10	75.05					
Medication	Biguanides	41	63.91	3	5.71	7.82	0.126	NS
	Sulphonu	26	56.71					
	Combination	34	63.59					
	Insulin	30	79.63					
Whether taking medicines regularly	Yes	100	59.60	1	12.07	3.84	0.001	S*
	No	31	86.65					
Type of food consumed	Vegetarian	23	57.76	2	6.41	5.99	0.041	S*
	Non vegetarian	36	56.13					
	Mixed	72	73.57					

(NS= Non significant , S*= significant)

The Kruskal Wallis test for Independent samples was conducted to find the significance difference between groups of demographic variables with respect to Psychosocial Distress. The calculated X² value of Psychosocial Distress for Age is 1.62, Gender is 0.03, Education is 8.58 and Monthly Income is 5.89. The calculated X² values for Age, Gender and Monthly Income are less than their respective X² table value at 0.05 levels. Thus we can state that there is no statistical significant difference between the groups of demographic variables Age, Gender and Monthly Income with respect to their Psychosocial Distress. Whereas the calculated X²value for Education is more than the respective X² table value at 0.05 levels. Thus there is a statistical significant difference between the groups of demographic variables Education with respect to their Psychosocial Distress. There is a statistical significant difference between

the groups of clinical variables whether taking medicines regularly and Type of food consumed with respect to their Psychosocial Distress.

DISCUSSION

Type 2 diabetes has an impact on the mental health and these study findings can add on to the literature which is underexplored in India. This study finding helps to give an insight about the distress that Indian diabetics experience. It is important to identify the type of distress people experience and derive a care accordingly. According to the 2017 IDF atlas in India diabetes is more prevalent and increasing over the years. The prevalence studies conducted in different states of India also support these findings. [7,8,15-21] In men as compared to women and this study finding also found that men have been diagnosed with diabetes more. Women experience diabetes distress more. They

play multiple roles in the family which makes them to neglect their own help and experience the distress more. [22-23]

Psychosocial distress is experienced by the people living with diabetes type 2. Study conducted in the Rohtak [24] has suggested that diabetes related distress is 18.0% mostly in the area of emotional burden (16.1%) and regimen related distress (5.6%) which correlates with the present study findings. Emotional distress screening of type 2 diabetic patients is emphasized by Pouwer. (25) Many studies suggest the need to implement both physical and psychological intervention for coping with this distress. [26,27] ADA as also recommended emotional care as be the prime goal of diabetes management and care in its 2017 guidelines. [28] The findings of these studies are also supported by African American study. [29]

CONCLUSION

Findings suggest that there is a need for dealing with mental health in type 2 diabetes care. This study will help in improving the psychosocial care in type 2 diabetes patients in India. In conclusion, the important factor in preventing psychological distress in patients is early detection and early intervention. Health professional, Diabetes Educators and caregivers should focus on psychological care and implement it along with the physical care. Blended care will ensure health promotion and improve the health outcomes.

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