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Research Article

**ALEXITHYMIA AND ASSOCIATED FACTORS IN THE  
ELDER PATIENTS SUFFERING FROM DIABETES  
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Nishtar Medical University Multan**Abstract:**

**Objective:** To determine the alexithymia traits and associated risk factors in the elder patients suffering from DM (Diabetes Mellitus).

**Methodology:** This research work was a descriptive study carried out in Nishtar Hospital, Multan on 120 patients suffering from Diabetes Mellitus. We performed the collection of data with the utilization of personal data form and the TAS (Toronto Alexithymia Scale).

**Results:** Alexithymia prevailed in 75.80% elder patients who were suffering from Diabetes Mellitus. We discovered that these patients faced difficulties in the identification and description of their feelings. All of these patients were present with high externally-oriented styles of thinking. The level of patients, structure of family and duration of illness influenced their manifestation of traits of alexithymia.

**Conclusion:** Most of the elder patients suffering from Diabetes Mellitus exhibited the characteristics of alexithymia. But these characteristics were not present to have association with gender, patient's age, marital status, level of qualification and occupational status. Additionally, there was no association between alexithymia and HbA1c (Glycosylated Hemoglobin), BMI (Body Mass Index), PBG (Post-prandial Glucose) and the complications and treatment associated with Diabetes Mellitus.

**Keywords:** Glycosylated Hemoglobin, Diabetes Mellitus, Oriented, Glucose, Post-Prandial Glucose, Body Mass Index.

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**INTRODUCTION:**

There is an increase in chronic disease with the advancement of diseases [1]. One of the most important diseases in elderly population is Type-2 DM (Diabetes Mellitus) which often comprise most of psycho-social and psychiatric dimensions [2, 3]. The accurate description of the word alexithymia is no words to describe emotions. So, this state is the inability to elaborate and describe emotions and feelings. These patients normally prefer the fantasy world and show externally-oriented styles of thinking. These patients also face complications with the functions of emotions and inter-personal relations to distinguish and express the feelings [4]. Neuropsychological proofs elaborate that some elder patients may have issues in the processing of feelings and they are not able to elaborate their feelings as sorrow and anger [5]. Alexithymia has association with many chronic diseases because of elderly age. The characteristics of these complications are present in approximately 4.70% of young population, while 29.30% elder population is affected [6, 7]. Sapozhnikova in 2012 investigated 265 patients suffering from Type-2 Diabetes Mellitus and 65 matched healthy controls. When he compared both groups, the patients suffering from Type-2 Diabetes Mellitus were present with high levels of alexithymia (47.20% vs 21.50%) [8]. Reports have shown that there is an association between diabetes mellitus and alexithymia [9]. Diabetes Mellitus has the capability to effect the social and physical lives of the patients as well as it has psychological impacts [10]. The diagnosis of Diabetes Mellitus hinders the capabilities of elder patients to live their lives independently [11]. Diabetic patients experience many reactions of emotions concerning about their illness. When patients are able to describe their feeling verbally, there can be improvement in their physical as well as psychological symptoms [7]. When patients are not able to describe their emotions, the body of the patients will show a rise in the characteristics of alexithymia [12]. The purpose of this research work was to find out the characteristics of alexithymia in elder patients suffering from diabetes mellitus and influencing factors of the characteristics of alexithymia.

**MATERIAL AND METHODS:**

This study was a descriptive research work. This research work carried out in Nishter Hospital, Multan on 120 patients who got treatment from January 2019 to July 2019. All of these patients were present with Typ-2 diabetes mellitus, having more than 60 years of age and not suffering from psychiatric complications. All the patients gave their consent to participate in this research work. We used the Personal Information Form and Toronto

Alexithymia Scale -20 (Toronto Alexithymia Scale) for collection of the information. Personal information form contained the questions about the socio-demographic traits and 6 questions related to the characteristics of disease. Bagby developed the Toronto Alexithymia Scale -20 and tests of reliability and validity were carried out by Sayar [13, 14]. There were 5 points in Toronto Alexithymia Scale -20 which comprises of 20 items. There are further three sub-scales in Toronto Alexithymia Scale -20 as Difficulty Identifying Feelings, Difficulty Describing Feelings and Externally Oriented Thinking. The range of the scores was twenty to one hundred. Higher scores show the higher level of alexithymia [13]. All the patients complete their forms with or without assistance.

SPSS V. 22 was in use for the statistical analysis of collected information. We presented the descriptive data in percentages and frequencies as data about demography and variables related with diabetes mellitus. We used the Chi square test for the determination of the relationship between socio-demographic, variables of diabetes mellitus of patients and characteristics of alexithymia. We used Means  $\pm$  SDs for presentation of Toronto Alexithymia Scale -20. Ethical committee of the hospital gave the permission to conduct this research work. We explained the purpose of this research work to the patients and took their written consent.

**RESULTS:**

120 patients were the part of this research work. There were 65.80% female patients in this research work. There were 45.80% patients who belonged to age group of 70-79 years of age. 70.0% patients of this research work were living their married life. 35% patients were not educated. 52.50% patients in this research work were housewives. There were 64.20% patients were present with moderate level of income and 52.50% patients were living in extended families. 46.70% patients told that they were suffering from this disease for 6 to 10 years. 80.0% patients of this research work were present with level of Glycosylated Hemoglobin greater than 7%, 60% patients were overweight and 82.50% patients were having Post-Prandial Glucose of greater than 180.0 mg/dl. 81.70% patients were receiving diet and insulin treatment, 19.80% patients obtained diet and OAD (Oral Anti-Diabetic) therapy and 66.70% patients were present with complications of diabetes mellitus. The average score of Toronto Alexithymia Scale -20 was  $65.860 \pm 9.70$ , average score of Difficulty Identifying Feelings, was  $24.2 \pm 5.61$ , average score of difficulty describing feelings was  $16.470 \pm 3.190$  and average score of externally oriented thinking was  $25.180 \pm 4.210$  (Table-1). Alexithymic traits of the patients of this research

work suffering from diabetes mellitus are present in Table-2. The female patients of this research work from the age group of 70 to 79 years were uneducated, housewives, married, present with Glycosylated Hemoglobin level greater than 7.0%, overweight, Post-prandial Glucose of greater than 180.0 mg/dl. They were having diet and insulin

treatment and they had complications of diabetes mellitus. These patients were present with high characteristics of alexithymia. We discovered a significant disparity between the characteristics of alexithymia of the elderly patients suffering from diabetes mellitus and their levels of income, types of family and duration of disease.

**Table-I: Mean Alexithymia Scores Of Elderly Diabetic Patients (n=120)**

Scale	Mean + SD	Range
Toronto Alexithymia Scale -20	65.86 ± 9.70	38 - 89
Difficulty Identifying Feelings,	24.20 ± 5.61	7 - 34
Difficulty Describing Feelings,	16.47 ± 3.19	5 - 23
Externally Oriented Thinking	25.18 ± 4.21	14 - 38

**Table-II: Alexithymia Characteristics of Elderly Diabetic Patients (n=120)**

Alexithymia characteristics		Alexithymia		Non alexithymia		Total		P value
		n	%	n	%	n	%	
Sex	Female	62	68.1	17	58.6	79	65.8	0.347
	Male	29	31.9	12	41.4	41	34.2	
Age groups	60-69	36	39.6	15	51.7	51	42.5	0.37
	70-79	45	49.5	10	34.5	55	45.8	
	80 +	10	11	4	13.8	14	11.7	
Marital Status	Single	12	13.2	1	3.4	13	10.8	0.321
	Married	67	73.6	23	76.3	90	75	
	Widowed	12	13.2	5	17.2	17	14.2	
Educational status	Illiterate	34	37.4	8	27.6	42	35	0.659
	Literate	26	28.6	10	34.5	36	30	
	Primary School	30	33	10	34.5	40	33.3	
	High School	1	1.1	1	3.4	2	1.7	
Income status	Low	29	31.9	2	6.9	31	25.8	0.027
	Moderate	54	59.3	23	79.3	77	64.2	
	High	8	8.8	4	13.8	12	10	
Professional status	Self employed	2	2.2	1	3.4	3	2.5	0.622
	Retired	39	42.9	15	51.7	54	45	
	Housewives	50	54.9	13	44.8	63	52.5	
Family structure	Nuclear Family	38	41.8	19	65.5	57	47.5	0.026
	Extended	53	58.2	10	34.5	63	52.5	
Disease duration	0-1 year	2	2.2	2	6.9	4	3.3	0.038
	2-5 years	14	15.4	11	37.9	25	20.8	
	6-10 years	44	48.4	12	41.4	56	46.7	
	11-15 years	22	24.2	3	10.3	25	20.8	
	16 years +	9	9.9	1	3.4	10	8.3	
Glycosylated Hemoglobin	> %7	73	80.2	23	79.3	96	80	0.915
	< % 7	18	19.8	6	20.7	24	20	
Body Mass Index	Normal	4	4.4	3	10.3	7	5.8	0.483
	Overweight	55	60.4	17	58.6	72	60	
	Obese	32	35.2	9	31	41	34.2	
Post-prandial Glucose	>180mg/dl	75	82.4	24	82.8	99	82.5	0.966
	<180mg/dl	16	17.6	5	17.2	21	17.5	
Treatment	Diet + Oral Anti-Diabetic	18	19.8	4	13.8	22	18.3	0.468
	Insulin + diet	73	80.2	25	86.2	98	81.7	
Diabetes Mellitus complication	Yes	62	68.1	18	62.1	80	66.7	0.546
	No	29	31.9	11	37.9	40	33.3	
Total		91	100	29	100	120	100	-

**DISCUSSION:**

Diabetes mellitus is a chronic complication and it has influences on social and psychological life of the patients [10]. This research work examined the characteristics of alexithymia in elder patients suffering from diabetes mellitus. In accordance with the Toronto Alexithymia Scale -20 scores, Toronto Alexithymia Scale -20 average scores, 75.80% patients with Diabetes Mellitus of this research work were present with alexithymia. Topsever stated that 65% patients of his research work were present with alexithymia [14]. Abramson in his study confirmed that the patients suffering from diabetes were more alexithymia as compared to the healthy controls [15]. The characteristics of alexithymia among female patients were high as compared to the male patients but the difference was not significant. Two other research works on elderly patients revealed that gender was a significant factor in the characteristics of alexithymia [16, 17]. Some other research work discovered that patients of elderly age were present with more characteristics of alexithymia [7, 18].

Mattila in his study stated that characteristics of alexithymia had an increase with the increase in age. These characteristics were present in 4.70% young patients and had enhanced to 29.30% in the patients of elderly age [19]. This research work showed that traits of alexithymia were much higher in the uneducated patients of elder age. These traits were 3.30% in the patients who were present with high level of education, while this rate was 16.50% in the patients present with low level of education [7, 19]. Kokkonen in his research work discovered a significant association between low socio-economic condition and the traits of alexithymia [20]. Although the persons having alexithymia seem to enjoy the interactions and dealings with other peoples, the data on this very topic shows that they make attempts to hide the proper emotions from other [21, 19]. Sanden-Eriksson stressed that there was a strong association between level of Glycosylated Hemoglobin and patients who adapted to the disease and then coped well [22]. Luminet in his research work stated that high difficulty describing feelings scores have correlation with the adverse glycemic control [23].

**CONCLUSION:**

The findings of this research work concluded that most of the elderly patients suffering from diabetes mellitus were present alexithymia characteristics. Status of income, structure of family and duration of disease influenced the characteristics of alexithymia of the patients with Diabetes Mellitus. So, it is obvious that patients require data about the vitality of being able to elaborate and describe their feelings,

as this will ensure that these patients obtained suitable treatment in right time.

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