Original Article

Relationship between level of depression and psychological well-being among diagnosed diabetic and non-diabetic.

Rizwan Taj, Gul –I –Riaz Siddiqui, Asma Khan, Mazher Mufti, Ghazala Rehman.

From Department of Psychiatry and Medicine, Pakistan Institute of Medical Sciences and Shifa International Hospital, Islamabad

Correspondance: Prof. Rizwan Taj Pakistan Institute of Medical Sciences, Islamabad.

Received: July 7, 2005 Accepted: August 16, 2005

ABSTRACT

Objective: To find out the frequency of relationship between level of depression and psychological well-being among people diagnosed with diabetes and non-diabetic people.
Patients and Methods: The sample consisted of 52 individuals aged between 25-55 years. Twenty six participants were diagnosed with diabetes and twenty six were non-diabetic. Two of the instruments were used, comprising of BDI and Affectometer-2.
Results: Diabetics have moderate level of depression as compared to non-diabetics
Conclusion: Diabetics have high level of depression and low level of psychological well-being than non-diabetics. Better liaison is required between physician and family members to let them aware about the changing needs and demands both physical and psychological health of diabetics. (Rawal Med J 2005;30:65-67).

Key words: Depression, Psychological wellbeing, Diabetes, Beck Depression Inventory, Affectometer2.

INTRODUCTION

Approximately 15% - 20% of adults with diabetes, both type-I and II, suffer from depression.[1] The rate of depression in diabetes is much higher than in the general population. Diabetics with major depression have a very high rate of recurrent depressive episodes within the following 5 years.[2] The beta cells in the areas of pancreas called the islets of langerhans usually make insulin.[3] Diabetes mellitus is a disease that has a bearing almost all areas of psychological functioning, from cognitive development, schooling and family life when young and interpersonal relationships when adult. Diabetes is related to poverty and other risk factors such as diet, obesity, physical inactivity and stress.[4]

The symptoms of depression are persistent sadness, anxious, or "empty" mood, feelings of hopelessness, pessimism, feelings of guilt, worthlessness, helplessness, loss of interest or pleasure in hobbies and activities that were once enjoyed, including sex, decreased energy, fatigue, being "slowed down", difficulty concentrating, remembering making decisions and insomnia.[5] Diabetic patients can decrease the influence of the diabetes on their lives, if they develop the positive thinking to cope with the difficulties of life appropriately.[6] The present study assessed the frequency of relationship between level of depression and psychological well-being among people diagnosed with diabetes and non-diabetic people.

MATERIALS AND METHODS

A non-probability sample of 26 diabetic patients was taken from out patient departments of Pakistan Institute of Medical Sciences, CDA Hospital and Polyclinic. The study groups consisted of 26 (13 male and 13 female) diagnosed patients of diabetes mellitus and 26 non-diabetic (13 male and 13 female). The age ranged from 25-55 years. The study was conducted during the period of December, 2004 to May, 2005. The patient included in sample were able to comprehend and respond to Urdu language. These participants did not have prior history of any psychiatric ailment.

Instrument applied were BDI and Affectometer-2 and were handed over to the individual participants. Informed consent and socio-demographic information regarding ages, sex, residence, education, years of illness and employment status were soughtfrom both groups. Data was analyzed on SPSS statistical package. Frequencies and percentages were used to describe characteristics amongst the two groups. Student's t-test and Chi Square test were used to match the two groups on variables.

RESULT

The study and the control groups were matched on the variables of age, sex and martial status. The types of diabetes are shown in table 1. No of history of diabetes in the family was found in 38 % subjects. Depression of varying degree was present in 48.08% of the sample (table 2). Severe depression was more prevalent in females as compared to males (table 3). There was a highly significant negative relationship between the scores of the two tests i.e. (r = - .709, PC .001).

Table 1.Frequencies and Percentages for type of diabetes in Male and Female participants diagnosed with diabetes (N=26)

Type of diabetes	Males		Females	
	n	%	n	%
Type I	4	15.38	6	23.08
Type II	9	34.62	7	26.92

Diabetics had moderate level of depression as compared to non-diabetics (t = 12 . 200, P < .001) and df = 50 (table 4). Also diabetics had low level of psychological well-being on Affectometer-2 as compared to non diabetics (table 5).

Table 2.Frequencies and Percentages of Depression based on scores of Beck Depression Inventory (BDI) (N=52)

BDI Level of Depression	n	%
No Depression	27	51.92
Mild-Moderate	12	23
Moderate-Sever	4	7.69
Severe Depression	9	17.31

DISCUSSION

The results of our study indicate that overall the depression and well being are highly negatively related to psychological well-being. The study also showed that diabetes has strong influence on the psychological well-being of the patients and impairer their activities and routine life.

Table 3.Frequencies and Percentages of Depression in Male and Female participants based on scores of Beck Depression Inventory (BDI) (N=52)

BDI Level of Depression	Males		Females	
	n	%	n	%
No Depression	12	46.15	15	57.69
Mild-Moderate	9	34.62	3	11.54
Moderate-Sever	2	7.69	2	7.69
Severe Depression	3	11.54	6	23.08

Table 4. Mean scores, standard deviation and t value of the scores of diabetics and non-diabetics ob BDI (N=52)

	Beck Depressive Inventory			
Groups	N	M	SD	t
Diabetics	26	19.54	13.21	12.200
Non-diabetics	26	5.69	5.05	

df=50,***p<.001

We also showed that diabetics have more depression and low psychological well-being as compared to non-diabetics. The prevalence of depression is treated samples of diabetic adults suggest that major depressive syndrome is approximately three times more common in patients with diabetes than in general population.[7] These results support other studies that the rate of depression in diabetics is much higher than in the general population. Factors like metabolic control and cohesiveness in the family significantly influenced adjustment to the disease. Age and gender were significant in adult diabetics.[8]

Table 5. Mean scores, standard deviation and t value of the scores of diabetics and non-diabetics on Affectometer-2 (N=52)

	Affectometer-2			
Groups	N	M	SD	t
Diabetics	26	104.69	20.11	12.200
Non-diabetics	26	169.35	18.05	

df=50,***p<.001

Depression and psychological well-being correlate negatively with each other. However, they also suggest that patients with poor metabolic control have high level of depression. This could mean that, in a selected group of patients, either depression leads to non-compliance behavior that worson metabolic control or diabetes has an impact on the psychological well-being of the patients due to restrictions in diet, need for discipline or due to complications. A third approach might be that there are common biological pathways that cause diabetes and depression in these patients. Diabetics face some kind of psychological problems such as depression and poor quality of life at any time in their course of illness.[9] The family should be aware of the stage by which a diabetic is passing through, who needs more care. It is further suggested in the light of the findings that physicians should be especially trained in order to explore the problem and engaging the family to let them aware about the changing needs and demands both physical and psychological health of diabetics.[10]

In Conclusion, depression and psychological well-beings are negatively correlated with each other. Diabetics have high level of depression and low level psychological well-being compared to non-diabetics. Awareness regarding interventions are required to improve functioning and psychological well-being to reduce the burden of chronic disease on the patient, his or her family and society. Medical professionals are significant figures creating awareness among family members of diabetics about their changing needs and demands both of physical and psychological health.

REFERENCES

1. Lustman PJ, Griffith LS, Gavard JA, Clouse RE. Depression in Adults with Diabetes. Diabetes care. 1992;15:1631-9.

2. Lustman PJ, Clouse RE, Carney RM. Depression and the reporting of diabetes symptoms. Int J Psychiatry Med 1988;18:295-303.

3. Diabetes Care 2003; 26;104-111 Retrieved from http://www.ivanhoe.com/Newsalert/.

4. http//www.Diabeticlifestyle.com/Articles/Sep98whats 1 Htm.

5. Gelder M,Gath. D, Mayou.R.,(1989)Oxford Text Book of Psychiatry 2nd edition, Butler And Tanner Ltd Great Britain.

6. H.H Goldman,(1984), Review of General Psychiatry Lang Medical Publications, Los Altos, California.

7. Popkin-MK; Callies-AL; Lentz-RD; Colon-EA; Sutherland-DE: Prevalence of Major Depression, Simple Phobia and Other Psychiatric Disorders in Patients With Long-Standing Type1 Diabetes Mellitus. Arch-Gen-Psychiatry. 1988; 45(1).

8. Robinson-N; Fuller-JH; Edmeaders-SP: Depression and Diabetes**.** Diabet-Med. 1988; 5(3): 268-74.

9. Lustman-PJ; Griffith-LS; Clouse-RE: Depression in Adults with Diabetes**.** Results of 5-Yr Follow-Up study. Diabetes-Care. 1988; 11(8): 605-12.

10. Spiess-K; Sachs-G; Pietschmann-P; Prager-R: A Program To reduce Onset Distress in Unselected Type1 Diabetic Patients : Effects on Psychological Variables and Metabolic Control.Eur-J-Endocrinol. 1995; 132(5): 580-6.

11. Toth-EL; James-I: Description of A Diabetes support Group**:** Lessons for Diabetes Caregivers. Diabet-Med. 1992;9(8): 773-8