

## Original Research

### Assessment of prevalence of psychiatric illness among diabetics

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#### ABSTRACT

**Background:** Diabetes mellitus is a non-communicable metabolic derangement afflicting several millions of individuals globally. Comorbidity of diabetes and psychiatric disorders can present in different patterns. Hence; the present study was undertaken for assessing the prevalence of psychiatric illness among diabetics. **Materials & methods:** A total of 200 diabetic patients who reported to the department of internal medicine were enrolled for the present study. Blood samples were obtained from all the patients and were sent to laboratory for assessing the blood glucose and HbA1c levels. Complete demographic details of all the patients were obtained. A self-framed questionnaire was used for obtaining the demographic details and analyzing the presence of psychiatric illness among these patients. All the results were recorded in Microsoft excel sheet and were analyzed by SPSS software. **Results:** Psychiatric illness was found to be present in 28 percent of the patients (56 patients). In the present study, majority of the diabetic patients with psychiatric illness were having educational status Among 56 diabetic patients with psychiatric illness, in 67.89 percent of the patients, course of psychiatric illness was progressive in nature. **Conclusion:** Early identification of psychiatric illness among diabetic patients is crucial since it might affect prognosis and outcome of therapeutic treatment therapy

**Key words:** Diabetes, Psychiatric illness

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#### INTRODUCTION

Diabetes mellitus is a non-communicable metabolic derangement afflicting several millions of individuals globally. It is associated with several micro and macrovascular complications and is also a leading cause of mortality. The unresolved issue is that of definition of the diagnostic threshold for diabetes.<sup>1-3</sup> Comorbidity of diabetes and psychiatric disorders can present in different patterns. First, the two can present as independent conditions with no apparent direct connection. In such a scenario both are outcome of independent and parallel pathogenic pathways. Second, the course of diabetes can be complicated by emergence of psychiatric disorders. In such cases diabetes contributes to the pathogenesis of psychiatric disorders.<sup>4</sup> Various biological and psychological factors mediate the emergence of psychiatric disorders in such context. Third, certain psychiatric disorders like depression and schizophrenia act as significant independent risk factors for development of diabetes.<sup>5-7</sup> Hence; under the light of above obtained data, the present study was undertaken for

assessing the prevalence of psychiatric illness among diabetics.

#### MATERIALS & METHODS

The present study was conducted in the department of psychiatry of the medical institute and it included assessment of psychiatric illness among diabetic. Ethical approval was obtained before the starting of the study. Written consent was obtained from all the patients before the starting of the study. A total of 200 diabetic patients who reported to the department of internal medicine were enrolled for the present study. For diagnosing the patients with diabetes, criteria described previously in literature by WHO was used. According to this criteria, glycated hemoglobin (HbA1c) level of  $\geq 6.5\%$  as a diagnostic cut-off for Diabetes. Blood samples were obtained from all the patients and were sent to laboratory for assessing the blood glucose and HbA1c levels. Complete demographic details of all the patients were obtained. A self-framed questionnaire was used for obtaining the demographic details and analyzing the presence of psychiatric illness

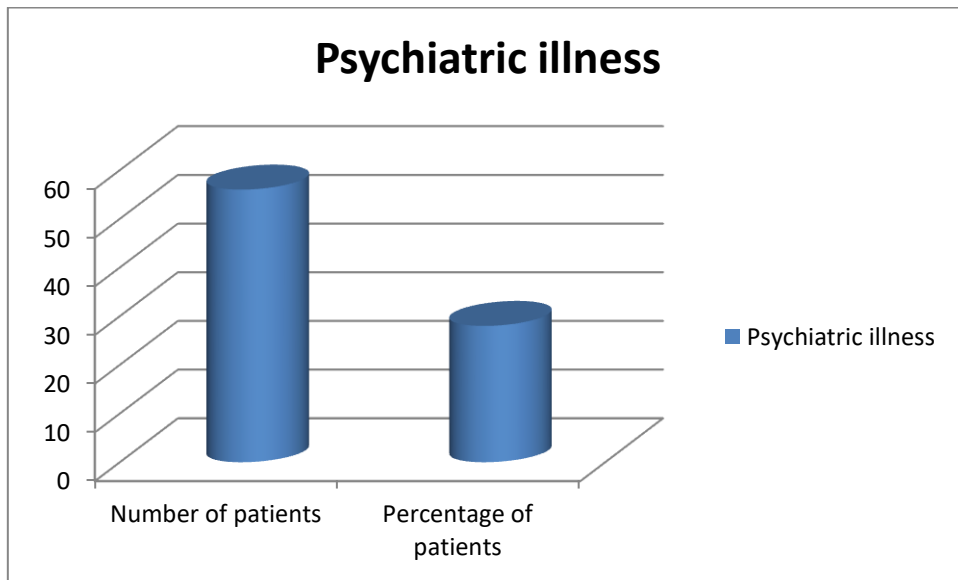
among these patients. All the results were recorded in Microsoft excel sheet and were analyzed by SPSS software.

**RESULTS**

In the present study, a total of 200 diabetic patients were screened. Among these 200 patients, psychiatric illness was found to be present in 28 percent of the patients (56

patients). In the present study, majority of the diabetic patients with psychiatric illness were having educational status Upto the level of graduation. Among the 56 diabetic patients with psychiatric illness, in 64.29 percent of the patients, onset of psychiatric illness was insidious in nature. Among 56 diabetic patients with psychiatric illness, in 67.89 percent of the patients, course of psychiatric illness was progressive in nature.

**Graph 1:** Prevalence of psychiatric illness among diabetic patients



**Table 1:** Distribution of diabetic patients with psychiatric illness according to their educational status

Education	No. of Patients
Illiterate	8
Primary	11
Secondary	20
Graduate	10
Master	7
Total	56

**Table 2:** Distribution of diabetic patients according to the onset of psychiatric Disorder

Onset	No. Of patients	Percentage
Acute	20	35.71
Insidious	36	64.29
Total	56	100

**Table 4:** Distribution of diabetic patients according to the course of psychiatric illness

Course	No. Of patients	Percentage
Continuous	18	32.14
Progressive	38	67.86
Total	56	100

## DISCUSSION

Individuals living with type 1 or type 2 diabetes are at increased risk for depression, anxiety, and eating disorder diagnoses. Mental health comorbidities of diabetes compromise adherence to treatment and thus increase the risk for serious short- and long-term complications, which can result in blindness, amputations, stroke, cognitive decline, decreased quality of life, and premature death.<sup>8</sup> When mental health comorbidities of diabetes are not diagnosed and treated, the financial cost to society and health care systems is substantial, as are the morbidity and health consequences for patients.<sup>8,9</sup> Hence; under the light of above obtained data, the present study was undertaken for assessing the prevalence of psychiatric illness among diabetics.

In the present study, a total of 200 diabetic patients were screened. Among these 200 patients, psychiatric illness was found to be present in 28 percent of the patients (56 patients). In the present study, majority of the diabetic patients with psychiatric illness were having educational status upto the level of graduation. Whether the etiology of diabetes is an autoimmune disorder that depletes the pancreas of insulin-producing (beta) cells, as in T1D, or the development of insulin-resistance in conjunction with lipo- and glucotoxicity, as in T2D, the behavioral implications for patients are similar. In both disorders, landmark studies have shown that maintaining glycemic control close to nondiabetes levels reduces risk of long-term complications. Health care providers, therefore, recommend that patients use medications and multiple self-care behaviors to augment or replace insulin and achieve glycemic control. This requires maintaining a balance between dietary intake, energy exertion through physical activity and oral and/or injectable medications (e.g., insulin) for the entire life span following diagnosis.<sup>10</sup> Depression and depressive symptoms are associated with poor adherence to therapeutic recommendations such as medical appointments, diet, exercise, medication use, glucose monitoring, and foot care (Gonzalez et al., 2008) as well as impaired problem solving skills, a core component in the self-management of diabetes. Poor problem solving skills are independently associated with poor metabolic control in persons with diabetes. Anxiety worsens diabetes self-care, including adherence to dietary recommendations.<sup>7,8</sup>

In the present study, among the 56 diabetic patients with psychiatric illness, in 64.29 percent of the patients, onset of psychiatric illness was insidious in nature. Among 56 diabetic patients with psychiatric illness, in 67.89 percent of the patients, course of psychiatric illness was progressive in nature. Lustman PJ et al determined lifetime prevalence of psychiatric illness in 114 patients with diabetes mellitus (types I and II). Seventy-one percent of the patients had a lifetime history of at least one criteria-defined psychiatric illness; affective and anxiety disorders were the most common diagnoses. A

significant difference ( $p = .02$ ) in mean glycosylated hemoglobin levels was observed comparing patients with a recent psychiatric illness (mean = 10.8%) to those never psychiatrically ill (mean = 9.6%). These psychiatrically ill patients also reported more symptoms of poor metabolic control and more distress associated with these symptoms than did patients never psychiatrically ill ( $p$  less than .0001 for both). The overall report of diabetes symptoms was unrelated to HbA1 ( $p = .25$ ) and was influenced primarily by the recent presence of psychiatric disorder ( $p$  less than .0001). They conclude that emotional illness is associated with both poorer metabolic control and the increased report of clinical symptoms of diabetes.<sup>11</sup>

## CONCLUSION

Under the light of above obtained results, the author concludes that early identification of psychiatric illness among diabetic patients is crucial since it might affect prognosis and outcome of therapeutic treatment therapy. However; further studies are recommended.

## REFERENCES

1. Blunt BA, Barrett-Connor E, Wingard DL. Evaluation of fasting plasma glucose as screening test for NIDDM in older adults. Rancho Bernardo Study. *Diabetes Care*. 1991;14:989-993.
2. Taylor R, Zimmet P. Limitation of fasting plasma glucose for the diagnosis of diabetes mellitus. *Diabetes Care*. 1981;4:556-558.
3. Finch CF, Zimmet PZ, Alberti KG. Determining diabetes prevalence: a rational basis for the use of fasting plasma glucose concentrations? *Diabet Med*. 1990;7:603-610.
4. Willi C, Bodenmann P, Ghali WA, Faris PD, Cornuz J. Active smoking and the risk of type 2 diabetes: a systematic review and meta-analysis. *JAMA*. 2007;298:2654-64.
5. Persson PG, Carlsson S, Svanström L, Ostenson CG, Efendic S, Grill V. Cigarette smoking, oral moist snuff use and glucose intolerance. *J Intern Med*. 2000;248:103-10.
6. Eliasson B. Cigarette smoking and diabetes. *Prog Cardiovasc Dis*. 2003;45:405-13.
7. Ford ES, Mokdad AH, Gregg EW. Trends in cigarette smoking among US adults with diabetes: findings from the Behavioral Risk Factor Surveillance System. *Prev Med*. 2004;39:1238-42.
8. Foy CG, Bell RA, Farmer DF, Goff DC, Jr, Wagenknecht LE. Smoking and incidence of diabetes among U.S. adults: findings from the Insulin Resistance Atherosclerosis Study. *Diabetes Care*. 2005;28:2501-7.
9. Haffner SM, Rosenthal M, Hazuda HP, Stern MP, Franco LJ. Evaluation of three potential screening tests for diabetes mellitus in a biethnic population. *Diabetes Care*. 1984;7:347-353.
10. Daumit G, Goldberg R, Anthony C, Dixon L. Physical Activity Patterns in Adults with Severe Mental Illness. *Journal of General Internal Medicine*. 2004;19:191.
11. Lustman PJ, Griffith LS, Clouse RE, Cryer PE. Psychiatric illness in diabetes mellitus. Relationship to symptoms and glucose control. *J Nerv Ment Dis*. 1986 Dec;174(12):736-42.