

## Observational Study on the Socio-demography of Diabetic Depressive Patients in Tertiary Level Hospitals

ISRAT UH<sup>1\*</sup>, RAHMAN MR<sup>2\*</sup>, ARIFINAR<sup>3</sup>, SATHI MN<sup>4</sup>, MAHJABIN M<sup>5</sup>, SUMI S<sup>6</sup>

### Abstract

**Introduction:** Diabetes Mellitus is one of the most common disease. Associated depression is more common among Diabetic patients. This study was done aimed to assess the sociodemographic condition of the diabetic depressive patient and bring of social awareness.

**Methods:** This observational prospective study was conducted among patients of diabetic depressive patient consulting at the Department of Psychiatry and Endocrinology Department of Sir Salimullah Medical College & Hospital & BIRDEM during the period of January 2018- December 2018.

**Results:** According to the study, people who were commonly affected by diabetes and depression were selected. The patient's age range were between 40 to 68 years. Among the patient's 5 (14.3%) were males and 30 (85.7%) were females. Here, most of the patient's monthly income ranges between-20000-30000 taka and it was 42.86%. Among the 35 patients, 9 (25.7%) had minor depression and 26 (74.3%) are moderate to severe depression.

**Conclusion:** A significant proportion of females were suffering from type-2 diabetes with depression. For our better social and family life, we should take care of our women.

**Keywords:** Diabetic depressive patient, Diabetes mellitus, Socio-demography of diabetic patient

*Journal of Green Life Med. Col. 2026; 11(1): 19- 22*

### Introduction:

The prevalence of Diabetes is increasing worldwide. According to recent global estimates by the World Health Organization (WHO) there will be 300 million people with diabetes by the year of 2025.<sup>1</sup> Major depression is a common medical problem which frequently co exists with Diabetes Mellitus.<sup>2</sup> The association between depression

1. Umme Honey Israt, Assistant Professor, Department of Pharmacology and Therapeutics, Green life Medical College and Hospital.
2. Md. Rifayet Rahman, Professor (CC), Department of Pharmacology and Therapeutics, Green Life Medical College and Hospital.
3. Rafzana Arifina, Assistant Professor, Department of Pharmacology and Therapeutics, Green Life Medical College and Hospital.
4. Meherun Nessa Shathi, Associate Professor & Head, Department of Pharmacology and Therapeutics, City Medical College, Gazipur
5. Mosfika Mahjabin, Assistant Professor, Department of Pharmacology and Therapeutics, Enam Medical College, Savar.
6. Sayla Sultana Sumi, Assistant Professor, Department of Pharmacology and Therapeutics, International Medical College, Tongi, Gazipur

\*Both authors contributed equally.

**Address of Correspondence:** Umme Honey Israt, Assistant Professor, Department of Pharmacology and Therapeutics, Green Life Medical College and Hospital, Dhaka, e-mail: dr.honey86@yahoo.com  
**Received:** 25.11.2024 **Accepted:** 15.12.2025

and diabetes was first described in the seventeenth century by Thomas Willis, an English Physician and Anatomist, who stated, 'Diabetes is caused by sadness or long sorrow'.<sup>3</sup> Depression has been associated with hyperglycemia and diabetes related complications. Depression is commoner in females and those with a duration of diabetes >3 years had a three fold higher risk of depression.<sup>1</sup>

Depression has negative effects on motivation, concentration, energy, self-efficacy and hope for the future. Depression in people with Diabetes is associated with less adherence to diet, exercise and medication recommendation. Consistent with its association with diabetes selfcare depression is also associated with glycemic control. Depression in people is also associated with increased complication rate. A meta-analysis has confirmed that there is an association of moderate effect size between Depression and the presence of Diabetes Mellitus both macrovascular and microvascular complications.<sup>4</sup>

However in Bangladesh, usually there is less strategy about the epidemiology of these patients. The purpose of this

study is to highlight the sociodemographic feature of the people of diabetic depressive patients and achieve the social awareness.

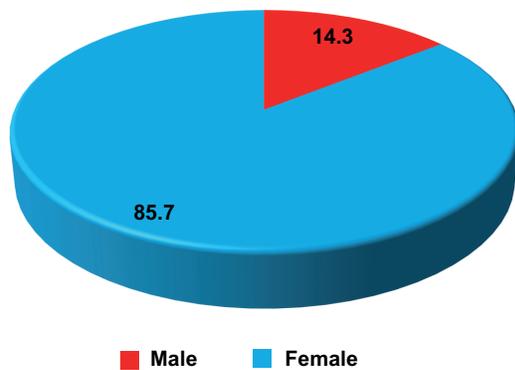
**Methods:**

We conducted a 1 year (January 2018- December 2018) observational prospective study of diabetic depressive patient consulting at the Department of Psychiatry and Endocrinology Department of Sir Salimullah Medical College & Hospital & BIRDEM. Sample size was 35 & purposive convenient sampling technique applied. The clinical records of these patients, we identify the demographic data, psychological data. Demographic data was collected including age, gender, marital status, monthly income. Severity of depression was diagnosed by DSM-V & Hamilton Depression scale. After proper counseling the aim, objectives of the study was explained in details to the subjects. Only positive responder was recruited as research participants and was allowed to withdraw themselves from the study even after participants whenever they like. Ethical permission has been taken from the institute. Persons who were given informed written consent to participate voluntarily in the study were included as study sample. The SPSS version 22 was used for data analysis.

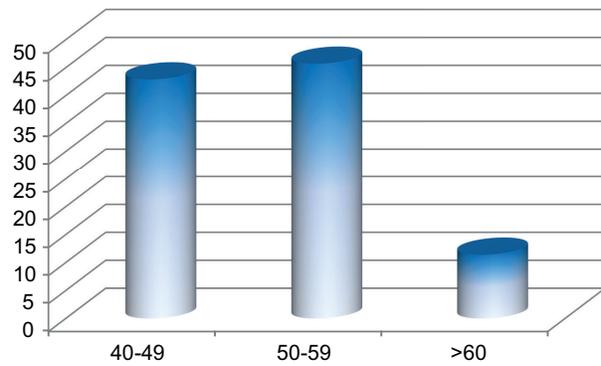
**Results:**

The presented study was intended to estimate the people who are commonly effected diabetes and depression.

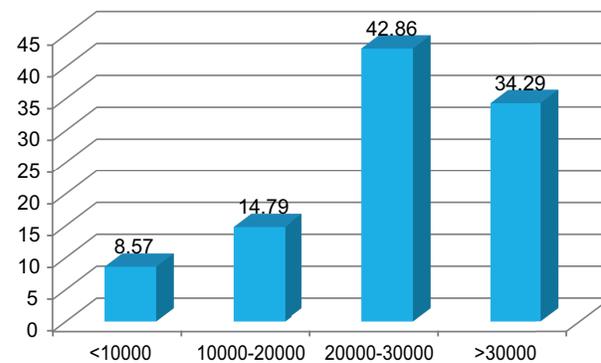
Among the patients, 5(14.3%) were males and 30(85.7%) were females.



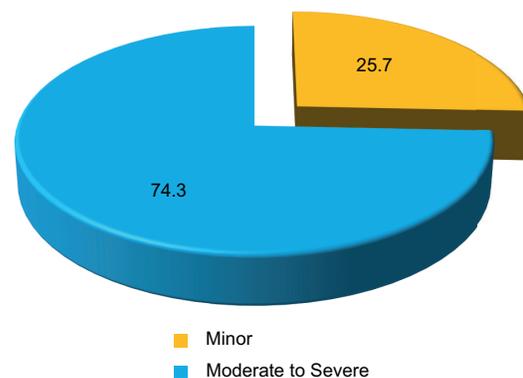
**Figure 1:** Pie chart of study subjects according to gender Patient's age range was between 40 to 68 years. Mean age was being 51.2±6.3 years.



**Figure 2:** Age distribution of study subjects Here, monthly income of the patient's (42.86%) commonly was 20000-30000 taka.



**Figure 3:** Bar diagram showing socio-economic condition of study subjects. Among the 35 patients, 9 (25.7%) are minor Depression and 26 (74.3%) are moderate to severe Depression.



**Figure 4:** Study subjects according to Severity of Depression

**Discussion:**

In recent years there has been a heightened interest in the psychological well being of people with diabetes. Current epidemiological evidence suggests that at least one third

of them suffer from clinically relevant depressive disorders.<sup>3</sup> Furthermore, people with depression have an increased risk of developing diabetes.<sup>3</sup> It is suggested that each disease is a mutual risk factor for developing each other, and the two disorders may share similar pathophysiological mechanisms. For depression, patients are in poor glycemic control, less self care and day by day increase complications and treatment burden.<sup>5</sup> However, in spite of the huge impact of comorbid depression and diabetes on the individual and its importance as a public health problem, questions still remain as to the nature of the relationship, it causes and consequences, as well as potential ways of preventing and treating these two conditions.<sup>6</sup>

In this study, fifty-five patients were enrolled study population. Sample size was thirty five. This research work was conducted in Department of Pharmacology and Therapeutics, Sir Salimullah Medical College, Dhaka.

In term of distribution of the patients according to age ranged between 40 to 68 years, with the mean age being  $51.2 \pm 6.3$  years which is similar to other study.

Moreover, in age group distribution, maximum 45.7% patients were in the age group of 50-59 years. The tendency of diabetes is more in this age group of the patients and this people are very much prone to developed depression. Similar another study found mean age of patients with comorbid diabetes and depression was 50.8 years of which 60.1% are females.<sup>7</sup>

In this study, females were 85.7% which was more than males. On the other hand, male patients were 14.3%.

Depression is more in females because-compared to men, women may have a stronger genetic predisposition to developing depression. They are much more subjected to fluctuating hormone levels. This specially occurs at the time of puberty, pregnancy, child birth and at menopause, which are associated with increased risk of developing depression.

Hormone changes during puberty with other social experiences can play a role in depression.

After puberty, depression rates are higher in females than in males. Because girls typically reach puberty before boys.<sup>8</sup> In pregnancy, drastical changes in body and mind due to hormonal changes, social and familial factors depression is commonly occur on that time and some in postpartumly. Associated diabetes is more common in this situation.<sup>5</sup>

Another factor is, women faces more stress than men. They have to go work and also to be expected to bear the

burden of maintaining home, care of children and family members.<sup>5</sup>

Here, age of the most female patients were 50-59 years, which was postmenopausal age and above with all factors females were developed more depression. With all these conditions, associated diabetes is also more common in female.

Among the selected patients, 25.7% are minor depressive and 74.3% are moderate to severe depressive. Here, 42.86% of the patient's monthly income was taka 20000-30000. This type of socioeconomic status is a common risk factor for depression and type 2 diabetes. The relationship between socioeconomic status, psychosocial factors and diabetes is complex. It is likely that socioeconomic status contributes to the development of diabetes through areas unrelated or indirectly related to psychosocial pathways, such as unhealthy lifestyles.<sup>9-11</sup> Similar study was conducted in India that showed similar type of socio demographic profile.

#### Conclusion:

This study shows a significant incidence in symptoms of depression more in female diabetic patients. Women play an important role not only in their family but also in society even nationally. Individual family depends on their female members. It is our great responsibility to take care of their physical & mental health.

#### References:

1. Asghar S, Hussain A, Ali SM, Khan AK, Magnusson A. Prevalence of depression and diabetes: A population based study from rural Bangladesh. *Diabetic medicine*. 2007 Aug;24(8):872-7.
2. Petrak F, Röhrig B, Ismail K. Depression and Diabetes. [Updated 2018 Jan 14]. In: Feingold KR, Anawalt B, Blackman MR, et al., editors. *Endotext* [Internet]. South Dartmouth (MA): MDText.com, Inc.; 2000-. Available from: <https://www.ncbi.nlm.nih.gov/books/NBK498652/>
3. Katon W, Maj M, Sartorius N, eds. *Depression and diabetes*. 1st Edition. John Wiley & Sons. 2011.
4. Rubin RR, Ciechanowski P, Egede LE, Lin EH, Lustman PJ. Recognizing and treating depression in patients with diabetes. *Current diabetes reports*. 2004 Apr;4(2):119-25.
5. <https://www.mayoclinic.org/diseases-conditions/depression/in-depth/depression/art-20047725>
6. Katon W, Maj M, Sartorius N, editors. *Depression and diabetes*. John Wiley & Sons; 2011 Jun 9.
7. Gehlawat P, Gupta R, Rajput R, Gahlan D, Gehlawat VK. Diabetes with comorbid depression: role of SSRI in better glycemic control. *Asian journal of psychiatry*. 2013 Oct 1;6(5):364-8.

8. Burton N. The 7 Reasons Why Depression is More Common in Women| Psychology Today. 2012. Available: <https://www.psychologytoday.com/us/blog/hide-and-peek/201205/the-7-reasons-why-depression-is-more-common-in-women>.
9. Ko GT, Chan JC, Yeung VT, Chow CC, Tsang LW, Cockram CS. A low socio-economic status is an additional risk factor for glucose intolerance in high risk Hong Kong Chinese. *European journal of epidemiology*. 2001 Mar;17:289-95.
10. Xu F, Yin XM, Zhang M, Leslie E, Ware R, Owen N. Family average income and diagnosed type 2 diabetes in urban and rural residents in regional mainland China. *Diabetic Medicine*. 2006 Nov;23(11):1239-46.
11. Connolly V, Unwin N, Sherriff P, Bilous R, Kelly W. Diabetes prevalence and socioeconomic status: a population based study showing increased prevalence of type 2 diabetes mellitus in deprived areas. *Journal of Epidemiology & Community Health*. 2000 Mar 1;54(3):173-7.