ABSTRACT

Background
Prevalence of diabetes mellitus has reached epidemic levels globally, and depression is another condition with high prevalence worldwide. A bidirectional relationship between depression and diabetes is well established. There is substantial evidence that comorbid depression among individuals with diabetes is associated with poor diabetes outcomes such as decreased adherence to treatment, poor metabolic and glycemic control, higher complication rate and decreased quality of life.

Objectives
The objective of this study were to estimate severity of depression (mild, moderate and severe) among patients with diabetes (Type 1 and 2), to find the association between glycemic control (HbA1c) and severity of depression. It was also aimed to find out the association of different socio- demographic variables and depression among patients with diabetes mellitus.

Methodology
A cross sectional study was conducted among the diabetic population in the endocrinology outpatient department of Tribhuwan University Teaching Hospital meeting the inclusion criteria after taking informed consent. Patients with diabetes mellitus (n=158) attending endocrinology OPD were chosen by simple random sampling technique. A self- designed semi structured proforma was devised to obtain the socio-demographic characteristics of the study population. General health questionnaire -12 (GHQ-12) was administered and those with a score of three or more considered as achieving 'psychiatric caseness' and among them depression was diagnosed with ICD-10 DCR criteria and HAM-D scale was used to verify it objectively. HbA1c within the last 3 months was obtained from patient's record and finally, information were analyzed using appropriate statistical tools.

Results
Out of the total sample size of 158, 36 were cases of type 1 diabetes mellitus and 122 were cases of type 2 diabetes mellitus. The estimation of psychiatric caseness using GHQ-12 was found to be 48.73% and the estimate of depression among diabetes using ICD-10 DCR was 29.11%. Estimate was similar in type 1 diabetes and type 2 diabetes being 27.22% and 29.50% respectively. Statistically significant association between severity of depression and glycemic control was observed. ($p<0.01$). Similarly statistically significant association between severity of depression and income, type of family, duration of diabetes, type of medication use (<0.05) and number of medication missed per week was observed. ($p<0.01$). Statistically significant association between psychiatric caseness and age, marital status, educational status, duration of diabetes, meal plan, regular exercise ($p<0.05$), and number of medication missed per week was observed. ($p<0.01$). There was positive correlation between type of depression and GHQ-

12(r=0.826), type of depression and HbA1c (r=0.670), and GHQ-12 and HbA1c(r=0.619), all at p<0.01.

Conclusion
Occurrence of psychiatric caseness and depression was noteworthy in patient with Diabetes. Glycemic control had significant association and positive co-relation with the presence of depression and psychiatric caseness. The study calls the need to have recommendation for routine depression screening in cases of diabetes mellitus for better management, improvement in clinical outcomes in depression.