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The Relationship between Depression Treatment and Level of HbA1c in Diabetic Patients

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Introduction: Diabetes is one of the most common chronic diseases. The prevalence of depression is higher among these patients than normal people. Therefore, the present study investigates the effect of depression treatment on controlling blood sugar and lowering HbA1c.

Materials and methods: The present study is across-sectional study on 140 depressed diabetes patients referred to the psychiatric clinic of Shariati Hospital. Considering their depression time length, the patients were divided into three groups: one group had not started depression treatment, the other group had been treating for three months and the last group had been treating for six months. Following the inclusion and exclusion criteria and demographic information, HbA1c of the patients was measured. Furthermore, every patient answered Beck Depression Test (in this study, Fluoxetine was used as anti-depressant drug since it does not affect the blood sugar level.)

Findings and results: No difference was observed in the mean of HbA1c for the three groups, i.e. those who had not started treatment, those who were treated for three months and those who were treated for six months. However, a direct meaningful relationship was observed between BDI Score and the level of HbA1c. In other words, as BDI Score reduced, the level of HbA1c reduced (Pearson correlation coefficient of .224, $P = .008$). Moreover, investigating the relation between the independent variables of age, gender and BDI and HbA1c, no meaningful relation was found between age and gender but a significant relation was observed between Beck Depression Test and HbA1c (regression $B = .066$, $t = 2.7$, and $P = .008$)

Conclusion: no relationship was observed between treatment duration of depression and the HbA1c level in diabetic patients. However, a relation was found between the reduction in depression score and HbA1c.

Key words: diabetes, depression, Beck Depression Test