

## PREVALENCE OF DIABETES MELLITUS IN INPATIENTS OF A FORENSIC PSYCHIATRY CLINIC AND QUALITATIVE CHARACTERISTICS OF CRIMES COMMITTED BY INDIVIDUALS WITH DIABETES

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**BACKGROUND AND AIM:** The higher prevalence of diabetes mellitus (DM) in individuals with psychiatric disorders is linked to unhealthy lifestyles, physical inactivity, psychotropic medication use, and limited medical care access. Hypoglycemia in DM can cause altered consciousness, impaired self-regulation, anger dyscontrol, and impulsivity, while long-term glucose fluctuations may lead to cognitive impairment. This study examines the association between DM and the qualitative characteristics of criminal behavior in forensic psychiatric inpatients, thereby contributing to the assessment process of forensic cases.

**METHODS:** We retrospectively analyzed 115 forensic cases (aged 18–70) hospitalized at the High-Security Forensic Psychiatry Clinic/Bursa City Hospital in 2024. Among them, 45 had comorbid DM. Sociodemographic data and variables related to diabetes/psychiatric disorders, and criminal behavior were recorded. Group comparisons were conducted using the Chi-Square Test, Independent Samples t-Test, and Multivariable Binary Logistic Regression. Analyses were performed with IBM SPSS 26.0. The study was approved by the Bursa City Hospital Ethics Committee on 22/01/2025 (Decision No: 2025-2/11).

**RESULTS:** The DM group (30 females, 15 males; mean age 49.18±10.65 years) exhibited significantly higher antipsychotic ( $p=0.019$ ) and antidepressant ( $p=0.049$ ) use than the control group (53 males, 17 females; mean age 41.54±11.23 years). Crime type (premeditated vs. impulsive) ( $p=0.002$ ) and employment status ( $p=0.016$ ) also differed significantly by DM status, with higher impulsivity and unemployment in DM. Independent Samples t-Test revealed higher mean age and blood glucose levels closest to the time of the offense in DM cases ( $p<0.001$ ). Multivariable Binary Logistic Regression showed presence of DM increased impulsive crime risk by 4.45 times ( $p=0.004$ , OR=4.455, 95% CI [1.627–12.199]), while substance use disorder reduced it by ~70% ( $p=0.019$ , OR=0.294, 95% CI [0.106–0.815]).

**CONCLUSIONS:** These findings indicate that diabetes-related blood glucose dysregulation significantly increase the rate of impulsive criminal behavior. We believe that considering the diagnosis of diabetes and blood glucose fluctuations in the forensic evaluation of individuals committing impulsive crimes is notable in assessing criminal responsibility.

**Keywords:** diabetes mellitus, forensic psychiatry, crime, hypoglycemia, impulsivity