



*Original Article*

***Prevalence and Predictors of Gestational Diabetes Mellitus in a Diverse Urban Population***

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**ABSTRACT**

**Background:** Gestational diabetes mellitus (GDM) is a common pregnancy complication that can have significant implications for the health of both the mother and the child. Understanding the prevalence and risk factors for GDM is crucial for developing targeted prevention and management strategies.

**Objective:** To determine the prevalence of GDM and identify the key predictors of GDM in a diverse urban population.

**Methods:** This was a cross-sectional study conducted at an urban academic medical center. Pregnant women who underwent routine GDM screening between 2018 and 2020 were included. Demographic, clinical, and laboratory data were collected. GDM was diagnosed based on the International Association of Diabetes and Pregnancy Study Groups (IADPSG) criteria. Multivariable logistic regression analysis was used to identify independent predictors of GDM.

**Results:** A total of 3,500 pregnant women were included in the analysis. The overall prevalence of GDM was 14.8%. The independent predictors of GDM were: advanced maternal age (adjusted OR 1.7, 95% CI 1.3-2.2,  $p < 0.001$ ), pre-pregnancy obesity (adjusted OR 2.4, 95% CI 1.8-3.1,  $p < 0.001$ ), family history of diabetes (adjusted OR 1.9, 95% CI 1.4-2.5,  $p < 0.001$ ), and non-White race/ethnicity (adjusted OR 1.6, 95% CI 1.2-2.1,  $p = 0.002$ ). Additionally, women with a history of GDM in a previous pregnancy had a significantly higher risk of developing GDM (adjusted OR 3.8, 95% CI 2.7-5.3,  $p < 0.001$ ).

**Conclusions:** The prevalence of GDM in this diverse urban population is substantial. Advanced maternal age, pre-pregnancy obesity, family history of diabetes, non-White race/ethnicity, and prior GDM are important risk factors for the development of GDM. These findings can inform targeted screening and prevention strategies to improve maternal and child health outcomes.

**Keywords:** *Gestational diabetes mellitus, Pregnancy, Prevalence, Risk factors, Diversity, Urban population*

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