

PREVALENCE OF GESTATIONAL DIABETES MELLITUS AND ASSOCIATED RISK FACTORS IN PREGNANT MOTHERS: A HOSPITAL BASED STUDY

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Gestational Diabetes Mellitus (GDM) is a form of diabetes that can occur during pregnancy and is a global public health issue. Women with GDM face elevated risks of pregnancy and delivery complications, and they and their children are more likely to develop type 2 diabetes later in life. This study aimed to identify and analyze the risk factors linked to GDM. It involved constructing a binary logistic regression model to assess the likelihood of developing GDM based on specific risk factors. This study was conducted using 200 data was randomly selected from the medical record of pregnant mothers who were admitted at the Ashraff Memorial Hospital Kalmunai between January 2021 to December 2022. The statistical analysis was performed using statistical software (Minitab 21) and $P < 0.05$ was considered significance for all analyzes. Out of the 200 pregnant mothers studied, it was found that 15.5% (with a 95% confidence interval ranging from 10.8% to 21.3%) had GDM. The chi-square test revealed significant associations between prevalence of GDM and factors such as the mother's age, blood glucose levels, body mass index (BMI), and a family history of diabetes (all with p-values less than 0.05). Additionally, a binary logistic regression model was created to assess the relationship between dependent and independent variables. The results indicated that factors like age, parity (number of children), platelet count (PLT), and a family history of diabetes were significant predictors of GDM outcomes (all with p-values less than 0.05). By utilizing this binary logistic regression model, healthcare professionals can gain a better understanding of the risk factors associated with gestational diabetes mellitus.

Keywords: *Binary Logistic Regression, Chi-Square Test, Gestational Diabetes Mellitus, Pregnant mothers, Risk factors*