## IDENTIFICATION OF FACTORS ASSOCIATED WITH DIABETES AMONG PATIENTS IN THE SAMMANTHURAI REGION, SRI LANKA

## Alibuhtto M. C.

Department of Mathematical Sciences, Faculty of Applied Sciences, South Eastern University of Sri Lanka mcabuhtto@seu.ac.lk

Diabetes mellitus has emerged as a major global public health problem influenced by several factors. This study aims to identify the factors associated with diabetes in the Sammanthurai region of Sri Lanka using a logistic regression model. Data were collected from the Diabetes Clinic Center at Sammanthurai Base Hospital, for the period from June 2024 to August 2024. A sample of 392 patients was selected using a simple random sampling technique. The study included eight independent variables: gender, age, alcohol consumption, BMI, systolic blood pressure, diastolic blood pressure, serum creatinine, and serum cholesterol level, with diabetic status serving as the dependent variable. Based on the results of the study, the total number of diabetic patients was 228 (58.2%). In addition, logistic regression analysis revealed that BMI [odds ratio (OR) = 1.073, 95% CI: 1.010–1.139], serum creatinine [OR = 1.237, 95% CI: 1.063–1.887], alcohol consumption [OR = 2.683, 95% CI: 1.985-3.001], and serum cholesterol level [OR = 0.990, 95% CI: 0.983–0.997] significantly influenced the occurrence of diabetes (p-value < 0.05). However, age, gender, systolic blood pressure, and diastolic blood pressure were not significantly associated with diabetes (p-value > 0.05). These findings provide valuable insights for health centers to enhance awareness and implement effective diabetes prevention measures.

Keywords: Diabetes, Influencing factors, Logistic regression model, Odds ratio.