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ANALYZING THE FACTORS INFLUENCING IN HEART DISEASE: A CASE STUDY IN MONARAGALA DISTRICT

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Abstract

Heart disease has been identified as one of the leading causes of death. Heart disease has been the leading cause of death in Sri Lanka since 2010. In the case of the Monaragala district, heart disease is currently the leading cause of death in the district. The purpose of this study was to explore the risk of factors for heart disease and to develop a suitable Logistic Regression Model to compare the risk of heart disease due to selected risk of factors. This study was conducted using 200 patients who attended clinics at the Monaragala District General Hospital between October and December 2020. Statistical analysis was performed using statistical software (Minitab 17) and $P < 0.05$ was considered significance for all analyzes. The Chi-Square test results showed the gender, patient's age, blood pressure, diabetes, LDL, BMI value, smoking habit, types of smoking, alcohol habit, family history of heart disease and close relatives factors association with heart disease. A valid Logistic Regression Model was developed to test the effect and outcome of independent variables. Factors such as age, HDL, LDL, blood pressure, diabetes, diet type, smoking habit and family history of heart disease have been identified as predictors of given outcomes. Patients with old age, low HDL, high LDL, hypertension, having diabetes, non-vegetarian, smoking and having family history of heart disease are more likely to increase heart disease. This valid logistic regression model can help health workers understand the risk factors for heart disease in the Monaragala District.

Keywords: *logistic regression, Chi square, heart disease*