



ABSTRACT

Title of Abstract : Prediction Model of Diabetes Mellitus Using Multivariate Analysis
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Background: Type 2 Diabetes Mellitus (DM) is a metabolic disorder disease that occurs in the pancreas organ and is characterized by increased blood sugar levels. DM does not show symptoms until the disease becomes severe and causes complications. Prevention can be done by predicting events based on various factors

Objective: This study aims to produce a prediction model for the incidence of Diabetes Mellitus in the Banggai Community Health Center Working Area

Research Methods/ Implementation Methods: This is an observational study with a case-control design involving 77 people in the case group and 77 people in the control group. sample was chosen randomly in the Banggai Community Health Center working area. Data was collected using a questionnaire. Measurement of physical activity using the Indonesian GPAQ questionnaire. Data analysis was done using the chi-square and multiple logistic regression tests with the backward LR methods

Results: The results showed that in the case group, most of them did light physical activity, 51 people (66.2%), were obese, namely 47 people (61.0%), had a history of hypertension, namely 50 people (64.9%), and had family history, namely 58 people (75.3%). While in the control group, the majority did heavy physical activity, 44 people (57.1%), were not obese, namely 46 people (59.7%), had no history of hypertension namely 43 people (55.8%), who had a family history, namely 44 people (57.1%). Meanwhile, smoking habits and sugar consumption habits did not differ between the case and control groups. The multivariate analysis shows that physical activity, BMI, history of hypertension, and family history of Diabetes mellitus, can predict the incidence of Diabetes mellitus by 48.8% together, after adjusting the covariate

Conclusion/Lesson Learned: Physical activity, BMI, history of hypertension, and family history as predictors of diabetes mellitus. To reduce the prevalence of DM, it is necessary to carry out health promotion, screening, and treatment, especially in those who are in the risk group of DM

Keyword : Diabetes mellitus; physical activity; BMI; history of hypertension; prediction model of DM