

ABSTRACT

The Determinants of the Developing type 2 Diabetes Mellitus and the Prevention Model in Surabaya

Introduction: Diabetes mellitus is characterized by high levels of blood glucose, late onset of disease and associated with serious complications. Genetic and environmental risk factors are known to exist and the importance of educating these risk factors in different populations.

Objectives: The aim of this study was to assess the impact of determinant factors that may be developed the type 2 diabetes mellitus such as, family history of DM, (BMI), physical inactivity, diet, educational, urbanization and smoking.

Methodology: A case control study included 50 cases with newly diagnosed type 2 diabetes and 50 non diabetic controls from 5th health care centers in Surabaya, cluster random sample technique used. A specifically designed questionnaire used to collect information on possible risk factors of type 2 diabetes mellitus. BMI was calculated from these measurements. The odds ratios (OR), and 80% confidence interval (80% CI) for type 2 diabetes mellitus will be calculate by a conditional logistic regression.

Results: The result shown that 92% of cases were more likely to be having low education, 70% of them had low annually income. High statistically association between T2DM and education OR=8.817, 80%CI, 2.803-27.738,($p<0.01$), family history of diabetes mellitus OR=4.893, 80%CI, 1.792-13.359($p<0.043$), physical inactivity OR=13.722, 80%CI, 4.793-39.288 ($p<0.00$), BMI OR=6.687, 80%CI, 2.525-17.708 ($p<0.012$), but no any association between the smoking and the disease.

Conclusion:: The results of the present study will be of use in planning primordial, primary and secondary measures of prevention at the community level.

Keyword: Type 2 diabetes mellitus, Determinant factors, case control study, Surabaya