

THE EFFECT OF FAMILY HISTORY, PHYSICAL ACTIVITY, AND OVERWEIGHT ON TYPE 2 DIABETES MELLITUS IN ELDERLY IN PADANG BULAN COMMUNITY HEALTH CENTER, MEDAN

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ABSTRACT

Background: Diabetes mellitus is a global public health problem. In Indonesia, the prevalence of diabetes mellitus increased from 1.1% in 2007 to 2.1% in 2013. Prevalence of diabetes mellitus in North Sumatera was 2.3%. Medan ranked second highest with 2.7% cases. This study aimed to determine the effect of family history, physical activity, and overweight against the incidence of diabetes mellitus type 2 in elderly women in Padang Bulan community health center, Medan.

Subjects and Method: This was an analytic observational study with a case-control design. The study was conducted at Padang Bulan community health center, Medan Baru District, North Sumatera from November to December 2017. The study population was elderly women aged 60-70 years. A sample of 60 elderly women with type 2 diabetes mellitus (case) and 60 elderly women without type 2 diabetes mellitus (control) was selected by purposive sampling. The dependent variable was type 2 diabetes mellitus. The independent variables were family history, physical activity, and overweight. Physical activity data were measured by Physical Activity Level questionnaire. Overweight data were determined by calculating Body Mass Index (BMI). Other variables were collected by questionnaire. The data were analyzed by a multiple logistic regression.

Results: The risk of type 2 Diabetes Mellitus in elderly women increased with family history (OR= 2.80; CI 95%= 1.17 to 6.66; p= 0.020), low physical activity (OR= 4.41; 95% CI= 1.81 to 10.70; p= 0.001), and overweight (OR= 2.48; 95% CI= 1.02 to 5.99; p= 0.043).

Conclusion: The risk of type 2 Diabetes Mellitus in elderly women is affected by family history, physical activity, and overweight.

Keywords: type 2 diabetes mellitus, family history, physical activity, overweight, elderly women

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