

ABSTRACT

THE CORRELATION BETWEEN THE RISK LEVEL OF DIABETES MELLITUS TYPE 2 WITH RANDOM BLOOD GLUCOSE TEST USING *THE CANADIAN DIABETES RISK QUESTIONNAIRE* (CANRISK) QUESTIONNAIRE

SINDY IRVANA KURNIA SAPUTRI

Diabetes mellitus (DM) is a metabolic disorder due to abnormality of insulin secretion, insulin action, or both. This study aimed to screen people who look healthy but have the risk of developing type 2 diabetes. In addition, to determine the relationship between random blood glucose and the risk of developing type 2 diabetes mellitus based on *The Canadian Diabetes Risk Questionnaire* (CANRISK) at Universitas Airlangga.

This study was cross-sectional study with a simple random sampling technique. The instrument used was the CANRISK questionnaire.

About 332 respondents participated in this study. The results show that there was a positive correlation between the total score of the CANRISK and the age ($p=0,000$; $r_s=511$), BMI ($p=0,000$; $r=657$), waist circumference ($p=0,000$; $r=673$). In a differential test analysis, there was significant differences between gender ($p=0,000$), history of hypertension ($p=0,000$), history of high blood glucose ($p=0,000$), family history of DM ($p=0,001$) and education ($p=0,001$) in the risk category of the CANRISK. Whereas for physical activity, fruit or vegetable consumption, ethnicity, childbirth ≥ 4 kg, there were no significant difference in the risk category of the CANRISK. The study also showed that there was a positive correlation between random blood glucose level ($p=0,000$; $r=0,280$) with the total score of the CANRISK.

In conclusion, the higher the total score obtained based on the CANRISK questionnaire, the higher the risk for developing type 2 diabetes mellitus in the next 10 years. The development of diabetes for the next 10 years can be predicted through screening using CANRISK.

Keywords: Type 2 Diabetes Mellitus, Risk Assessment, *The Canadian Diabetes Risk Questionnaire*, Screening.