

John Prawira, Medical Doctor. 2011. **Screening for Diabetes Mellitus type 2, including over nutrition, hypertension, hypercholesterolemia and family history of diabetes in adults at Ubon Ratchathani province of Thailand.** Master of Science Program in International Health, Charité Universitätsmedizin and Khon Kaen University.

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Keywords:

Diabetes mellitus type 2, fasting capillary blood glucose, positive screening, over-nutrition, hypercholesterolemia

ABSTRACT

This cross sectional study aimed to estimate the rate of diabetes mellitus type 2 (DM) and its association with over nutrition, hypertension, hypercholesterolemia and family history of DM among adults in the Khemarat district, Ubon Ratchathani province of Thailand. The population for this study consisted of adults aged ≥ 35 years old in Khemarat district, Ubon Ratchathani province of Thailand. This study made use of the secondary dataset derived from a screening program conducted at the Khemarat district of the Ubon Ratchathani province by the local health authorities initiated by the Ministry of Public Health, Thailand in the year 2007. Bivariate logistic regression analysis was performed to obtain the crude odds ratio followed by multivariate logistic regression to obtain adjusted odds ratio.

Of the 10510 subjects who underwent the screening program, 8027 subjects were analyzed according to the inclusion and exclusion criteria of the study. The mean fasting capillary blood glucose (FCBG) for male was 91.5 ± 24.6 whereas the mean FCBG for female was 90.4 ± 29.0 . Statistically there was no difference between sexes (p -value 0.086). The overall rate of positive screening (FCBG ≥ 126 mg/dl) among subjects was 5.5% ($n=440$), thus in male and female were 4.7% ($n=146$) and 6.0% ($n=294$) respectively. There were significant differences among male and female for positive screening (p -value 0.019), over-nutrition (p -value <0.001) and hypercholesterolemia (p -value <0.001). Subjects with hypertension were 1.67 times more likely to have positive screening results

than subjects without hypertension (95% CI: 1.35-2.06). Subjects with hypercholesterolemia were 1.75 times more likely to have positive screening than subjects without hypercholesterolemia (95% CI: 1.42-2.16). Subjects with a family history of DM were 1.67 times more likely to have positive screening than subjects without family history of DM (95% CI: 1.32-2.12). In conclusion hypertension, hypercholesterolemia and family history of DM were predictors for a positive screening result of DM in the Khemmarat district, Ubon Ratchathani province of Thailand.