

RELATIONSHIP BETWEEN ANTHROPOMETRIC INDICATORS AND FASTING BLOOD GLUCOSE AMONG BANK OFFICERS IN JAFFNA MUNICIPALITY AREA

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The objective of this study was to describe the correlation between anthropometric indicators such as body weight, height, waist circumferences (WC), hip circumferences (HC), Body Mass Index (BMI), Waist Hip Ratio (WHR) and fasting plasma glucose (FPG) level. A total of 223 subjects aged 20-60 years (all bank officers who gave their consent to participate in our study) were included in this study. Anthropometric measurement such as body weight, height, WC, and HC were taken by standard methods. Overnight fasting blood samples were used for FPG analysis by the enzymatic colorimetric assay using semiautomated Analyser Teco 3300. Clinical data, details about life style, socio-demographic factors were obtained using interviewer administrated questionnaire. The mean value of FPG was 91.816(\pm 19.7653) mg/dL. BMI was classified based on WHO classification of Asians. In this study, 16.7% of obese subjects and 6.5% of overweight subjects were diabetics. In this study, 10.7% of centrally obese subjects (WC for male \geq 90 cm, female \geq 80 cm) and 9.4% of subjects with normal WC had diabetes. In this study population, anthropometric measurements such weight ($p=0.001$, Pearson correlation (PC) = 0.221), BMI ($p=0.004$, PC= 0.193), WC ($p<0.001$, PC= 0.280), HC ($p=0.008$, PC= 0.180) and WHR ($p<0.001$, PC= 0.239) were positively correlated with FPG level. Height [$p=0.948$, PC = 0.004] was not correlated with FPG. Among the study subjects, 5.4% (n=12) had diabetes mellitus (FPG>126 mg/dL) and 20.2% (n=45) had pre-diabetes (FPG>100 mg/dL). Mean values of anthropometric indicators which were correlated with FPG such as weight [73.008 (\pm 11.648) vs. 65.671(\pm 14.551) kg], BMI [25.792 (\pm 3.39) vs. 24.067(\pm 4.2525) kg/m²], WC [93.54 (\pm 8.606) vs. 84.87(\pm 13.427) cm], HC [98.54(\pm 5.727) vs. 95.37(\pm 9.9556) cm] and WHR [0.941 (\pm 0.0676) vs. 0.878(\pm 0.954)] were higher among diabetics when compared to non-diabetics. High weight, BMI, WC, WHR can be taken as predictors of diabetes mellitus among the bank officers.

Key words: *Body Mass Index, Waist Hip Ratio, Fasting plasma glucose, Pearson correlation, Diabetes mellitus.*