

ABSTRACT

Introduction: Obesity is risk factor for some health problems, hypertension is one of them. Obesity can be determined by body mass index. Body mass index is a marker for adiposity, it is known that the level of adiposity can affect blood pressure (Kotsis et al., 2010). The aim of this study is to analyze the correlation of body mass index and systole and diastole pressure.

Method: This study was analytic observational with cross-sectional design, the sample was 60 people aged 35-59 years old was selected by accidental sampling. The measurement of body weight, height, blood pressure, and selection of samples are taken by weight scales, stature meter, mercury sphygmomanometer, and questionnaire. Data was analyzed by Spearman correlation test.

Result: Samples in this study were 44 woman (73,3%) and 16 man (26,7%). Most age group is 45-49 and 50-54 years old (31,7%) and least is 55-59 years old (5,0%). 33 samples (55,0%) have weight above normal ($>25,0 \text{ kg/m}^2$), 32 samples (53,4%) have systole pressure above normal ($\geq 120 \text{ mmHg}$), and 42 samples (70,0%) have diastole pressure above normal ($\geq 80 \text{ mmHg}$). The Spearman correlation test between body mass index and systole pressure shown weak correlation ($p=0.015$ $r=0.312$). The Spearman correlation test between body mass index and diastole pressure shown weak correlation ($p=0.013$ $r=0.321$).

Conclusion: There is weak correlation between body mass index and systolic pressure in this study. There is weak correlation between body mass index and diastole pressure in this study.

Keywords: *body mass index, systole pressure, diastole pressure, obesity, hypertension*