ABSTRACT

Background : *Obesity is one of the malnutrition conditions that remains a global issue to this day. A person is considered obese if their body mass indeks (BMI) is ≥ 25 Kg/m^2. Obesity can effect body composition, which may ultimately become a risk factor for chronic diseases such as diabetes, hypertension, heart disease, hyperlipidemia, and others. The aim of this study is to determine the relationship between body composition and blood sugar levels in individuals with obesity in Jambi City.*

Method : *This study is an analytical research with a cross-sectional approach. The sample used consists of 53 individuals, selected through purposive sampling and calculates using the lemeshow formula. Body composition was measured using Bioelectrical Impedance Analysis (BIA), while fasting blood glucose levels were measured using the GOD-PAP method. The hypothesis test employed was the Fisher's Exact test.*

Results : *Of the 53 study subjects, it was found that the majority of the respondents were female (83%), worked as civil servants (96.2%), had grade 1 obesity (67.9%), abnormal muscle mass (83%), normal visceral fat (81,1%), normal total body water (75.5%), and normal fasting bloof glucose levels (75.5%). The results of the fisher's exact test, used to assess the relationship between body composition (fat mass, muscle mass, visceral fat, total body water) and fasting blood glucose levels, showed a p-value of 1.00 (>0.05) for each variable.*

Conclusion : *There was no, significant relationship between fasting blood glucose levels and fat mass, muscle mass, visceral fat, and total body water*

Keywords : *Obesity, Body Composition, Fasting Blood Glucose Levels*

ABSTRAK

Latar Belakang : Obesitas merupakan salah satu kondisi malnutrisi yang menjadi masalah dunia hingga saat ini. Seseorang dikatakan obesitas apabila Indeks Massa Tubuh (IMT) $\geq$ 25 Kg/m^2. Obesitas dapat memengaruhi komposisi tubuh yang pada akhirnya bisa menjadi faktor risiko terjadinya penyakit kronis seperti diabetes, hipertensi, jantung, hiperlipidemia dan lain sebagainya. Tujuan dari penelitian ini adalah untuk mengetahui hubungan komposisi tubuh dengan kadar gula darah pada orang dengan obesitas di Kota Jambi.

Metode : Penelitian ini merupakan penelitian analitik dengan pendekatan *cross sectional*. Sampel yang digunakan sebanyak 53 orang, diambil dengan cara *purposive sampling* dan menggunakan rumus *lemeshow*. Komposisi tubuh diukur dengan menggunakan BIA (*bioelectrical impedance analysis*), sementara kadar gula darah puasa menggunakan GOD-PAP dan uji hipotesis yang digunakan adalah uji *Fisher's Exact*.

Hasil : Dari 53 subjek penelitian didapatkan responden sebagian besar berjenis kelamin perempuan (83%), pekerjaan pegawai negeri sipil (96,2%), derajat obesitas 1 (67,9%), asupan energi seimbang (77,4%), massa lemak obesitas (94,3%), massa otot tidak normal (83%), *visceral fat* baik (81,1%), *total body water* normal (75,5%), dan kadar gula darah puasa normal (75,5%). Hasil uji *Fisher's Exact* yang digunakan untuk menilai hubungan antara komposisi tubuh (massa lemak, massa otot, *visceral fat*, *total body water*) dengan kadar gula darah puasa diperoleh p-*value* = 1 (>0,05) tiap variabel.

Kesimpulan : Tidak terdapat hubungan yang bermakna antara kadar gula darah puasa dengan massa lemak, massa otot, *visceral fat* dan *total body water*

Kata Kunci : Obesitas, Komposisi Tubuh, Kadar Gula Darah Puasa