

Pengukuran persen lemak tubuh menggunakan antropometri sederhana dengan gold standard bioelectrical impedance analysis : Studi validasi pada pegawai negeri sipil Dinas Kesehatan Kota Depok tahun 2015 = Measuring body fat percentage using simple anthropometry with gold standard bioelectrical impedance analysis validation : Study on civil servants Depok Health Departement in 2015

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Abstrak

[ABSTRAK]

DXA, Densitometry, Hydrometry, Magnetic Resonance Imaging (MRI), dan Bioelectrical Impedance Analysis (BIA) merupakan metode pengukuran yang akurat untuk menilai komposisi tubuh. Namun metode ini mahal, rumit dan tidak aplikatif jika digunakan masyarakat. Pengukuran antropometri adalah pengukuran yang lebih sederhana, murah dan mudah digunakan untuk evaluasi status gizi. Tujuan dari penelitian ini adalah untuk mendapatkan pengukuran yang lebih sederhana namun akurat dalam mengevaluasi kasus obesitas dengan gold standard BIA. Penelitian ini dilaksanakan pada bulan Mei-April 2015 dengan jumlah total responden 18 laki-laki dan 79 perempuan yang merupakan PNS Dinas Kesehatan Kota Depok Tahun 2015. Desain studi yang digunakan yaitu cross sectional dengan mengukur variabel independen yaitu persen lemak tubuh serta variabel bebas meliputi IMT, lingkaran pinggang, lingkaran panggul, skinfold tricep, ILT dan RLPP. Hasil penelitian menunjukkan bahwa RLPP memiliki nilai koefisien korelasi paling tinggi yaitu (0,938) dibandingkan dengan pengukuran lainnya. Namun berdasarkan kurva ROC IMT memiliki performa uji paling baik untuk digunakan pada semua jenis kelamin dengan (AUC 0,948; Se = 90,9,5%; Sp = 85,7%; NPP 90%; NPN 85%; LR+ 6,35; LR- 0,10) pada laki-dengan cut off 25,5 kg/m² sedangkan pada perempuan (AUC 0,943; Se = 81,5%; Sp = 96,2%; NPP 91%; NPN 90%; LR+ 21,4; LR- 0,19) dengan cut off 26,5 kg/m². Akan tetapi masih diperlukan studi validasi lain dengan mempertimbangkan beberapa faktor seperti usia, jenis kelamin dan etnis.

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<i>ABSTRACT</i>

;DXA, Densitometry, Hydrometry, Magnetic Resonance Imaging (MRI), and Bioelectrical Impedance Analysis (BIA) are accurate measurement methods to assess body composition. However, these methods are expensive, complicated, and not applicative if used by society. Anthropometric measurement is a measurement that is more simple, inexpensive and easy to use for the evaluation of nutritional status. This study aims to procure simpler measurement but accurate in evaluating cases of obesity used BIA as a gold standard. This study was conducted in May-April 2015 with a total number of respondents are 18 male and 79 female who are Civil Servants from Depok Health Departement in 2015. The study used cross sectional design with measure of independent variables which is body fat percentage as well as independent variables include BMI, waist circumference, hip circumference, triceps skinfold, ILT and waist to hip ratio. The result of this study showed that waist to hip ratio had a highest correlation coefficient (0,938) compared with other measurements. However based on ROC curve, IMT has the best test performance for use on all genders with (AUC 0.948; Se = 90,9,5%; Sp = 85.7%; 90% NPP; NPN 85%, LR + 6.35; LR- 0 , 10) in men

with cut-off of 25.5 kg/m², while the test performance on women (AUC 0.943; Se = 81.5%; Sp = 96.2%; 91% NPP; NPN 90%; LR + 21.4; LR - 0.19) with cut-off 26.5 kg/m². However another similiar studies were still needed to validate several factors such as age, gender and ethnicity.

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