Intisari

HUBUNGAN ANTARA KOMPOSISI TUBUH DAN KEKUATAN GENGGAM TANGAN DENGAN KEMAMPUAN FUNGSIONAL PADA LANSIA HIPERTENSI

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LATAR BELAKANG Semakin meningkatnya umur maka kemampuan fungsional lansia cenderung menurun. Kemampuan fungsional lansia dipengaruhi diantaranya oleh komposisi tubuh dan kekuatan gengam tangan. Hipertensi merupakan faktor risiko penyakit kardiovaskular maupun neurologis dimana penyakit tersebut berpengaruh terhadap kemampuan fungsionalnya.
TUJUAN Mengetahui hubungan antara komposisi tubuh (IMT, massa lemak dan massa bebas lemak) dan kekuatan genggam tangan serta mengetahui faktor-faktor yang berkontribusi terhadap kemampuan fungsional pada lansia hipertensi.
METODE PENELITIAN Penelitian dengan disain *cross sectional* ini dilaksanakan di Kota Yogyakarta selama bulan April – Mei 2017. Pemilihan wilayah berdasarkan *multistage random sampling* sedangkan pemilihan subyek secara *purposive sampling.* Jumlah sampel sebanyak 200 orang. Komposisi tubuh diukur menggunakan alat *bioelectrical impedance analysis* (BIA). Kekuatan genggam tangan diukur menggunakan alat *hand grip dynamometer.* Penilaian kemampuan fungsional menggunakan tes berjalan 6 menit (*six minutes walking test)*. Penilaian aktivitas fisik sebagai variabel perancu mengunakan IPAQ.
HASIL PENELITIAN Hasil analisis korelasi Spearman menunjukkan bahwa massa lemak dan massa bebas lemak berhubungan bermakna dengan kemampuan fungsional ($p=0,001$). Namun, tidak demikian dengan IMT ($p=0,899$). Terdapat hubungan bermakna antara kekuatan genggam tangan dengan kemampuan fungsional ($p<0,001$). Hasil analisis multivariat dengan uji multiple regresi menunjukkan bahwa variabel yang berkontribusi terhadap kemampuan fungsional adalah jenis kelamin ($p=0,033$), aktivitas fisik ($p=0,002$), massa bebas lemak ($p=0,029$), kekuatan genggam tangan ($p<0,001$), dan pengendalian hipertensi ($p=0,010$) dengan nilai R^2 sebesar 0,3474.
KESIMPULAN Terdapat hubungan bermakna antara massa lemak, massa bebas lemak dan kekuatan genggam tangan dengan kemampuan fungsional lansia hipertensi. Massa bebas lemak, kekuatan genggam tangan, pengendalian hipertensi, jenis kelamin, dan aktivitas fisik berkontribusi terhadap kemampuan fungsional lansia hipertensi.

Kata Kunci : kemampuan fungsional, komposisi tubuh, kekuatan genggam tangan, lansia hipertensi

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Abstract

THE RELATIONSHIP BETWEEN BODY COMPOSITION AND HANDGRIP STRENGTH AND THE FUNCTIONAL ABILITY ON THE ELDERLY WITH HYPERTENSION

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BACKGROUND The increasing number of age tend to reduce the functional ability of the elderly as well. Functional ability of elderly is influenced by the body composition and the handgrip strength. Hypertension is a serious health problem with the greatest number of cases. Aside from this, hypertension is also a factor in causing cardiovascular and neurological diseases in which the disease affects its functional ability.
OBJECTIVE : To figure out the relationship between the body composition (Body Mass Index, fat mass and fat-free mass) and the handgrip strength and alsoto find out what factor becomes the most influential factor towards the functional ability in elderly with hypertension.
METHOD: The design of the study is using *cross-sectional* method. The population is the elderly in the city of Yogyakarta conducted from April to May 2017. The selection of the area is based on *multistage random sampling* while the selection of subjects uses *purposive sampling*. The number of samples in this study is 200 people. Body composition is measured by using *bioelectrical impedance analysis* (BIA). The handgrip strength is measured by using *handgrip dynamometer*. The functional ability assessment uses *six minutes walking test*. The assessment of physical activity acts as the confounding variables using IPAQ.
RESULT The result of Spearman correlation analysis indicates that fat mass and fat free mass are significantly related to the functional ability ($p = 0{,}001$). However, it is different with BMI ($p = 0{,}899$). There is a significant relationship between handgrip strength and the functional ability ($p < 0{,}001$). The result of multivariate analysis by using linear regression test signifies that the most influential variable on functional ability is gender ($p = 0{,}033$), physical activity ($p = 0{,}002$), fat free mass ($p = 0{,}029$), handgrip strength ($p < 0{,}001$) and hypertension control ($p=0{,}010$). With a value of R^2 of 0,3474.
CONCLUSION: There is a significant relationship between fat mass, fat-free mass and handgrip strength and the functional ability of elderly who suffering from hypertension. The most influential factors on functional ability of elderly with hypertension are fat-free mass, handgrip strength, hypertension control, sex and physical activity.

KEYWORDS: Functional ability, body composition, handgrip strength, elderly with hypertension

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