

INTISARI

KORELASI ANTARA LINGKAR PINGGANG, KADAR GLUKOSA DARAH PUASA TERHADAP SKOR RAPUH PADA LANSIA YANG MENCAPAI USIA HARAPAN HIDUP TINGGI DI DAERAH ISTIMEWA YOGYAKARTA

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Latar Belakang: Populasi lansia bertambah seiring meningkatnya angka Usia Harapan Hidup (UHH) akibat layanan kesehatan yang membaik. Proses penuaan menyebabkan penurunan aktifitas fisik 40%-80% sehingga meningkatkan gangguan metabolisme dan morbiditas yang mempengaruhi skor rapuh. Faktor yang dapat mempengaruhi skor rapuh meliputi obesitas sentral, lingkar pinggang, kadar glukosa darah puasa (GDP), jenis kelamin, status nutrisi, aktifitas fisik, penyakit kronis dan polifarmasi. Angka UHH di Daerah Istimewa Yogyakarta (DIY) melebihi angka UHH rata-rata di Indonesia sehingga penting untuk mengetahui faktor yang meningkatkan skor rapuh agar morbiditas dan kualitas hidup dapat diperbaiki. Penelitian terkait faktor yang mempengaruhi kerapuhan pada lansia yang melebihi angka UHH belum pernah dilakukan di Indonesia.

Tujuan: Mengetahui korelasi antara lingkar pinggang dan kadar GDP terhadap skor rapuh pada lansia yang mencapai UHH di DIY.

Metode: Penelitian potong lintang dari data kuesioner dan laboratorium pada lansia yang mencapai UHH di masyarakat dan di poli penyakit dalam mulai Maret 2022 - Agustus 2023. Gambaran karakteristik dan variabel dalam satuan jumlah dan prosentase untuk data berskala kategorik, rerata dan standar deviasi untuk data berskala numerik. Analisis bivariat menggunakan uji *Spearman* dan *Mann Whitney* dilanjutkan analisis multivariat menggunakan uji regresi linier.

Hasil Penelitian: Diperoleh 53 partisipan dengan 30 laki-laki (56,6%) dan 23 perempuan (43,4%) dengan median usia 78 tahun. Pemeriksaan indeks massa tubuh (IMT) didapatkan 17 partisipan (32,1%) *underweight*-normal dan 36 partisipan (67,9%) *overweight-obese* dengan rerata lingkar pinggang $100,04 \pm 13,96$ cm. Nilai median GDP 153 mg/dL, dan 9 (17,0%) partisipan mendapatkan polifarmasi. Analisis bivariat didapatkan GDP, lingkar pinggang, usia dan riwayat stroke berhubungan dengan skor rapuh dengan nilai p masing-masing 0,004; 0,131; 0,160 dan 0,007. Tidak ada hubungan antara aktifitas fisik, status gizi, polifarmasi, hipertensi, penyakit jantung, penyakit paru obstruktif kronik (PPOK) dan osteoarthritis (OA) terhadap skor rapuh. Analisis multivariat didapatkan GDP ($p=0,005$) dan riwayat stroke ($p=0,001$) berpengaruh signifikan terhadap skor rapuh.

Kesimpulan: Lingkar pinggang berkorelasi positif terhadap skor rapuh, sedangkan GDP berkorelasi positif dan signifikan terhadap skor rapuh pada lansia yang mencapai UHH di DIY.

Kata Kunci: Lansia, lingkar pinggang, obesitas sentral, GDP, skor rapuh

ABSTRACT

CORRELATION BETWEEN WAIST CIRCUMFERENCE, FASTING BLOOD GLUCOSE LEVELS ON FRAILTY SCORE FOR ELDERLY WHO REACH HIGH LIFE EXPECTANCY IN THE SPECIAL REGION OF YOGYAKARTA

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Background: Elderly population is increasing as life expectancy (LE) increases due to improved health services. The aging process causes a decrease in physical activity of 40%-80%, thereby increasing metabolic disorders and morbidity which affect frailty score. Factors that can influence frailty scores include central obesity, waist circumference (WC), fasting blood glucose (FBG), gender, nutritional status, physical activity, chronic diseases and polypharmacy. The LE rate in the Special Region of Yogyakarta exceeds the average LE rate in Indonesia, so it is important to know the factors that increase frailty score so morbidity and quality of life can be improved. Research related to factors that influence fragility in the elderly who exceed the LE figure has never been conducted in Indonesia

Objective: To determine the correlation between WC and FBG levels on frailty scores in elderly people who reach LE in the Special Region of Yogyakarta.

Method: A cross-sectional study of questionnaire and laboratory data on elderly who achieved LE both in the community and in internal medicine clinics from March 2022 to August 2023. Bivariate analysis used the Spearman and Mann Whitney test followed by multivariate analysis using the linier regression test.

Results: There were 53 participants, 30 men (56,6%) and 23 women (43,4%) with median age of 78 years. Body mass index (BMI) examination showed that 17 participants (32,1%) were underweight-normal and 36 participants (67,9%) were overweight-obese. The average of WC was $100,04 \pm 13,96$ cm, FBG median was 153 mg/dL, and 9 (17,0%) participants received polypharmacy. Bivariate analysis showed that WC, FBG, age and history of stroke were associated with frailty scores with p value of 0,004; 0,131; 0,160 and 0,007 respectively. There was no relationship between physical activity, nutritional status, polypharmacy, hypertension, heart disease, chronic obstructive pulmonary disease (COPD) and osteoarthritis (OA) on frailty scores. Multivariate analysis showed that FBG ($p=0,005$) and history of stroke ($p=0,001$) had a significant effect on frailty scores.

Conclusion: WC is positively correlated with frailty scores, while FBG is positively and significantly correlated with frailty scores in elderly people who reach LE in the Special Region of Yogyakarta.

Keywords: Elderly, waist circumference (WC), central obesity, fasting blood glucose (FBG), frailty.