

Hubungan Indeks Lingkar Pinggang, Rasio Lingkar Pinggang/tinggi badan, dan Lingkar Perut dengan Kualitas Tidur pada Mahasiswa UGM

Lintang Putri Aulia¹, Neni Trilusiana Rahmawati², Denny Agustiningih³

ABSTRAK

Latar belakang: Tidur berperan penting dalam menjaga kesehatan fisik, mental, metabolik, dan kognitif. Prevalensi kualitas tidur buruk cukup tinggi, termasuk pada mahasiswa yang rentan mengalami gangguan tidur. Obesitas sentral diketahui berhubungan dengan kualitas tidur melalui berbagai mekanisme fisiologis. Indikator antropometri seperti indeks lingkar pinggang, rasio lingkar pinggang terhadap tinggi badan, dan lingkar perut digunakan untuk menggambarkan akumulasi lemak abdominal. Namun, penelitian terkait pada mahasiswa Indonesia masih terbatas. Oleh karena itu, penelitian ini dilakukan pada mahasiswa Universitas Gadjah Mada untuk mengeksplorasi hubungan indikator tersebut dengan kualitas tidur pada dewasa muda.

Tujuan: Mengetahui hubungan antara indeks lingkar pinggang, rasio lingkar pinggang/tinggi badan, dan lingkar perut dengan kualitas tidur pada mahasiswa UGM

Metode: Penelitian analitik observasional dengan pendekatan *cross-sectional* pada mahasiswa UGM berusia 18–25 tahun. Pengambilan data dilakukan di Fakultas Kedokteran, Kesehatan Masyarakat, dan Keperawatan Universitas Gadjah Mada menggunakan teknik *consecutive sampling* dengan total subjek 170 mahasiswa yang memenuhi kriteria inklusi dan eksklusi. Instrumen berupa timbangan badan, antropometer, pita pengukur (*metline*), kuesioner *Pittsburgh Sleep Quality Index* (PSQI), dan *International Physical Activity Questionnaire Short Form* (IPAQ SF). Analisis data dilakukan secara univariat dan bivariat menggunakan uji korelasi *Spearman* dan uji beda *Mann Whitney Test*.

Hasil: Sebagian besar responden memiliki rasio lingkar pinggang/tinggi badan normal (81,8%) dan lingkar perut normal (75,9%), dengan rerata indeks lingkar pinggang sebesar $9,51 \pm 0,48$. Mayoritas responden (70%) memiliki kualitas tidur buruk (skor PSQI ≥ 5). Analisis bivariat menunjukkan tidak terdapat hubungan signifikan antara indeks lingkar pinggang, rasio lingkar pinggang/tinggi badan, dan lingkar perut dengan kualitas tidur ($p=0,628$; $p=0,833$; $p=0,993$). Selain itu, variabel perancu seperti jenis kelamin dan aktivitas fisik juga tidak menunjukkan hubungan bermakna dengan kualitas tidur ($p>0,05$).

Kesimpulan: Tidak ditemukan hubungan antara indeks lingkar pinggang, rasio lingkar pinggang/tinggi badan, dan lingkar perut dengan kualitas tidur pada mahasiswa UGM.

Kata kunci: Indeks Lingkar Pinggang; Rasio Lingkar Pinggang/Tinggi Badan; Lingkar Perut; Kualitas Tidur; Mahasiswa

¹Mahasiswa Program Studi Gizi, Fakultas Kedokteran, Kesehatan Masyarakat, dan Keperawatan, Universitas Gadjah Mada

²Dosen Fakultas Kedokteran, Kesehatan Masyarakat, dan Keperawatan, Universitas Gadjah Mada

The Relationship between Weight-Adjusted Waist Index, Waist-to-Height Ratio, and Waist Circumference with Sleep Quality among UGM Students

Lintang Putri Aulia¹, Neni Trilusiana Rahmawati², Denny Agustiningih³

ABSTRACT

Background: Sleep plays an important role in maintaining physical, mental, metabolic, and cognitive health. The prevalence of poor sleep quality is quite high, including among university students who are prone to sleep disturbances. Central obesity has been associated with sleep quality through various physiological mechanisms. Anthropometric indicators such as weight-adjusted waist index, waist-to-height ratio, and waist circumference are used to describe abdominal fat accumulation. However, studies related to these indicators among Indonesian students remain limited. Therefore, this study was conducted on Universitas Gadjah Mada (UGM) students to explore the relationship between these indicators and sleep quality in young adults.

Objective: To determine the relationship between weight-adjusted waist index, waist-to-height ratio, and waist circumference with sleep quality among UGM students.

Methods: This was an observational analytic study with a cross-sectional design involving UGM students aged 18–25 years. Data collection was conducted at the Faculty of Medicine, Public Health, and Nursing, Universitas Gadjah Mada, using consecutive sampling with a total of 170 students who met the inclusion and exclusion criteria. Instruments used were a body scale, anthropometer, measuring tape (metline), Pittsburgh Sleep Quality Index (PSQI) questionnaire, and International Physical Activity Questionnaire Short Form (IPAQ-SF). Data were analyzed using univariate and bivariate analyses with Spearman correlation and Mann-Whitney tests.

Results: Most respondents had a normal waist-to-height ratio (81.8%) and normal waist circumference (75.9%), with a mean weight-adjusted waist index of 9.51 ± 0.48 . The majority of respondents (70%) had poor sleep quality (PSQI score ≥ 5). Bivariate analysis showed no significant relationship between weight-adjusted waist index, waist-to-height ratio, and waist circumference with sleep quality ($p=0.628$; $p=0.833$; $p=0.993$). In addition, confounding variables such as sex and physical activity also showed no significant association with sleep quality ($p>0.05$).

Conclusion: No relationship was found between weight-adjusted waist index, waist-to-height ratio, and waist circumference with sleep quality among UGM students.

Keywords: Weight-adjusted Waist Index; Waist-to-Height Ratio; Waist Circumference; Sleep Quality; Undergraduate Students

¹Undergraduate Student, Nutrition Program, Faculty of Medicine, Public Health, and Nursing, Universitas Gadjah Mada

²Lecturer, Faculty of Medicine, Public Health, and Nursing, Universitas Gadjah Mada