

## INTISARI

### **WAIST-TO-HIP RATIO AS AN ALTERNATIVE INDICATOR IN PREDICTING CARDIOVASCULAR DISEASE USING SYSTEMATIC CORONARY RISK EVALUATION IN SLEMAN POPULATION**

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**Latar Belakang:** Penyakit Kardiovaskular (PKV) merupakan penyebab kematian nomor 1 di dunia berdasarkan WHO. Mewakili 31% dari semua kematian global. Tidak hanya itu, komplikasi PKV yang tidak fatal akan menjadi rawat inap yang lebih lama, cacat fisik dan peningkatan biaya perawatan bagi pasien. Ada banyak faktor risiko untuk PKV tetapi satu penyebab yang umum yaitu aterosklerosis. Mengetahui patofisiologi umum penyakit ini, para peneliti menemukan cara untuk menilai risiko PKV untuk menyaring orang yang tampaknya sehat dengan membuat sistem penilaian. Salah satu sistem penilaian risiko PKV adalah Systematic Coronary Risk Evaluation (SCORE) yang didasarkan pada beberapa faktor risiko seperti usia, jenis kelamin, status merokok, tekanan darah sistolik, dan kolesterol total. Tetapi sistem penilaian bukanlah satu-satunya cara untuk menilai risiko PKV seseorang. Studi sebelumnya dan pedoman WHO menemukan bahwa Rasio Lingkar Pinggang ke Pinggul (RLPP) memiliki hubungan positif dengan Risiko PKV. Dengan menggabungkan RLPP dan SCORE, peneliti berharap dapat bermanfaat dalam menemukan beberapa cara untuk menilai risiko PKV dari orang yang tampaknya sehat.

**Tujuan:** Penelitian ini bertujuan untuk mengetahui hubungan antara Waist-to-Hip Ratio dengan kejadian Penyakit Kardiovaskular 10 tahun berdasarkan Systematic COronary Risk Evaluation pada penduduk Sleman.

**Metode:** Metode dalam penelitian ini menggunakan desain potong lintang pada populasi Sleman. Semua data dianalisis dengan analisis statistik komputerisasi IBM SPSS Software. Variabel dianalisis dengan analisis univariat menggunakan tabel distribusi frekuensi dan analisis bivariat menggunakan analisis Somers'D untuk mengetahui hubungan dengan taraf signifikansi 5%.

**Hasil:** Data yang dikumpulkan dari Health Demographic Surveillance System (HDSS) Sleman 2019 sebanyak 128 data dan hanya 82 subjek yang dianalisis karena beberapa data tidak lengkap. Analisis univariat menunjukkan proporsi tinggi (42,7%) dalam kategori risiko sedang Systematic COronary Risk Evaluation (SCORE) dan juga proporsi tinggi (65,9%) pada risiko Waist-to-Hip Ratio (WHR). Analisis bivariat menunjukkan hubungan yang tidak signifikan antara WHR dan risiko 10 tahun Kejadian Penyakit Kardiovaskular ( $p > 0,05$ ).

**Kesimpulan:** Tidak ada hubungan yang bermakna antara Rasio Lingkar Pinggang ke Pinggul (RLPP) dengan kejadian Penyakit Kardiovaskular 10 tahun menurut Systematic Coronary Risk Evaluation (SCORE) pada penduduk Sleman ( $p > 0,05$ ).

**Kata kunci:** Rasio Lingkar Pinggang ke Pinggul (RLPP), Systematic COronary Risk Evaluation (SCORE), Risiko Penyakit Kardiovaskular (PKV), Obesitas, Sleman

## ABSTRACT

### WAIST-TO-HIP RATIO AS AN ALTERNATIVE INDICATOR IN PREDICTING CARDIOVASCULAR DISEASE USING SYSTEMATIC CORONARY RISK EVALUATION IN SLEMAN POPULATION

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**Background:** Cardiovascular Disease (CVD) is the number 1 cause of death around the world based on WHO. Representing 31% of all global deaths. Not only that, non-fatal complications of CVD would be a longer hospitalizations, physical disability and increased costs of care for the patient. There are many risk factors to CVD but one common denominator which is atherosclerosis. Have known common pathophysiology of the disease, researchers found a way to assess the risk of CVD in order to screen seemingly healthy people by creating scoring systems. One of the scoring systems for CVD risk is Systematic Coronary Risk Evaluation which based on several risk factors as age, sex, smoking status, systolic blood pressure, and total cholesterol. But scoring systems is not the only way to assess a person CVD risk. Previous studies and WHO guidelines found that the Waist-to-Hip Ratio has a positive association with CVD Risk. By combining both WHR and SCORE, the researcher hopes that it could be beneficial in finding several ways to assess the CVD risk of a seemingly healthy person.

**Objectives:** The objective of this research is to find out the association between Waist-to-Hip Ratio with a 10-year risk of Cardiovascular Disease Event based on Systematic COronary Risk Evaluation in the Sleman population.

**Methods:** The method in this study was using cross-sectional design in Sleman population. All data was analyzed by computerized statistical analysis IBM SPSS

Software. The variables were analyzed with univariate analysis using frequency distribution table and bivariate analysis using Somers'D analysis to determine the association with 5% level of significance.

**Results:** There were 128 data collected from Health Demographic Surveillance System (HDSS) Sleman 2019 and only 82 subjects being analyzed due to several data were incomplete. Univariate analysis showed a high proportion (42.7%) in moderate risk category of Systematic COronary Risk Evaluation (SCORE) and also a high proportion (65.9%) in at-risk Waist-to-Hip Ratio (WHR). Bivariate analysis showed an insignificant association between WHR and 10-year risk of Cardiovascular Disease Event ( $p>0.05$ ).

**Conclusion:** There was no significant association between Waist-to-Hip Ratio (WHR) and 10- year risk of Cardiovascular Disease Event by Systematic Coronary Risk Evaluation (SCORE) in Sleman population ( $p>0.05$ ).

**Keywords:** Waist-to-Hip Ratio (WHR), Systematic COronary Risk Evaluation (SCORE), Cardiovascular Disease Risk, Obesity, Sleman