

ABSTRACT

The Effect of First Series PERSADIA Exercise on Waist Circumference and The Ratio of HDL-c LDL-c in Women

Introduction: Type 2 diabetes mellitus is the third cause of death in Indonesia. Overweight or waist circumference above normal and low HDL-c levels are risk factors for type 2 diabetes mellitus. Being overweight is defined as abnormal or excessive fat accumulation that can damage the body's health. Dyslipidemia is defined as a high plasma triglyceride concentration, low HDL-c concentration, and a decrease in LDL-c concentration. One of the risk factors can be resolve with exercise. First series PERSADIA exercise is specifically designed for the prevention of diabetes. Howefer, the effect of this exercise in reducing waist circumference and decrease ratio HDL-c LDL-c had never been proven. Therefore, this study was designed to determine the effect of first series PERSADIA exercise on decreasing waist circumference and increasing HDL-c LDL-c ratio. **Method:** The design of this study was a field experiment. The effect of first series PERSADIA exercise on waist circumference and HDL-c LDL-c ratio was analyzed by descriptive statistical test, saphiro wilk-test for normality test, paired t-test / Wilcoxon-test for different paired test. **Results:** This study involved 12 Women lived in Lidah Wetan Gang V RW 2 Surabaya. From the analysis, there was a decrease in mean waist circumference and significant but slightly ($p = 0.032$), there was no significant increase in HDL-c levels ($p = 0.301$), there was a decrease in LDL-c mean but it was not significant ($p = 0.755$), there was an increase in the mean HDL-c LDL-c ratio but it was not significant ($p = 0,303$). **Conclusion:** First series PERSADIA exercise has been able to reduce waist circumference and not able to increase HDL-c / LDL-c ratio significantly in women according to statistics. Further research is needed by increasing the exercise time and controlling the energy intake of subjects.

Keywords: diabetes mellitus, first series PERSADIA exercise, waist circumference, HDL-c LDL-c ratio, women

ABSTRAK

Pengaruh Senam PERSADIA I terhadap Lingkar Pinggang dan Rasio HDL-c LDL-c pada Wanita

Pendahuluan: Diabetes mellitus tipe 2 menjadi penyebab kematian nomer 3 di Indonesia. Kelebihan berat badan atau lingkar pinggang diatas normal dan kadar *HDL-c* rendah merupakan faktor risiko diabetes melitus tipe 2. Kelebihan berat badan didefinisikan sebagai akumulasi lemak abnormal atau berlebihan yang dapat merusak kesehatan tubuh. Dislipidemia didefinisikan sebagai konsentrasi trigliserida plasma yang tinggi, konsentrasi *HDL-c* yang rendah, dan penurunan konsentrasi *LDL-c*. Faktor risiko tersebut dapat diatasi salah satunya dengan olahraga. Senam PERSADIA I dirancang khusus untuk pencegahan diabetes. Namun, efek dari senam ini dalam menurunkan lingkar pinggang dan meningkatkan rasio *HDL-c LDL-c* belum pernah diteliti. Oleh karena itu, penelitian ini dirancang untuk mengetahui pengaruh Senam PERSADIA 1 terhadap penurunan lingkar pinggang dan peningkatan rasio *HDL-c LDL-c*. **Metode:** Desain penelitian ini adalah eksperimen lapangan. Pengaruh Senam PERSADIA 1 terhadap lingkar pinggang dan rasio *HDL-c LDL-c* dianalisis dengan uji statistik deskriptif, uji normalitas *saphiro wilk-test*, uji beda berpasangan *paired t-test / Wilcoxon-test*. **Hasil:** Penelitian ini melibatkan 12 ibu-ibu PKK Lidah Wetan Gang V RW 2 Surabaya. Dari hasil analisis, terdapat penurunan rerata lingkar pinggang dan bermakna namun sedikit ($p= 0,032$), tidak ada peningkatan kadar *HDL-c* yang bermakna ($p= 0,301$), terdapat penurunan rerata *LDL-c* namun belum bermakna ($p= 0,755$), terdapat peningkatan rerata rasio *HDL-c LDL-c* namun belum bermakna ($p= 0,303$). **Kesimpulan:** Senam PERSADIA 1 dapat menurunkan lingkar pinggang namun sedikit dan belum dapat meningkatkan rasio *HDL-c/LDL-c* pada wanita secara bermakna menurut statistika. Diperlukan penelitian lebih lanjut dengan menambah waktu pelaksanaan senam dan mengontrol *energy intake* subjek penelitian.

Kata kunci: Diabetes melitus, Senam PERSADIA I, lingkar pinggang, rasio *HDL-c LDL-c*, wanita