

ABSTRAK

EFEKTIVITAS INTERVENSI SENAM AEROBIK DAN PEMBATAHAN MINUMAN MANIS TERHADAP KADAR KOLESTEROL TOTAL (Studi pada Mahasiswa Universitas Jenderal Soedirman dengan Hiperkolesterolemia)

Latar Belakang : Hiperkolesterolemia mulai dijumpai pada usia muda dan bermanifestasi pada penyakit jantung iskemik hingga berujung kematian. Senam aerobik dan pembatasan minuman manis diketahui dapat menurunkan kadar kolesterol total. Penelitian bertujuan untuk mengetahui efektivitas senam aerobik dan pembatasan minuman manis dalam menurunkan kadar kolesterol total.

Metodologi : Penelitian ini menggunakan metode *true experimental randomized control pre-test post-test group design*. Sejumlah 42 mahasiswi usia 19-23 tahun, memiliki kadar kolestetol total >190 mg/dL, tidak sedang menjalankan diet khusus dan tidak mengonsumsi obat penurun kolesterol dibagi menjadi tiga kelompok yakni kelompok senam aerobik, pembatasan minuman manis, dan kontrol. Pemeriksaan kolesterol menggunakan metode *hand prick* sebelum dan sesudah intervensi. Intervensi diberikan selama 4 minggu berupa senam aerobik 8 kali pada kelompok senam, pembatasan minuman manis maksimal 236 mL/hari pada kelompok pembatasan minuman manis, dan kelompok kontrol tidak diberi intervensi. Analisis statistik uji *paired t-test* dan ANOVA *one way* menggunakan SPSS versi 26.0 dengan taraf kepercayaan 95%.

Hasil Penelitian : Sebanyak 71,4% responden tinggal di kost dan 90,5% memiliki kualitas tidur yang buruk. Kadar kolesterol total pada kelompok senam aerobik mengalami penurunan sebesar $32,71 \pm 34,76$ mg/dL dan kelompok pembatasan minuman manis $16,21 \pm 17,54$ mg/dL. Terdapat pengaruh intervensi senam aerobik terhadap kadar kolesterol total ($p=0,004$). Terdapat pengaruh intervensi pembatasan minuman manis terhadap kadar kolesterol total ($p=0,004$). Terdapat perbedaan rata-rata perubahan kadar kolesterol total ketiga kelompok dengan penurunan terbesar pada kelompok senam aerobik ($p=0,012$).

Kesimpulan : Intervensi senam aerobik dan pembatasan minuman manis dapat menurunkan kadar kolesterol total. Intervensi yang paling efektif menurunkan kadar kolesterol total adalah senam aerobik.

Kata Kunci : Hiperkolesterolemia, Senam Aerobik, Minuman Manis, Kolesterol Total.

ABSTRACT

EFFECTIVENESS OF AEROBIC EXERCISE AND RESTRICTION OF SUGAR SWEETENED BEVERAGES ON TOTAL CHOLESTEROL LEVELS (Study on Students of Jenderal Soedirman University with Hypercholesterolemia)

Background: Hypercholesterolemia began to be found in young age and manifests in ischemic heart disease, leading to death. Aerobic exercise and restriction of sugar sweetened beverages (SSB) have been shown to reduce total cholesterol levels. The study's aimed is to determine the effectiveness of aerobic exercise and restriction of SSB in reducing total cholesterol levels.

Methods: True experimental randomized control pre-test post-test group design. A total of 42 female college students aged 19-23 years old with total cholesterol levels >190 mg/dL, who were not on a special diet or cholesterol lowering drugs, were randomized into three groups: aerobic exercise, SSB restriction, and control. Cholesterol levels are measured using the hand prick method before and after intervention. The intervention lasted 4 weeks and consisted of aerobic exercise 8 times for the aerobic group, a maximum of 236 mL of SSB per day for the SSB restriction group, and no intervention for the control group. SPSS version 26.0 is used for statistical analysis of paired t-test and one way ANOVA at a 95% confidence level.

Result : A total of 71.4% of respondents lived in boarding houses and 90.5% had poor sleep quality. Aerobic exercise reduced total cholesterol levels by 32.71 ± 34.76 mg/dL, whereas SSB restriction reduced total cholesterol levels by 16.21 ± 17.54 mg/dL. There was an effect of aerobic exercise intervention on total cholesterol levels ($p=0.004$). There was an effect of SSB restriction intervention on total cholesterol levels ($p=0.004$). The results of the one-way ANOVA test revealed differences in the average changes in total cholesterol levels of the three groups, with the aerobic exercise group experiencing the greatest decrease ($p= 0.012$).

Conclusion : Aerobic exercise interventions and SSB restriction can lower total cholesterol levels. Aerobic exercise is the most effective intervention for lowering total cholesterol levels.

Keywords: Hypercholesterolemia, Aerobic Exercise, Sugar Sweetened Beverages, Total Cholesterol.

