

## ABSTRACT

NERLANTI ADAM. The effect of Diabetes exercise on Reducing Temporary Blood Sugar Levels in Type 2 DM Sufferers at Kota Timur Health Center. Supervised by HARISMAYANTI as chairman and MIKE SUSIANTI as member.

Type II diabetes mellitus has a main problem in the form of a lack of receptor response to insulin. One way to overcome diabetes mellitus caused by living habits is to exercise regularly, in the form of highly recommended diabetes exercises which focus on stretching and relaxing muscles, joints, blood vessels and nerves. The research aims to determine the effect of diabetes exercise on reducing blood sugar levels in type 2 DM sufferers at kota timur health center. The research design was quasi experimental design with a pretest posttest nonequivalent control group design approach. The population of type 2 DM sufferers was 137 people, a sample of 18 type 2 DM sufferers was calculated Using the sample formula for estimating the mean of two paired groups. The sampling technique used purposive sampling. The intervention group was controlled by medication and diabetes exercise, and the control group was controlled by medication and no diabetes exercise. The analysis was carried out by means of a paired sample t test on the GDS pretest and posttest of each group and the independent t test on the difference in the decrease in GDS between groups. The results obtained the GDS pretest in the intervention group: the lowest was 150 mg/dl, the highest was 360 mg/dl, the average was 234,9 mg/dl. In the control group the lowest was 153 mg/dl, the highest was 360 mg/dl and the average was 242,6 mg/dl. posttest GDS in the intervention group was the lowest 120 mg/dl, the highest 331 mg/dl, the average 194 mg/dl. In the control group, the lowest 138 mg/dl, the highest was 341 mg/dl and the average was 223,9 mg/dl. The paired sample t test in the intervention group had a T count of 6.582 and p value of 0,000, a control group had a T count of 12.933 and p Value of 0.00. The independent t test obtained a T count of 3.484 and p Value of 0.003. it was concluded that there was an effect of diabetes exercise on reducing blood sugar levels in type 2 DM sufferers at Kota Timur Health Center working area.

***Keywords; Type II DM, Blood Sugar Levels, Diabetes Exercise***

## ABSTRAK

NERLANTI ADAM. Pengaruh Senam Diabetes terhadap Penurunan Kadar Gula Darah Sewaktu pada Penderita DM Tipe 2 di Puskesmas Kota Timur. Dibimbing oleh HARISMAYANTI sebagai ketua dan MIKE SUSIANTI sebagai anggota.

Diabetes melitus tipe II memiliki masalah utama berupa kurangnya respons reseptor terhadap insulin. Salah satu cara untuk mengatasi diabetes mellitus yang disebabkan oleh kebiasaan hidup adalah dengan berolahraga secara teratur, berupa senam diabetes yang sangat dianjurkan yang berfokus pada peregangan dan relaksasi otot, sendi, pembuluh darah, dan saraf. Penelitian bertujuan untuk mengetahui pengaruh senam diabetes terhadap penurunan kadar gula darah sewaktu pada penderita DM Tipe 2 di Puskesmas Kota Timur. Desain penelitian *quasy experimental design* pendekatan *pretest posttest nonequivalent control group design*. Populasi penderita DM tipe 2 sebanyak 137 orang, sampel 18 orang penderita DM tipe 2 dihitung dengan rumus sampel estimasi rerata dua kelompok berpasangan. Teknik pengambilan sampel menggunakan *purposive sampling*. Kelompok intervensi terkontrol obat dan senam diabetes, serta kelompok kontrol terkontrol obat dan tidak senam diabetes. Analisis dilakukan dengan uji *paired sampel t test* pada GDS *pretest* dan *posttest* setiap kelompok dan *independent t test* pada selisih penurunan GDS antar kelompok. Hasil penelitian mendapatkan GDS *pretest* pada kelompok Intervensi: terendah 150 mg/dl, tertinggi 360 mg/dl, rata-rata 234,9 mg/dl. Pada kelompok kontrol terendah 153 mg/dl, tertinggi 360 mg/dl dan rata-rata 242,6 mg/dl. GDS *posttest* pada kelompok intervensi yaitu terendah 120 mg/dl, tertinggi 331 mg/dl, rata-rata 194 mg/dl. Pada kelompok Kontrol yaitu terendah 138 mg/dl, tertinggi 341 mg/dl dan rata-rata 223,9 mg/dl. Uji *paired sampel t test* pada kelompok intervensi T hitung 6,582 dan *p Value* 0,000, kelompok kontrol T hitung 12,933 dan *p Value* 0,000. Uji *independent t test* mendapatkan T hitung 3,484 dan *p Value* 0,003. Disimpulkan ada pengaruh senam diabetes terhadap penurunan kadar gula darah pada penderita DM Tipe 2 di wilayah kerja Puskesmas Kota Timur.

**Kata Kunci: DM Tipe II, Kadar Gula Darah, Senam Diabetes.**