ABSTRAK

UNIVERSITAS MUHAMMADIYAH JEMBER
PROGRAM STUDI S1 ILMU KEPERAWATAN
FAKULTAS ILMU KESEHATAN

Skripsi, Agustus 2026
Wulansari

Pengaruh Senam Terhadap Kadar Gula Darah Puasa Pada Peserta Prolanis *Diabetes Mellitus* di Puskesmas Paspan Kabupaten Banyuwangi

Abstrak

Diabetes mellitus merupakan penyakit kronis yang memerlukan pengelolaan berkelanjutan. Salah satu upaya nonfarmakologis yang dapat dilakukan adalah aktivitas fisik melalui senam. Aktivitas fisik dapat meningkatkan penggunaan glukosa oleh otot dan membantu meningkatkan sensitivitas insulin sehingga berpotensi menurunkan kadar gula darah. Penelitian ini bertujuan mengetahui pengaruh senam terhadap kadar gula darah puasa pada peserta Prolanis *Diabetes Mellitus* di Puskesmas Paspan. Penelitian menggunakan desain pre-eksperimental one group pretest-posttest dengan 47 responden. Kadar gula darah puasa diukur sebelum dan sesudah intervensi senam. Analisis data menggunakan uji Paired Samples t-test dengan tingkat kemaknaan $\alpha = 0,05$. Rata-rata kadar gula darah puasa sebelum senam sebesar 128,00 mg/dl, sedangkan sesudah senam sebesar 110,85 mg/dl, sehingga terjadi penurunan rata-rata sebesar 17,15 mg/dl. Hasil uji Paired Samples t-test diperoleh $t = 27,712$; $df = 46$; $p < 0,001$. Terdapat perbedaan yang bermakna antara kadar gula darah puasa sebelum dan sesudah diberikan intervensi senam pada peserta Prolanis *Diabetes Mellitus* di Puskesmas Paspan. Setelah diberikan intervensi senam, rata-rata kadar gula darah puasa menjadi 110,85 mg/dl, dengan median 112,00 mg/dl, standar deviasi 6,75 mg/dL, nilai minimum 97 mg/dl dan maksimum 124 mg/dl.Karena nilai p lebih kecil dari 0,05, maka terdapat perbedaan yang bermakna secara statistik antara kadar gula darah puasa sebelum dan sesudah diberikan intervensi senam. Hasil penelitian menunjukkan bahwa senam dapat menjadi salah satu bentuk aktivitas fisik yang mendukung upaya pengendalian kadar gula darah pada peserta Prolanis *Diabetes Mellitus*. Meskipun demikian, pengelolaan diabetes mellitus perlu dilakukan secara komprehensif melalui kombinasi aktivitas fisik, pengaturan pola makan, kepatuhan terhadap pengobatan, pemantauan kadar gula darah, edukasi kesehatan, serta pemeriksaan kesehatan secara berkala.

Kata Kunci: *Diabetes Mellitus*, Senam, Kadar Gula Darah Puasa, Prolanis.

ABSTRACT

MUHAMMADIYYAH UNIVERSITY OF JEMBER

UNDERGRADUATE NURSING STUDY PROGRAM

FACULTY OF HEALTH SCIENCES

Thesis, August 2026
Wulansari

THE EFFECT OF EXERCISE ON FASTING BLOOD GLUCOSE LEVELS AMONG PROLANIS PARTICIPANTS WITH DIABETES MELLITUS AT PASPAN PUBLIC HEALTH CENTER, BANYUWANGI REGENCYABSTRAK

Diabetes mellitus is a chronic disease that requires continuous management. One non-pharmacological approach that can be implemented is physical activity through exercise. Physical activity can increase glucose utilization by muscles and improve insulin sensitivity, thereby potentially reducing blood glucose levels. This study aimed to determine the effect of exercise on fasting blood glucose levels among Prolanis participants with Diabetes Mellitus at Paspan Public Health Center. This study used a pre-experimental design with a one-group pretest-posttest approach involving 47 respondents. Fasting blood glucose levels were measured before and after the exercise intervention. Data were analyzed using the Paired Samples t-test with a significance level of α = 0.05. The mean fasting blood glucose level before exercise was 128.00 mg/dL, while after exercise it decreased to 110.85 mg/dL, representing a mean reduction of 17.15 mg/dL. The results of the Paired Samples t-test showed t = 27.712; df = 46; p < 0.001. There was a statistically significant difference in fasting blood glucose levels before and after the exercise intervention among Prolanis participants with Diabetes Mellitus at Paspan Public Health Center. The results indicated that exercise may serve as a form of physical activity that supports blood glucose control among individuals with Diabetes Mellitus. Nevertheless, diabetes mellitus management should be conducted comprehensively through a combination of physical activity, dietary management, adherence to medication, regular blood glucose monitoring, health education, and routine health examinations.

Keywords: Diabetes Mellitus, Exercise, Fasting Blood Glucose, Prolanis.