

ABSTRAK

Nama : Bazlina Zahra Wahyusaputri (1102016043)
Program Studi : Kedokteran
Judul : Efektivitas Senam Terstruktur dalam Monitoring HbA1c serta Pengaruhnya terhadap Hormon Kortisol pada Penderita DM Tipe 2 pada Anggota Persadia Rs.Islam Jakarta Pondok Kopi dan Tinjauannya Menurut Pandangan Islam

Latar Belakang : Diabetes melitus (DM) merupakan kelompok penyakit metabolik dengan karakteristik hiperglikemia yang terjadi karena kelainan sekresi insulin, kerja insulin, atau keduanya. Prevalensi diabetes di seluruh dunia telah meningkat jauh selama dua dekade terakhir dan menurut *International Federation Projects* pada tahun 2030 penderita diabetes melitus akan mencapai 438 juta orang. Diabetes dapat terkendali dengan baik bila kadar profil lipid dan kadar HbA1c mencapai kadar yang diharapkan untuk mengurangi risiko komplikasi. Senam diabetes berupa senam aerobik *low impact* dapat menghambat dan memperbaiki faktor risiko penyakit kardiovaskular yang banyak terjadi pada penderita DM. Islam menganjurkan kepada umatnya agar menjadi manusia yang sehat dan kuat, baik secara jasmani maupun rohani. Islam memerintahkan manusia memerhatikan faktor-faktor yang dapat mengantarkan mereka menuju hidup sehat, salah satunya dengan berolahraga dan menjaga pola makan.

Metode : Rancangan penelitian berupa *one group pretest-posttest design*. Perlakuan berupa senam yang dilakukan 60 menit per minggu dan diobservasi selama 3 bulan. Populasi dan sampel adalah anggota Persadia di RS.Islam Pondok Kopi Jakarta berusia 49-82 tahun. Sampel dipilih dengan menggunakan *purposive sampling*. Pengambilan data dilakukan dengan cara mengambil serum darah responden dan diperiksa hasilnya di laboratorium.

Hasil : Hasil dari penelitian ini didapatkan perbedaan kadar HbA1c sebelum dan sesudah intervensi senam signifikan karena nilai $P < 0.05$ (P value = 0.001). Kadar trigliserida juga didapatkan perbedaan rata-rata kadar trigliserida dalam darah sebelum dengan sesudah dilakukan kegiatan senam terstruktur dan perbedaan ini secara statistik bermakna ($p=0.04$), maka dapat dikatakan bahwa terjadi penurunan kadar HbA1c dan trigliserida pada responden setelah melakukan kegiatan senam terstruktur. Hasil uji statistik pada kadar HDL didapatkan peningkatan rata-rata kadar HDL dalam darah sesudah dilakukan kegiatan senam terstruktur, namun perbedaan rata-rata ini secara statistik tidak begitu bermakna ($p=0.08$). Perbedaan rata-rata kadar LDL dalam darah sebelum dengan sesudah dilakukan kegiatan senam terstruktur juga didapatkan berbeda, namun perbedaan ini secara statistik tidak bermakna ($p=0.8$), maka dapat dikatakan bahwa tidak ada pengaruh kegiatan senam terstruktur terhadap penurunan kadar LDL.

Kesimpulan : Terdapat pengaruh senam terstruktur terhadap penurunan kadar HbA1c dan kadar trigliserida pada penderita DM tipe 2 anggota Persadia RS Islam Jakarta Pondok Kopi. Secara statistik tidak terdapat pengaruh senam terstruktur terhadap peningkatan kadar HDL ($p=0,08$), namun rerata kadar HDL sesudah senam mengalami peningkatan meski tidak terlalu signifikan, begitu juga kadar LDL tidak terdapat pengaruh senam terstruktur terhadap penurunan kadar LDL pada penderita DM tipe 2 anggota persadia RS Islam Jakarta Pondok Kopi ($p=0,8$).

Kata Kunci : *Senam Terstruktur, Diabetes Melitus tipe 2, HbA1c, Profil Lipid*

ABSTRACT

Name : Bazlina Zahra Wahyusaputri (1102016043)
Faculty : Medicine
Title : *The Effectiveness Of Structured Exercise In Monitoring Hba1c And Its Effect On Lipid Profile In Patients With Type 2 Diabetes mellitus In Persadia Members Of Jakarta Islamic Hospital Pondok Kopi And Review by Islamic Views*

Background : *Diabetes mellitus (DM) is a group of metabolic diseases characterized by hyperglycemia that occurs due to abnormal insulin secretion, insulin action, or both. The prevalence of diabetes worldwide has increased considerably over the last two decades and according to the International Federation Projects in 2030 people with diabetes will reach 438 million people. Diabetes can be well controlled if lipid profile levels and HbA1c levels are under control. Diabetes exercise in the form of low impact aerobic exercise can inhibit and improve the risk factors for cardiovascular disease that often occurs in people with DM, help improve lipid profile by maintaining total cholesterol, LDL, triglycerides within normal limits, and raising HDL. Islam encourages its people to become healthy and strong as a human being, both physically and spiritually. Also to pay attention to the factors that can lead them to a healthy life, by exercising and maintaining a healthy diet.*

Method : *This study uses a non probability sampling technique with the research method of one group pretest posttest design. The number of samples in this study is 13 patients with type 2 DM members of Persadia in Islamic Hospital Jakarta Pondok Kopi. Primary data were collected using blood serum and questionnaires before and after exercise intervention for 3 months.*

Results : *The results of this study found that the difference in HbA1c levels before and after physical activity intervention was significant because the P value <0.05 (P value = 0.001). Triglyceride levels before and after structured physical activity are also has differences in average levels and this difference was statistically significant (p = 0.04), so it leads that there was a decrease in HbA1c and triglyceride levels in patients with type 2 DM after conducting structured physical activities. The results of statistical tests on HDL levels showed an average increase in HDL levels after structured physical activities, but this average difference was not statistically significant (p = 0.08). Differences in average LDL levels in blood before and after structured physical activities were also found to be different, but this difference was not statistically significant (p = 0.8), so it can be said that there were no effect of structured physical activities on decreasing LDL levels.*

Conclusion: *There is an effect of structured physical activity on decreasing HbA1c levels and triglyceride levels in patients with type 2 diabetes member of Persadia Jakarta Islamic Hospital Pondok Kopi. Statistically there was no effect of structured physical activity on increasing HDL levels (p = 0.08), but the mean HDL levels after physical activity had increased although not too significant, otherwise there was no effect of structured physical activity on reducing LDL levels in patients with type 2 diabetes member of Persadia Jakarta Islamic Hospital Pondok Kopi (p = 0.8).*

Keywords: *Structured Physical Activity, Type 2 Diabetes Mellitus, HbA1c, Lipid Profile*