# ABSTRAK

Bunga Cahya Aprilia Nisa (2026). *Implementasi Senam Kaki Diabetik Dan Rendam Air Hangat Dalam Meningkatkan Sirkulasi Perifer Berdasarkan Nilai Ankle Brachial Index (Abi) Pada Pasien Diabetes Melitus.* Karya Tulis Ilmiah Studi Kasus, Program Studi DIII Keperawatan Malang, Jurusan Keperawatan, Politeknik Kesehatan Kemenkes Malang. Pembimbing: Dr. Susi Milwati S.Kp., M.Pd

Diabetes melitus (DM) dapat menyebabkan gangguan sirkulasi perifer yang meningkatkan risiko neuropati diabetik, ulkus diabetikum, hingga amputasi. Kombinasi senam kaki diabetik dan rendam air hangat merupakan upaya nonfarmakologis untuk meningkatkan sirkulasi perifer yang dinilai menggunakan Ankle Brachial Index (ABI). Penelitian ini menggunakan desain studi kasus deskriptif dengan tujuan untuk mengetahui penerapan kombinasi senam kaki diabetik dan rendam air hangat terhadap nilai ABI pada dua pasien Diabetes Melitus Tipe 2 di wilayah kerja Puskesmas Arjuno Kota Malang pada tanggal 27 April–10 Mei 2026. Implementasi dilakukan setiap hari selama 14 hari dengan pengukuran ABI sebanyak tujuh kali. Hasil menunjukkan peningkatan nilai ABI pada kedua subjek setelah implementasi. Pada subjek 1 (Ny. D), ABI kanan meningkat dari 0,88 (abnormal) menjadi 0,98 (borderline) dan ABI kiri dari 0,90 (abnormal) menjadi 0,99 (borderline). Sedangkan subjek 2 (Ny. R), ABI kanan meningkat dari 0,91 (borderline) menjadi 1,02 (normal) dan ABI kiri dari 0,93 (borderline) menjadi 1,02 (normal). Setelah dilakukan tindakan senam kaki diabetik dan rendam air hangat, dapat meningkatkan nilai ABI pada kedua subjek. Kombinasi tersebut dapat dipergunakan untuk meningkatkan nilai ABI. Untuk penelitian selanjutnya dalam implementasi senam kaki diabetik dan rendam air hangat agar diperoleh hasil pengukuran ABI yang lebih akurat, disarankan menggunakan doppler vaskular.

Kata Kunci: *Ankle Brachial Index* (ABI), Diabetes Melitus, Rendam Air Hangat, Senam Kaki Diabetik, Sirkulasi Perifer.

# ABSTRACT

Bunga Cahya Aprilia Nisa (2026). The Implementation of Diabetic Foot Exercises and Warm Water Foot Soaking in Improving Peripheral Circulation Based on the Ankle Brachial Index (ABI) in Patients with Diabetes Mellitus. Scientific Paper of Case Study, Diploma III Nursing Program, Department of Nursing, Health Polytechnic of the Ministry of Health Malang. Advisor: Dr. Susi Milwati, S.Kp., M.Pd.

Diabetes mellitus (DM) can impair peripheral circulation due to chronic hyperglycemia, increasing the risk of diabetic neuropathy, diabetic ulcers, and amputation. The combination of diabetic foot exercises and warm water foot soaking is a non-pharmacological intervention to improve peripheral circulation, as assessed using the Ankle Brachial Index (ABI). This study employed a descriptive case study design to determine the implementation of the combination of diabetic foot exercises and warm water foot soaking on ABI values in two patients with Type 2 Diabetes Mellitus in the working area of Puskesmas Arjuno, Malang City, from April 27 to May 10, 2026. The intervention was performed daily for 14 days, with ABI measured seven times. Results showed improved ABI values in both subjects. In Subject 1 (Mrs. D), the right ABI increased from 0.88 (abnormal) to 0.98 (borderline), and the left ABI from 0.90 (abnormal) to 0.99(borderline). In Subject 2 (Mrs. R), the right ABI increased from 0.91 (borderline) to 1.02 (normal), and the left ABI from 0.93 (borderline) to 1.02 (normal). The implementation of diabetic foot exercises combined with warm water foot soaking improved ABI values in both subjects. This combination may be used to improve ABI values. For future studies implementing diabetic foot exercises and warm water foot soaking, it is recommended that more accurate ABI measurement results be obtained using a vascular Doppler.

Keywords: Ankle Brachial Index (ABI), Diabetes Mellitus, Warm Water Foot Soaking, Diabetic Foot Exercises, Peripheral Circulation