

**THE EFFECT OF COMBINATION WARM WATER FOOT SOAKING
THERAPY AND ACTIVE LOWER ROM ON CHANGES IN ANKLE
BRACHIAL INDEX VALUES IN TYPE 2 PATIENTS WITH DIABETES
MELLITUS IN THE WORKING AREA OF POLOWIJEN PUBLIC
HEALTH CENTER IN MALANG CITY**

Anggrelya Elza Sandrina¹, Maria Diah Ciptaningtyas²
Applied Bachelor of Nursing Program, Department of Nursing, Poltekkes
Kemenkes Malang
Email: anggrelya94@gmail.com

ABSTRACT

Diabetes mellitus is a chronic metabolic disease that can lead to peripheral blood circulation disorders, which are indicated by a decrease in the Ankle Brachial Index (ABI) value. Warm water foot soaking and Active Lower Range of Motion (ROM) exercises are non-pharmacological therapies commonly used to improve peripheral circulation. However, studies examining the combined use of these two therapies on changes in ABI values are still limited. This study aimed to determine the effect of the combination of warm water foot soaking therapy and Active Lower ROM on changes in Ankle Brachial Index values among patients with type 2 diabetes mellitus in the working area of Polowijen Public Health Center, Malang City. This research employed a quasi-experimental method with a pre-post test design. A total of 68 respondents were divided into treatment and control groups. Data were analyzed using the Paired Sample t-test and Independent Sample t-test. The results of the Paired Sample t-test showed a significant effect in the treatment group ($p = 0.000$; $p < 0.05$) and a non-significant result in the control group ($p = 0.072$; $p > 0.05$). Furthermore, the Independent Sample t-test showed a significant difference between the treatment and control groups in the post-test results ($p = 0.004$; $p < 0.05$). In conclusion, the combination of warm water foot soaking therapy and Active Lower ROM significantly affects changes in the Ankle Brachial Index values among patients with type 2 diabetes mellitus. Therefore, Public Health Centers are expected to consider implementing this combination therapy as a supportive non-pharmacological intervention to improve peripheral blood circulation in patients with type 2 diabetes mellitus.

Keywords: diabetes mellitus, Ankle Brachial Index, warm water foot soaking, Active Lower ROM