

**PROGRAM STUDI S1 KEPERAWATAN FAKULTAS KEPERAWATAN
INSTITUT KESEHATAN PAYUNG NEGERI PEKANBARU**

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Perbandingan Efektivitas *Diabetic Foot Exercise* Dan *Buerger Allen Exercise* Terhadap
Sensitivitas Kaki Pada Pasien Diabetes Mellitus Di UPTD Puskesmas Air Molek

Xv + 52 Halaman + 7 Tabel + 1 Skema + 10 Gambar + 16 Lampiran

ABSTRAK

Diabetes mellitus merupakan penyakit kronis yang dapat menyebabkan neuropati diabetik dan penurunan sensitivitas kaki, sehingga meningkatkan risiko terjadinya komplikasi kaki diabetik. Intervensi nonfarmakologis yang dapat dilakukan untuk meningkatkan sensitivitas kaki adalah *Diabetic Foot Exercise* (DFE) dan *Buerger Allen Exercise* (BAE). Penelitian ini bertujuan menganalisis perbandingan efektivitas DFE dan BAE terhadap sensitivitas kaki pada pasien diabetes mellitus di UPTD Puskesmas Air Molek. Penelitian menggunakan desain *quasi experiment* dengan pendekatan *two group pre-test and post-test*. Sampel berjumlah 40 responden yang dibagi menjadi kelompok DFE dan BAE, masing-masing 20 responden, dengan teknik *purposive sampling*. Sensitivitas kaki diukur menggunakan *monofilament* 10 g. Analisis data menggunakan *Paired Sample t-test*, *Wilcoxon Signed Rank Test*, dan *Mann-Whitney U Test*. Hasil penelitian menunjukkan terdapat peningkatan sensitivitas kaki yang signifikan setelah diberikan DFE ($p < 0,001$) dan BAE ($p < 0,001$). Hasil uji *Mann-Whitney U* menunjukkan terdapat perbedaan efektivitas antara kedua intervensi dengan $p = 0,036$. Nilai mean rank BAE sebesar 23,98 lebih tinggi dibandingkan DFE sebesar 17,03, sehingga BAE lebih efektif dalam meningkatkan sensitivitas kaki. Disarankan tenaga kesehatan di UPTD Puskesmas Air Molek memberikan edukasi dan mendorong penerapan latihan secara rutin sebagai upaya pencegahan neuropati diabetik dan meningkatkan kemampuan pasien melakukan perawatan kaki secara mandiri harian. Peneliti selanjutnya disarankan menggunakan sampel lebih besar, durasi intervensi seragam, serta mempertimbangkan faktor lain yang memengaruhi sensitivitas kaki.

Kata Kunci : Sensitivitas Kaki, Diabetes Mellitus, *Diabetic Foot Exercise*
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A Comparison of the Effectiveness of Diabetic Foot Exercise and Buerger Allen Exercise on Foot Sensitivity in Patients with Diabetes Mellitus at UPTD Puskesmas Air Molek

Xv + 52Pages + 7 Tables + 1 Scheme + 10 Figures + 16 Appendixes

ABSTRACT

Diabetes mellitus is a chronic disease that can cause diabetic neuropathy and decreased foot sensitivity, thereby increasing the risk of diabetic foot complications. Non-pharmacological interventions that can be used to improve foot sensitivity include Diabetic Foot Exercise (DFE) and Buerger Allen Exercise (BAE). This study aimed to analyze the comparative effectiveness of DFE and BAE on foot sensitivity among patients with diabetes mellitus at UPTD Puskesmas Air Molek. This study used a quasi-experimental design with a two-group pre-test and post-test approach. The sample consisted of 40 respondents, divided into DFE and BAE groups, with 20 respondents in each group, selected using purposive sampling. Foot sensitivity was measured using a 10-g monofilament. Data were analyzed using the Paired Sample t-test, Wilcoxon Signed Rank Test, and Mann–Whitney U Test. The results showed a significant increase in foot sensitivity after DFE ($p < 0.001$) and BAE ($p < 0.001$). The Mann–Whitney U test showed a significant difference in effectiveness between the two interventions ($p = 0.036$). The mean rank for BAE was 23.98, which was higher than that for DFE at 17.03, indicating that BAE was more effective in improving foot sensitivity. It is recommended that healthcare professionals at UPTD Puskesmas Air Molek provide education and encourage patients to practice these exercises regularly as an effort to prevent diabetic neuropathy and improve patients' ability to perform daily foot care independently. Future researchers are recommended to use larger sample sizes, apply standardized intervention durations, and consider other factors that may affect foot sensitivity.

Keywords : foot sensitivity, diabetes mellitus, Diabetic Foot Exercise,
Buerger Allen Exercise

Reference : 27 (2016-2025)