

MODEL PENCEGAHAN PROGRESIFITAS OSTEOARTRITIS GENU PADA LANSIA

Arneliwati¹

¹Fakultas Keperawatan, Universitas Riau, Indonesia

Article Info	ABSTRAK
Article History: Received 21/08/2026 Revised - Accepted 02/09/2026 Keywords: Model ARNELI Osteoarthritis Genu Lansia Progresifitas Fungsi Fisik	Osteoarthritis genu pada lansia merupakan masalah degeneratif yang berdampak pada nyeri, kekakuan sendi, keterbatasan aktivitas, penurunan mobilitas, dan kualitas hidup. Pencegahan progresifitas osteoarthritis genu memerlukan intervensi yang mengintegrasikan edukasi, aktivitas fisik aman, nutrisi, latihan, manajemen diri, dan dukungan keluarga. Penelitian ini bertujuan mengembangkan dan mengevaluasi Model ARNELI sebagai model pencegahan progresifitas osteoarthritis genu pada lansia. Penelitian menggunakan desain mixed methods dengan pendekatan ADDIE yang meliputi Analysis, Design, Development, Implementation, dan Evaluation. Tahap analisis dilakukan melalui studi kualitatif dan kuantitatif untuk mengidentifikasi kebutuhan, faktor risiko, dan hambatan pencegahan progresifitas. Model ARNELI dikembangkan melalui enam komponen, yaitu Aktivitas Fisik Aman, Range of Motion dan latihan ringan, Nutrisi seimbang, Edukasi osteoarthritis genu, Latihan aktivitas aman, serta Involvement keluarga dan monitoring. Implementasi dilakukan pada 120 lansia, terdiri atas 60 responden kelompok intervensi dan 60 responden kelompok kontrol, dengan pengukuran sebelum intervensi, minggu ke-8, dan minggu ke-18. Hasil menunjukkan rerata nyeri menurun dari 5,98 menjadi 4,09, kekakuan dari 4,44 menjadi 2,96, dan fungsi fisik WOMAC dari 45,18 menjadi 33,34 pada minggu ke-18. Analisis repeated measures menunjukkan interaksi waktu dan kelompok yang signifikan pada kekakuan dan fungsi fisik, sedangkan penurunan nyeri belum berbeda bermakna antar kelompok. Evaluasi proses menunjukkan keterlaksanaan intervensi yang baik, disertai peningkatan pengetahuan, aktivitas fisik, pola makan, manajemen diri, kepatuhan latihan, serta keterlibatan dan dukungan keluarga selama pelaksanaan program sampai akhir masa pemantauan. Model ARNELI efektif menurunkan kekakuan, memperbaiki fungsi fisik, dan berpotensi diterapkan pada pelayanan kesehatan primer berbasis komunitas di layanan primer.
	ABSTRACT <i>Knee osteoarthritis in older adults is a degenerative condition associated with pain, joint stiffness, activity limitations, reduced mobility, and impaired quality of life. Preventing knee osteoarthritis progression requires interventions that integrate education, safe physical activity, nutrition, exercise, self-management, and family support. This study aimed to develop and evaluate the ARNELI Model as a model for preventing knee osteoarthritis progression in older adults. The study used a mixed-methods design with the ADDIE approach, comprising Analysis, Design, Development, Implementation, and Evaluation. The analysis phase included qualitative and quantitative studies to identify needs, risk factors, and barriers to progression</i>

prevention. The ARNELI Model was developed through six components: Safe Physical Activity, Range of Motion and light exercise, Balanced Nutrition, Knee Osteoarthritis Education, Safe Activity Training, and Family Involvement and monitoring. Implementation involved 120 older adults, consisting of 60 participants in the intervention group and 60 participants in the control group, with measurements conducted before the intervention, at week 8, and at week 18. Mean pain scores decreased from 5.98 to 4.09, stiffness scores from 4.44 to 2.96, and WOMAC physical function scores from 45.18 to 33.34 at week 18. Repeated-measures analysis showed significant time-by-group interactions for stiffness and physical function, whereas pain reduction did not differ significantly between groups. Process evaluation showed good intervention implementation, accompanied by improvements in knowledge, physical activity, dietary patterns, self-management, exercise adherence, and family involvement and support throughout the program until the end of follow-up. The ARNELI Model effectively reduced stiffness, improved physical function, and showed potential for implementation in community-based primary health care services

**Corresponding Author: (arneliwati@lecturer.unri.ac.id)*
