

**PENGARUH *SLOW DEEP BREATHING EXERCISE* DAN MOBILISASI
SANGKAR THORAK TERHADAP PENGEMBANGAN SANGKAR THORAK
PADA PEROKOK AKTIF**

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ABSTRAK

Latar Belakang: Perokok aktif berisiko mengalami penurunan fungsi pernapasan akibat berkurangnya elastisitas jaringan paru dan terbatasnya ekspansi toraks. Intervensi fisioterapi seperti *Slow Deep Breathing Exercise* dan Mobilisasi Sangkar Thorak diketahui dapat meningkatkan ekspansi toraks dengan memperbaiki mekanisme pernapasan.

Tujuan: Penelitian ini bertujuan untuk mengetahui pengaruh kombinasi *Slow Deep Breathing Exercise* dan Mobilisasi Sangkar Thorak terhadap ekspansi toraks pada perokok aktif usia 18–45 tahun.

Metode Penelitian: Desain penelitian yang digunakan adalah kuasi-eksperimen dengan pendekatan *pre-test* dan *post-test control group*. Sebanyak 30 responden dibagi secara merata menjadi dua kelompok, yaitu kelompok eksperimen yang mendapatkan kombinasi *Slow Deep Breathing Exercise* dan *Mobilisasi Sangkar Thorak*, serta kelompok kontrol yang hanya mendapatkan *Slow Deep Breathing Exercise*. Intervensi dilakukan selama 14 hari dengan pengukuran sebelum dan sesudah perlakuan. Analisis data menggunakan *paired sample t-test* dan *independent t-test*.

Hasil: Hasil penelitian menunjukkan peningkatan signifikan pada ekspansi toraks di kedua kelompok ($p = 0,000$), dengan peningkatan yang lebih besar pada kelompok eksperimen ($p = 0,000$).

Kesimpulan: Kombinasi *Slow Deep Breathing Exercise* dan *Mobilisasi Sangkar Thorak* lebih efektif meningkatkan ekspansi toraks dibandingkan dengan *Slow Deep Breathing Exercise* saja pada perokok aktif usia 18–45 tahun.

Kata kunci: *Slow Deep Breathing Exercise*, Mobilisasi Sangkar Thorak, Ekspansi Toraks, Perokok Aktif, Fisioterapi Pernapasan.

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**THE EFFECT OF SLOW DEEP BREATHING EXERCISE AND THORACIC
CAGE MOBILIZATION ON THORACIC CAGE DEVELOPMENT IN
ACTIVE SMOKERS**

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ABSTRACT

Background: Active smokers are at risk of decreased respiratory function due to reduced lung tissue elasticity and limited thoracic expansion. Physiotherapy interventions such as Slow Deep Breathing Exercise and Thoracic Cage Mobilization have been shown to improve chest expansion by enhancing respiratory mechanics.

Purpose: This study aimed to determine the effect of combining Slow Deep Breathing Exercise and Thoracic Cage Mobilization on thoracic expansion in active smokers aged 18–45 years.

Methods: A quasi-experimental design with a pre-test and post-test control group approach was employed. A total of 30 participants were equally divided into two groups: the experimental group received a combination of Slow Deep Breathing Exercise and Thoracic Cage Mobilization, while the control group received Slow Deep Breathing Exercise only. Interventions were conducted over 14 days with measurements taken before and after the intervention. Data were analyzed using paired sample t-test and independent t-test.

Results: The results showed a significant increase in thoracic expansion in both groups ($p = 0.000$), with a greater improvement observed in the experimental group ($p = 0.000$).

Conclusion: The combination of Slow Deep Breathing Exercise and Thoracic Cage Mobilization is more effective in enhancing thoracic expansion compared to Slow Deep Breathing Exercise alone in active smokers aged 18–45 years.

Keywords: Slow Deep Breathing Exercise, Thoracic Cage Mobilization, Chest Expansion, Active Smokers, Respiratory Physiotherapy.

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