

ABSTRACT

ANALYSIS OF THE RELATIONSHIP BETWEEN CHEST EXPANSION AND PEAK EXPIRATORY FLOW RATE (PEFR) IN THE ELDERLY COMMUNITY OF UPRIGHT YOGA LAMPUNG

By

MAULANA IDHAM LUTFI

Background: The aging process in the elderly often results in a decline in respiratory function, stiffness of the chest wall, and reduced rib bone flexibility. Peak Expiratory Flow Rate (PEFR) examination is an indicator that reflects the airflow in the large airways, providing an overview of respiratory effort and indirectly assessing chest wall mobility and respiratory muscle strength during chest expansion. The decline in physiological function due to aging prompts adaptive capabilities to compensate for it, one of which is through yoga, which can enhance respiratory muscle efficiency. This study aims to determine the influence of chest expansion on PEF in the elderly community of Upright Yoga Lampung.

Methods: This study is analytical observational research with a cross-sectional design. Data were obtained through direct chest expansion measurements using a centimeter tape and PEFR using a peak flow meter. The total sample size in this study was 49 respondents. The data was subsequently processed and analyzed through univariate and bivariate methods.

Results: The statistical test results indicate that there is a relationship between chest expansion at all three locations and peak expiratory flow (at location 1 with $p=0.000$ and $r=0.494$, at location 2 with $p=0.000$ and $r=0.544$, at location 3 with $p=0.000$ and $r=0.460$).

Conclusion: There is a significant relationship with a moderate positive correlation between chest expansion and peak expiratory flow rate in the elderly community of Upright Yoga Lampung.

Keywords: Chest Expansion, Elderly, Peak Expiratory Flow Rate

ABSTRAK

ANALISIS HUBUNGAN EKSPANSI DADA TERHADAP ARUS PUNCAK EKSPIRASI (APE) PADA LANSIA KOMUNITAS UPRIGHT YOGA LAMPUNG

OLEH

MAULANA IDHAM LUTFI

Latar Belakang: Penuaan pada lansia sering menyebabkan penurunan fungsi pernapasan dan kekakuan dinding dada serta kurangnya fleksibilitas tulang rusuk. Pemeriksaan Arus Puncak Ekspirasi (APE) adalah indikator yang mencerminkan aliran saluran udara besar, memberikan gambaran usaha pernapasan, dan secara tidak langsung menilai mobilitas dinding dada serta kekuatan otot paru pada ekspansi dada. Penurunan fungsi fisiologis akibat penuaan mendorong kemampuan adaptasi untuk mengkompensasi hal tersebut, salah satunya melalui yoga yang dapat meningkatkan efisiensi otot pernapasan. Penelitian ini bertujuan untuk mengetahui pengaruh ekspansi dada terhadap APE pada lansia komunitas Upright Yoga Lampung.

Metode: Penelitian ini merupakan penelitian observasional analitik berdesain *cross sectional*. Data didapatkan dari pengukuran secara langsung ekspansi dada menggunakan pita sentimeter dan APE menggunakan *peak flow meter*. Jumlah sampel pada penelitian ini yaitu 49 responden. Data kemudian diolah dan dianalisis secara univariat dan bivariat.

Hasil: Hasil uji statistik menunjukkan bahwa terdapat hubungan antara ekspansi dada pada ketiga lokasi dengan APE (pada lokasi 1 dengan $p=0,000$ dan $r=0,494$, pada lokasi 2 dengan $p=0,000$ dan $r=0,544$, pada lokasi 3 dengan $p=0,000$ dan $r=0,460$)

Simpulan: Terdapat hubungan yang bermakna dengan korelasi positif sedang antara ekspansi dada dengan arus puncak ekspirasi pada lansia Komunitas Upright Yoga Lampung

Kata Kunci: Arus Puncak Ekspirasi, Ekspansi Dada, Lansia