

ABSTRAK
THE EFFECT OF PURSED-LIP BREATHING ON RESPIRATORY RATE IN
BRONCHIAL ASTHMA PATIENTS AT RSI SAKINAH MOJOKERTO

By :

IMELDA PUTRI PRATAMA

Bronchial asthma is a chronic inflammatory airway disease that causes bronchial narrowing, thereby increasing the respiratory rate (RR). An elevated RR indicates a ventilation impairment requiring non-pharmacological management. One such intervention is the Pursed Lips Breathing (PLB) technique, which helps prolong the expiratory phase, reduce air trapping, and improve pulmonary ventilation, resulting in more effective breathing. This study aimed to analyze the effect of the Pursed Lips Breathing technique on the respiratory rate of patients with bronchial asthma at RSI Sakinah Mojokerto. A pre-experimental design with a one-group pretest-posttest approach was employed. The study sample consisted of 35 patients with bronchial asthma selected via consecutive sampling over a one-month period. Respiratory rate was measured before and after the PLB intervention using an observation sheet and a stopwatch. Data analysis involved univariate and bivariate methods. Normality testing was conducted using the Shapiro–Wilk test, followed by the Wilcoxon Signed Rank Test. The results showed a mean respondent age of 38.57 ± 12.291 years, with a range of 19–59 years. The mean respiratory rate was 27.31 breaths/minute prior to the intervention and decreased to 23.23 breaths/minute afterward. The Wilcoxon Signed Rank Test yielded a p-value of 0.000 ($p < 0.05$). It is concluded that the Pursed Lips Breathing technique is effective in lowering the respiratory rate of patients with bronchial asthma by improving ventilation, reducing air trapping, and decreasing the work of respiratory muscles. This technique can be implemented as a non-pharmacological nursing intervention for patients with bronchial asthma.

Keywords: Bronchial Asthma, Pursed Lips Breathing, Respiratory Rate

ABSTRAK
**PENGARUH *PURSED LIPS BREATHING* TERHADAP RESPIRATORY
RATE PADA PASIEN ASMA BRONKIAL DI RUANG RAWAT INAP**

SUNAN BONANG RSI SAKINAH MOJOKERTO

OLEH :

IMELDA PUTRI PRATAMA

Asma bronkial merupakan penyakit inflamasi kronis pada saluran napas yang menyebabkan penyempitan bronkus sehingga meningkatkan *respiratory rate* (RR). Peningkatan RR menunjukkan adanya gangguan ventilasi yang memerlukan penanganan nonfarmakologis. Salah satu intervensi yang dapat diberikan adalah teknik *Pursed Lips Breathing* (PLB), yang membantu memperpanjang fase ekspirasi, mengurangi *air trapping*, dan meningkatkan ventilasi paru sehingga frekuensi pernapasan menjadi lebih efektif. Penelitian ini bertujuan untuk menganalisis pengaruh teknik *Pursed Lips Breathing* terhadap *respiratory rate* pada pasien asma bronkial di RSI Sakinah Mojokerto. Penelitian ini menggunakan desain *pre-experimental* dengan pendekatan *one group pretest-posttest design*. Sampel penelitian berjumlah 35 pasien asma bronkial yang dipilih menggunakan teknik *consecutive sampling* selama satu bulan. Pengukuran *respiratory rate* dilakukan sebelum dan sesudah intervensi *Pursed Lips Breathing* menggunakan lembar observasi dan *stopwatch*. Analisis data dilakukan secara univariat dan bivariat. Uji normalitas menggunakan Shapiro–Wilk, kemudian dilanjutkan dengan Wilcoxon Signed Rank Test. Hasil penelitian menunjukkan rata-rata usia responden $38,57 \pm 12,291$ tahun dengan rentang usia 19–59 tahun. Rata-rata *respiratory rate* sebelum intervensi adalah 27,31 kali/menit, sedangkan sesudah intervensi menurun menjadi 23,23 kali/menit. Hasil uji Wilcoxon Signed Rank Test menunjukkan nilai $p\text{-value} = 0,000$ ($p < 0,05$). Disimpulkan bahwa teknik *Pursed Lips Breathing* berpengaruh dalam menurunkan *respiratory rate* pada pasien asma bronkial melalui perbaikan ventilasi, pengurangan *air trapping*, dan penurunan kerja otot pernapasan. Teknik ini dapat dijadikan sebagai intervensi keperawatan nonfarmakologis pada pasien asma bronkial.

Kata kunci: Asma Bronkial, *Pursed Lips Breathing*, *Respiratory Rate*