

THE EFFECT OF THE ACTIVE CYCLE OF BREATHING TECHNIQUE ON OXYGEN SATURATION IN PATIENTS WITH RESPIRATORY SYSTEM DISEASES AT IHC LAVALATTE HOSPITAL

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ABSTRACT

Respiratory system diseases can cause secretion accumulation that interferes with ventilation and decreases oxygen saturation (SpO_2). Active Cycle of Breathing Technique (ACBT) is an active breathing exercise technique aimed at clearing the airway and improving lung function. This study aimed to determine the effect of ACBT on oxygen saturation in patients with respiratory system diseases at Lavalette Hospital. This study used a quasi-experimental design with a non-equivalent control group design. The sample consisted of 24 respondents from a target population of 34 respondents who were divided into an intervention group ($n=12$) and a control group ($n=12$) using a consecutive sampling technique. The independent variable of this study was ACBT, while the dependent variable was oxygen saturation. The intervention group received oxygenation therapy, pharmacological therapy, and ACBT exercises for 3 consecutive days, while the control group received the same therapy without ACBT. The research instruments used observation sheets and pulse oximetry. Data were analyzed using Paired t-test and Independent t-test. The results showed a significant increase in oxygen saturation in the intervention group ($p < 0.001$) with a mean pretest value of 94.625% and posttest value of 97.042%, while the control group showed no significant change ($p = 0.692$) with mean pretest and posttest values of 93.583% and 93.528%, respectively. The mean oxygen saturation on the third day in the intervention group increased by 4.333 points compared to the first day, while the control group increased by 1.084 points. The Independent t-test showed a significant difference between the two groups ($p < 0.001$). ACBT in a 45° position was effective in mobilizing secretions, improving pulmonary ventilation, and increasing oxygen saturation through breathing control to regulate breathing patterns, thoracic expansion exercise to increase lung expansion, and forced expiratory technique to facilitate secretion clearance and open the airway.

Keywords: Active Cycle of Breathing Technique, ACBT, Oxygen Saturation, Respiratory System Diseases.