

Effectiveness of Respiratory Care Bundle (RCB) in Terms of Clinical Parameters, Self-care Efficacy and Quality of Life among COPD Patients: A Feasibility Study

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ABSTRACT

Introduction: Chronic Obstructive Pulmonary Disease (COPD) is a common, preventable and treatable chronic lung disease characterised by persistent airflow limitation and breathing difficulty. It includes conditions such as chronic bronchitis and emphysema, which affect the normal functioning of the lungs and gradually impair respiratory function.

Aim: To evaluate the effectiveness of Respiratory Care Bundle (RCB) in terms of clinical parameters, Self-Care Efficacy and Quality of Life among COPD patients.

Materials and Methods: A quantitative, quasi-experimental study was conducted at MMIMS&R and M.M Super Specialty hospital, Mullana, Ambala, Haryana, using a non-equivalent control group pretest-post-test design. The study was conducted on 10 patients: 5 in experimental group and 5 in comparison group selected using a purposive sampling technique. The experimental group received the respiratory care bundle, consisting of airway clearance techniques and pamphlet-based education from day 2 to day 6. Pretest measurement of clinical parameters, Self-Care Efficacy and Quality of Life was done on day 1 and post-test measurements were done on day 6. Clinical parameters comprised of SpO₂, Heart Rate (HR), Respiratory Rate (RR) and Blood Pressure (BP). Self-care efficacy

was measured using Self-Care Efficacy Scale and Quality of Life was measured using St. George's Respiratory Questionnaire.

Results: Inferential statistics, including an independent t-test was used for data analysis. Both the groups were homogeneous in terms of clinical parameters, Self-Care Efficacy and Quality of Life on day 1. However, significant differences were found in post-test mean score of SpO₂ (96.76±0.85 vs 97.1±0.84), RR (18.00±1.29 vs 18.90±1.43), HR (88.4±4.43 vs 89.0±5.91), Systolic Blood Pressure (SBP) (116.3±7.62 vs 115.12±7.72), Diastolic Blood Pressure (DBP) (73.54±5.64 vs 73.81±5.66), Self-Care efficacy (67.00±4.72 vs 61.00±4.72) and quality of life (41.00±5.21 vs 48.00±4.30) between experimental and comparison groups, respectively. Based on the study findings, the calculated sample size for the final study was 80 participants, including a possible attrition rate.

Conclusion: The findings of the study concluded that the respiratory care bundle was effective in improving clinical parameters, self-care efficacy and quality of life among COPD patients. COPD patients should routinely practice respiratory care bundle at home as a part of their regular lifestyle practices.

Keywords: Airway clearance, Chronic obstructive pulmonary disease, Quality of life, Respiratory care bundle, Self-care efficacy.

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