# EFFECTIVENESS OF INTERVENTIONAL PACKAGE ON PULMONARY FUNCTIONAL PARAMETERS AMONG PATIENTS WITH CHRONIC OBSTRUCTIVE PULMONARY DISEASE ADMITTED IN SELECTED HOSPITAL, LUCKNOW

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***ABSTRACT***

*COPD medicines cannot cure COPD, but they can improve symptoms. Different kinds of COPD medicines are available such as bronchodilators to treat shortness of breath, corticosteroids to prevent COPD flare ups, antibiotics to treat infections and supplemental oxygen to boost up oxygen levels. The research approach used in this study was a quantitative evaluative research approach. The research design used in this study was quasi-experimental design (i.e.) two group pre and post-test design. The study was conducted at Selected Medical College Hospital, Lucknow. It consists of all patients admitted with COPD. The sample size for this study was 600 between the age group of 35 – 75 years. Samples were selected based on the purposive sampling technique.*

***Key Words:*** *COPD medicines, bronchodilators, shortness of breath.*

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**INTRODUCTION**

Chronic obstructive pulmonary disease (COPD) is a preventable and treatable disease, characterized by progressive airflow limitation that is not fully reversible and is associated with an abnormal inflammatory response of the lung to noxious particles and/or gases **[ KF Rabe et al 2007].**

Airway obstruction results in prolonged episodes of coughing and dyspnea (i.e., shortness of breath), exacerbations which can cause fear leading to avoidance of regular activity, causing additional deconditioning that can aggravate dyspnea even further **[JZ Reardon et al 2006].**

COPD is now the third leading cause of death in the United States [National Center for Health Statistics 2007]. Accordingly, *Healthy People 2020* objectives aim to reduce the proportion of adults whose activities are limited due to chronic lung and breathing problems, reduce COPD-related hospitalization rates and reduce COPD-related hospital emergency department visit rates **[U.S. Department of Health and Human Services, "Healthy People 2020].**

Impaired exercise capacity has been shown to be a significant determinant of disease burden, not only in patients with severe and very severe COPD but also in those with moderate disease. **(Van Wetering CR et al 2008)**

Differences in body composition can already be seen in early COPD where patients are not yet considered to have a wasting disorder due to their pulmonary disease. **(Vestbo J, et al 2006)**

Patients with relatively mild symptoms (dyspnoea grade 1–2 as measured by the MRC scale) have been shown to have lower 6-minute walk distance (6MWD), lower fat-free mass and lower health-related quality of life (HRQL) scores than age-matched controls However, few studies have examined the effects of PR in this patient population. **(Spruit M et al 2007)**

**RESEARCH METHODOLOGY**

The research approach used in this study was a quantitative evaluative research approach. The research design used in this study was quasi-experimental design (i.e.) two group pre and post-test design. The study was conducted at Selected Medical College Hospital, Lucknow. It consists of all patients admitted with COPD. The sample size for this study was 600 between the age group of 35 – 75 years. Samples were selected based on the purposive sampling technique

**DATA ANALYSIS AND INTERPRETATION**

**TABLE 1: Comparison of mean in experimental group on COPD with control group N=600.**

| Groups | Pre test | | Post test | | | | | |
|---|---|---|---|---|---|---|---|---|
| | Mean | SD | Mean | SD | Mean Difference | 't' test | Df | T value |
| Experimental Group | 59.40 | 4.83 | 39.26 | 5.19 | 20.14 | 28.45 | 29 | 2 |
| Control Group | 58.53 | 4.89 | 55.05 | 6.10 | 3.48 | 6.07 | 29 | 2 |

Significant at P<0.05

**Table No 2 Comparison of mean in experimental group on MDBS with control group N=600.**

| Groups | Pre test | | Post test | | | | | |
|---|---|---|---|---|---|---|---|---|
| | Mean | SD | Mean | SD | Mean Difference | 't' test | Df | T value |
| Experimental Group | 6.10 | .75 | 2.40 | .62 | 3.70 | 43.49 | 29 | 2 |
| Control Group | 6.00 | .64 | 5.40 | 1 | .60 | 3.27 | 29 | 2 |

Significant at P<0.05

**Table No 3 Comparison of mean in experimental group on Spirometer with control group N=600.**

| Groups | Pre test | | Post test | | | | | |
|---|---|---|---|---|---|---|---|---|
| | Mean | SD | Mean | SD | Mean Difference | 't' test | Df | T value |
| Experimental Group | 2.86 | 1.01 | 4.40 | 1.31 | 1.56 | 14.03 | 29 | 2 |
| Control Group | 2.76 | .91 | 3.16 | .98 | .40 | 2.59 | 29 | 2 |

Significant at P<0.05

**Table No 4 Comparison of mean in experimental group on Chest Expansion with control group. N = 600**

| Groups | Pre test | | Post test | | | | | |
|---|---|---|---|---|---|---|---|---|
| | Mean | SD | Mean | SD | Mean Difference | 't' test | Df | T value |
| Experimental Group | .811 | .26 | 1.46 | .36 | .64 | 15.01 | 29 | 2 |
| Control Group | .75 | .25 | .90 | .28 | .15 | 5.82 | 29 | 2 |

**Table No 5 Comparison of mean in experimental group on Breath Holding Time with control group N=600.**

| Groups | Pre test | | Post test | | | | | |
|---|---|---|---|---|---|---|---|---|
| | Mean | SD | Mean | SD | Mean Difference | 't' test | Df | T value |
| Experimental Group | 13.10 | 2.07 | 19.10 | 3.16 | 6.0 | 15.17 | 29 | 2 |
| Control Group | 12.76 | 1.81 | 13.72 | 2.62 | .96 | 4.86 | 29 | 2 |

**DISCUSSION**

**To assess the effectiveness of interventional package on pulmonary functional parameters among patients with COPD.**

The study findings were congruent with the following studies. Scherer et al, conducted a study of COPD patients to determine the effects of two intervention strategies. They used a quasi-experimental two-group pre-post-test design. 34 patients were included in this study 26 men and eight women were recruited pulmonary rehabilitation programs were provided in two phases. This phasein children 36 sessions of three times a week for 12 weeks. Results showed a significant increase in the training program (P<0.01). They concludedthat self-management and rehabilitation programs improved the quality of life amongpatients with COPD. This study showed a highly statistically significant between experimental &control group.

**CONCLUSION**

These findings will serve as a baseline to assess the effectiveness of interventional package on pulmonary functional parameters among patients with chronic obstructive pulmonary disease

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