

## A Quasi Experimental Study to Assess the Effectiveness of Selected Nursing Interventions on Health Related Quality Of Life and Activities Of Daily Living Among COPD Patients In Selected Tertiary Hospital

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**Abstract:** A study to assess the effectiveness of selected nursing interventions on health related quality of life and activities of daily living among COPD patients in selected tertiary hospital, Chennai, Tamilnadu, India. The aim of the study was to impart the selected nursing interventions applied to the COPD patients in medical and pulmonary wards. The conceptual framework used in this study was Widenbach's Helping art Theory. An Evaluative approach was used for the present study. Using purposive sampling technique 50 samples were selected from Chettinad Hospital and Research Institute, Tamil Nadu, India. The tool used was self administered questionnaire. The collected data was analyzed using descriptive and inferential statistics. The findings of the study revealed a significantly increase in the COPD patients health related quality of life and activities of daily living after given the selected nursing interventions. The mean pre test score was 1867 and the mean post test score was 1861 and the difference between pre test and post test knowledge score was 5.54. Based on the objectives of the study the findings of the level of health related quality of life and activities of daily living among COPD patients shows that increased health related quality of life and activities of daily living. The study shows that the COPD patients in post test were having post score 1861 mean difference 5.54. standard deviation 2.35. p value (0.02). Selected nursing interventions are effective in increasing the health related quality of life and activities of daily living among COPD patients.. The findings of the study revealed that a significantly increased in the post test health related quality of life and activities of daily living after given the selected nursing interventions

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### I. Introduction

Health is given its due importance in Alma-Ata declaration (1978) from this emerged the symbolic goal of WHO-Health for all by the year 2000 AD. "Prevention is better than cure" is a well-known concept in the present world; believe that health is more than a non-disease state. Hence preventive and promotives aspects of health are given more important than curative aspect. Health promotion has defined by the WHO as the process of enabling people to increase control over their own health.

Oxygen is very much important for the human body. Oxygen plays a vital role in breathing processes and in the metabolism of the living organism. The primary purpose of respiratory system is gas exchange which involves the transfer of oxygen and carbon dioxide between the atmosphere and blood. Molecules of oxygen and carbon dioxide are passively exchanged by diffusion between the gaseous external environment and the blood. The exchange process occurs in the alveolar region of the lungs. The respiratory system enables us to produce energy by a continuous supply of oxygen. It is also responsible for eliminating carbon dioxide, a byproduct of cell metabolism, whereas oxygen is necessary for human body function.

There can be various disorders of this respiratory system which can be reversible or irreversible. The major disorders of respiratory system include chronic obstructive pulmonary disease (COPD), Tuberculosis, Pneumonia, Pulmonary Embolism, and Pulmonary Hypertension. The increase in prevalence of long-term conditions (LTCs), largely due to the rising elderly population and lifestyle behaviors is a major public health issue. Globally, the challenge is finding effective health care solutions to manage the rising burden of chronic conditions. The National Health Service (NHS) Improvement Plan sets out the government's strategy for improving care of people with long-term conditions by moving towards a patient-centered approach. In order to manage the chronic condition, The NHS has increased the role that nurses' in the management of individuals with LTCs. Chronic obstructive pulmonary disease (COPD) refers to a condition of chronic airflow limitation. COPD consist of two separate diseases—Chronic Bronchitis (airway disease) and Emphysema (parenchyma disease). COPD also increases the lung cancer. Worldwide, COPD is a leading cause of death and disability. Experts predict that by 2020, it will be the third most common cause of death—up from sixth place in 1990.

COPD has an insidious onset; with symptoms arising only after 50% to 70% of lung function is lost. Lung changes cause increased work of breathing. Persons with COPD lose lung function at two to three times the normal rate. Nursing care for COPD patients focuses on managing symptoms, maximizing the function, and teaching skills to enhance self-care. Appropriate referral of patients to community resources helps to ensure

continuity of high-quality care. Many studies suggest that to help the patients to manage dyspnea, teach them about activities like breathing technique, proper positioning, energy conservation technique that reduce or control it. So, this study intended to identify the effectiveness of selected nursing interventions on health related quality of life and activities of daily living among patients with COPD.

### **Objectives**

- To assess the pretest level of health related quality of life and activities of daily living among patients with COPD in a selected tertiary hospital, Chennai, Tamilnadu.
- Comparison of pre-test and post-test level of health related quality of life and activities of daily living among COPD patients in a selected tertiary hospital, Chennai, Tamilnadu.
- To associate the posttest level of health related quality of life and activities of daily living among patients with COPD with the selected demographic variables in a selected tertiary hospital, Chennai, Tamilnadu.

## **II. Methods**

A quantitative evaluative research approach was considered appropriate for the present study. The research design in this study was quasi experimental study. In this study the independent variable is the selected nursing interventions. In this study, the dependent variable is health related quality of life and activities of daily living among patients with COPD. The attributed variables such as age, gender, educational qualification, occupation of the person, income of the person, duration of hospitalization of the person, duration of illness of the person. The study was conducted in Medical wards, pulmonary wards of Chettinad Hospital and Research Institute, Kelambakkam. The population of the study comprises of all COPD Patients admitted in the Chettinad Hospital and Research Institute. COPD Patients who fulfill the inclusion and exclusion criteria. 50 samples were selected for the study. The technique used was purposive sampling technique.

### **Data Collection Procedure**

The main study was conducted in Medical and pulmonary ward at Chettinad hospital, Kanchipuram (dist), from 16-09-2012 to 16-10-2013. The data collection period was four weeks. The investigator obtained written permission from the Dean.

The investigator introduced him to the respondents to ascertain their cooperation for the study. Later, the investigator collected data from the samples after obtaining their consent. COPD patients who admitted in the medical, pulmonary semi private wards were selected through purposive sampling technique. The pre test health related quality of life and activities of daily living was assessed by standardized St. George respiratory questionnaire for both experimental and control group. Then Selected nursing interventions was given for experimental group COPD patients after pre test. After three days the post test HQRL and ADL was assessed with the same tool for both experimental and control group patients. The data collection procedure was continued till the sample size reached 50. The investigator thanked the COPD patients for their co-operation & support.

### **Data Analysis**

The data of the present study were planned to be analyzed based on specific objectives and hypothesis. The data obtained from 50 COPD patients would be analyzed by using descriptive and inferential statistics as follows:

- Descriptive statistics method such as frequencies and percentage was used to assess the demographic variables and level of health related quality of life and activities of daily living among COPD patients.
- The comparison between the pretest and posttest level of knowledge evaluated by paired t test.
- The association between the level of health related quality of life and activities of daily living and selected demographic variables evaluated by Inferential statistical method i.e. ANOVA .

### **Ethical Consideration**

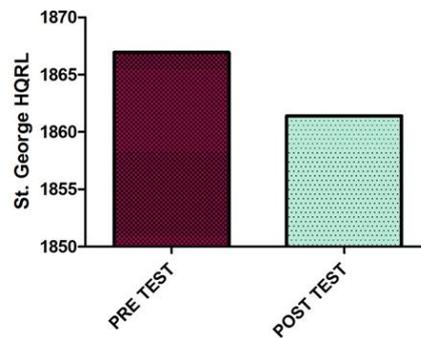
The research proposal was approved by the Institutional Human Ethics Committee of the CARE prior to the conduction of pilot study and main study. A written permission was obtained from the Dean, Chettinad Hospital and Research Institute Kanchipuram dist. The investigator explained about the study to the COPD patients and obtained written consent prior to the data collection.

## **III. Results And Discussion**

### **Comparison Of Pre Test And Post Test Health Related Quality Of Life And Activities Of Daily Living Among Copd Patients In Experimental Group.**

**Table I: Comparison of pre and post-test health related quality of life and activities of daily living among COPD patients in experimental group. N=25**

SAMPLE	MEAN		MEAN DIFFERENCE	STANDARD DEVIATION OF DIFFERENCES	't' VALUE
	PRETEST	POSTTEST			
COPD PATIENTS	1867	1861	5.54	2.35	P value 0.0219 Significant

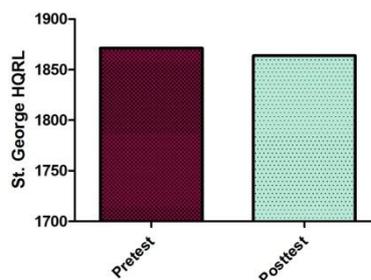


**Table I Figure I** depicts that the mean post test knowledge (1861) was lower than the mean pre test health related quality of life and activities of daily living score (1867). The accepted t value is greater than the table value (p 0.219). The computed t value shows that there is a significant difference between the two mean health related quality of life and activities of daily living score. This indicates that Selected nursing interventions is effective in increasing the health related quality of life and activities of daily living among COPD patients in experimental group.

**Comparison Of Pre Test And Post Test Health Related Quality Of Life And Activities Of Daily Living Among Copd Patients In Control Group.**

**Table II: Comparison of pre and post test health related quality of life and activities of daily living among COPD patients in control group. N=25**

SAMPLE	MEAN		MEAN DIFFERENCE	STANDARD DEVIATION OF DIFFERENCES	't' VALUE
	PRE TEST	POSTTEST			
COPD PATIENTS	1871	1864	7.58	2.75	P value 0.056



**Table II Figure II** depicts that the mean posttest knowledge (1871) was lower than the mean pretest health related quality of life and activities of daily living score (1864). The accepted t value is ( p 0.056). The computed t value shows that there is a significant difference between the two mean health related quality of life and activities of daily living score. This indicates that the control group patients had receiving the medications because of that moderately increasing in the health related quality of life and activities of daily living among COPD patients in control group.

**Comparison Of Pretest And Posttest Health Related Quality Of Life And Activities Of Daily Living Among COPD Patients In A Selected Tertiary Hospital, Chennai, Tamilnadu**

The study result shows difference in the health related quality of life and activities of daily living among COPD patients after giving the selected nursing interventions. The accepted t value is greater than the table value (t=2.32; p<0.05).

A study investigated the effects of diaphragmatic breathing (DB) on ventilation and breathing pattern, seeking to identify predictors of its efficacy in patients with chronic obstructive pulmonary disease (COPD). Twenty-nine patients with moderate and severe COPD were monitored using respiratory inductance plethysmography and metabolic gas analysis. After 4 minutes of natural breathing, subjects completed 2 minutes of DB followed by 4 minutes of natural breathing. Dyspnoea was measured using a visual analogue scale. Diaphragmatic mobility was assessed using chest radiography. A total of 10 subjects with moderate (5) and severe (5) COPD performed DB with asynchronous thoraco-abdominal motion, worsening the dyspnea, and decreasing the gain of tidal volume. In patients with COPD, DB can improve breathing pattern and ventilator efficiency without causing dyspnoea in patients whose respiratory muscular system is preserved.

An experimental study was conducted on the efficacy of pursed lip breathing and diaphragmatic breathing in the rehabilitation of people with COPD. The researchers selected a group of pursed lip breathing and the other group of diaphragmatic breathing. This study was concluded that diaphragmatic breathing has negative and positive effects but pursed lip breathing improved the breathing of people with cope.

All the above studies indicate there was a improvement in health related quality of life and activities of daily living among COPD patients after administering the selected nursing interventions.

### **Nursing Implications**

The findings emerged out of this study has got implications in the field of nursing service, nursing education, nursing administration and nursing research.

### **Nursing Service**

Nurses can provide specific selected nursing interventions to COPD patients. Nurses can conduct continuing nursing education on selected nursing interventions and care of patient with COPD. The study allows for evidence based practice.

### **Nursing Education**

The results of the study can be used in the class rooms for teaching the nursing students about appropriate of selected nursing care of patient with COPD.

### **Nursing Administration**

Nurse administrators can make policies that will include all nursing staff to be actively involved in continuing nursing education in their respective hospital and colleges. Nurse administrators can organize education programme regarding nursing care of patient with COPD.

### **Nursing Research**

There is a need for extensive and intensive research in this area so that strategies for educating nurse regarding various nursing care aspects of patient with COPD. As a nurse researcher nurse should encourage further studies to improve the health care practices, suitable intervention packages need to be developed and their feasibility of implementation and effectiveness require in depth studies. As a nurse researcher, nurse should disseminate the findings through workshops, seminar, symposium and worldwide web.

## **IV. Conclusion**

The result from this study reveals that the health related quality of life and activities of daily living among COPD patients inadequate and moderately adequate. This has to be taken into consideration. In the present scenario nurses provide only basic care to the COPD patients rather implementing specific interventions pertaining to COPD. This may be influenced by various factors like staff inadequacy, workload.

Selected nursing interventions are one of the effective methods in increasing the health related quality of life activities of daily living among COPD patients. The findings of the study revealed a significantly increased in the post test scores of the health related quality of life and activities of daily living among COPD patients after given the selected nursing interventions

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