

Review Article

Effectiveness of (HRQL) and Clinical Outcomes among Chronic Obstructive Pulmonary Disease (COPD) Patients: A Review study

¹Ranjna Singh Bhadauria, ²Tapati Bhattacharya

¹PhD Scholar, ²Professor, Dept. of Medical Surgical Nursing, R.D. Memorial College of Nursing, Bhopal, M.P., India

ABSTRACT:

The aim of this study to review the effectiveness of (HRQL) and Clinical Outcomes among Chronic Obstructive Pulmonary Disease (COPD) Patients. This study was done in the department of medical surgical nursing in R.D. Memorial college of nursing, Bhopal (M.P). Chronic obstructive pulmonary disease (COPD) patients often present considerable individual medical burden in their symptoms, limitations, and well-being that complicate medical treatment. Quality of life (QOL) is an important aspect for measuring the impact of chronic diseases. HRQOL measurement facilitates the evaluation of efficacy of medical interventions and also the detection of groups at risk of psychological or behavioural problems. We conclude that the quality of life is moderate in larger number of patient's population. The most affected domain was the patient's energy level. The patients enrolled had COPD from long period of time which might have affected their answer because they have been habitual with the difficulties arising from COPD.

Keywords: COPD, Health status, Quality of life

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Corresponding author: Ranjna Singh Bhadauria, PhD Scholar, Dept. of Medical Surgical Nursing, R.D. Memorial College of Nursing, Bhopal, M.P., India

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INTRODUCTION

Chronic obstructive pulmonary disease (COPD) is a common preventable and treatable chronic respiratory disease, which affects 210 million people globally. Global and national guidelines exist for the management of COPD. Although these are evidence-based, but alone they are inadequate to address the phenotypic and genotypic heterogeneity in India. Co-existence of many other chronic respiratory diseases can adversely influence the prognosis of COPD. Country like India has a huge burden of COPD with various risk factors and co morbid conditions. However, valid prevalence estimates employing spirometry as the diagnostic tool and data on important co morbid conditions are not available. This study protocol is designed to address this knowledge gap and eventually to build a database to undertake long-term cohort studies to describe the phenotypic and genotypic heterogeneity among COPD patients in India.

According to World Health Organization, globally chronic obstructive pulmonary disease (COPD) is a leading cause of mortality and morbidity.¹ COPD is a

chronic respiratory disease characterized by a waning in lung function over a period of time, along with respiratory symptoms, primarily dyspnea, cough, and sputum production. Consequently, COPD impacts on patients' everyday life; it is linked with a significant economic burden which includes cost of hospitalization, wage loss due to work absence, and restricted physical ability.²

Quality of life (QOL) is an important aspect for measuring the impact of chronic diseases. HRQOL measurement facilitates the evaluation of efficacy of medical interventions and also the detection of groups at risk of psychological or behavioral problems. Many studies have been conducted across the world to study the HRQOL of COPD patients and the factors affecting it using both generic and disease-specific questionnaires.³

STUDY AREA

This study was done in the department of medical surgical nursing, R.D. Memorial College of Nursing, Bhopal (M.P).

COMMON SYMPTOMS OF COPD

Common symptoms of COPD can develop from mid-life onwards, including: breathlessness or difficulty breathing, chronic cough, often with phlegm, tiredness. As the Chronic Obstructive Pulmonary Disease progresses, people find it more difficult to carry out their normal activities of daily living, often due to breathlessness. There may be a considerable financial burden on COPD patients due to limitation of workplace and home productivity, and costs of medical treatment. During flare-ups, people with COPD find their symptoms become much worse and they may need to get extra treatment at home or to be admitted to hospital for emergency care. Severe flare-ups can be life threatening for the COPD patients. People with COPD often associated with other medical conditions such as heart disease, osteoporosis, musculoskeletal disorders, lung cancer, depression and anxiety.

CHRONIC BRONCHITIS AND EMPHYSEMA

Two disease conditions under COPD are chronic bronchitis and emphysema. "Chronic bronchitis is a clinical diagnosis that is defined by excessive secretion of bronchial mucus and is manifested by a daily productive cough for 3 months or more in at least for two consecutive years. Emphysema is a pathologic diagnosis that denotes abnormal permanent enlargement of airspaces distal to the terminal bronchiole, with the destruction of their walls without obvious fibrosis". COPD is globally understood as a severe community health issue. The incidences, disease, and death due to COPD can be predicted to increase in the nations with speedily aging people, even with low smoking rates.⁴

MORTALITY IN COPD

According to recent reports, there is a continuous increase in COPD-related mortality. It is estimated that by the year 2020, COPD will be the third leading cause of death worldwide.⁵

The COPD death rate increased by 147%, this increases in proportion to the higher prevalence rate of smoking in many countries, air pollution and other fuels are key risk factors for COPD. Presence of alveoli damage to Chronic Obstructive Lung Disease can change respiratory physiology, thus affecting overall oxygenation of the body. Further it leads to the bronchial inflammatory process and also causes damage to the terminal bronchiolus wall.⁶

As a result of damage to the bronchial wall of terminalis will occur small bronchial obstruction (bronchiolus terminalis), resulting in closure or obstruction early expiratory phase. Easy air enters the alveoli at the time of inspiration, at the expiration of many trapped in the alveoli and there is air trapping. This is what causes the shortness of breath in COPD patient along with all the consequences. The presence of obstruction at the beginning of expiration process will cause expiratory difficulties and further it will

lead to elongation of the expiratory phase, so that lung functions includes ventilation, gas distribution, gas diffusion and blood perfusion will be impaired.⁷ Shortness of breath is one of the most common symptoms reported by COPD patients Breathing is the most commonly used reason for patients with COPD seeking medical help.⁸

IMPAIRED HEALTH-RELATED QUALITY OF LIFE (HRQOL)

According to the Center for Disease Control, HRQoL is an individual's or a group's perceived physical and mental health over time. HRQoL is defined as physical, psychological, and social domains of health that are unique to every individual. It reflects the health and disease-related aspects of QoL. HRQoL measurements quantify the impact of disease, treatments, and tests on daily life and well-being in a formal and standardized way.⁹ HRQoL has attracted considerable attention over the past decade as impaired health status is an important contributing factor of mortality, severity of disease and hospital admission, and response to diverse treatment options. For patients with symptomatic COPD, information provided by the measures of HRQoL are way more informative and useful when compared with measures of lung function or exercise performance. Thus, inclusion of HRQoL assessment should be a fundamental measure of the conduct and interpretation of clinical studies.¹⁰

Impaired health-related quality of life (HRQoL) affecting physical, psychological and social domains of health among COPD patients, is associated with depression, cognitive dysfunction, and severe hypoxemia, and has shown relationships with age, social class, physiological well-being and social networks.

MANAGEMENT OF COPD

The management of COPD is largely designed at improving airway by using bronchodilator and anti-inflammatory therapy. In spite of the best drug therapy, large number of COPD patients undergoes considerable functional impairment.¹¹ adding to pharmacological treatment, oxygen therapy and pulmonary rehabilitation will be beneficial in bringing down the risk of death due to COPD.¹²

OPERATIONAL DEFINITIONS

COPD Patients - In this study, it refers to the patients with mild to moderate chronic obstructive pulmonary disease.

Effectiveness- In this study, refers to effectiveness refers to the degree to which pulmonary therapies have the expected impact on HRQL and CO experimental groups as measured by SGRQC, BMI, HR, RR, PEFr and PFT.

Pulmonary interventions - In this study, pulmonary interventions refers to the three breathing techniques

that are: Incentive spirometry (IS), Diaphragmatic breathing (DB) and Pursedlip breathing (PLB).

Incentive spirometry- In this study, Incentive spirometry is a breathing technique in which the patient is instructed to inhale deeply by inserting the spirometer mouthpiece into the patient's mouth. The e columns on the spirometer each include a ball in it that can increase when breathed and determine the quantity of flow and/or lung as a motivator. This is done three times a day, at 8 a.m., 1 p.m., and 7p.m., for three minutes each time.

Diaphragmatic breathing - In this study, It's a breathing technique that involves lying on your back with flexed knees or in a semi-position Fowler's and inhaling deeply through the nose for a count of six in the abdomen and lower ribs, keeping the chest still, and exhaling for a count of six while relaxing the abdominal muscles with slightly puckered lips. This is done three times a day, at 8 a.m., 1 p.m., and 7 p.m., for three minutes each time.

Pursed lip breathing - In this study, it refers to the breathing technique of inhaling through the nose for two seconds and expelling through the pursed lips for four seconds by the relaxed neck and shoulder muscles. This is done three times a day, at 8 a.m., 1 p.m., and 7 p.m., for three minutes each time.

Health-related quality of life (HRQL)- In this study, it refers to people's perceived mental, physical, social and emotional functioning that may have been impacted by the disease they are suffering from stresses the effect of health status on quality of life. This is assessed by using the COPD respiratory questionnaire (SGRQ-C) from St. George.

CONCLUSIONS

We conclude that the quality of life is moderate in larger number of patient's population. The most affected domain was the patient's energy level. The patients enrolled had COPD from long period of time which might have affected their answer because they have been habitual with the difficulties arising from COPD.

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