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EFFECTIVENESS OF STRUCTURED TEACHING PROGRAMME ON KNOWLEDGE REGARDING PULMONARY REHABILITATION AMONG PATIENTS WITH CHRONIC OBSTRUCTIVE PULMONARY DISEASE

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ABSTRACT **Background :** Worldwide, about 65 million people have moderate to severe COPD. It's estimated that 12 million more have the disease, but don't know it yet. Most people with COPD are 40 years of age or older. The majority of people with COPD are smokers or former smokers. Smoking is the most important risk factor that can be changed. The aim of the study was to assess the knowledge of COPD patients regarding pulmonary rehabilitation. **Methods:** Pre experimental design of one group pre and post test group design was selected for the study. Evaluative approach was adopted for the study. The participants were 60 COPD patients from the Manjunath hospital, Bangalore. Using Purposive sampling technique samples were selected. A structured knowledge questionnaire was used to collect data from the subjects. **Results:** Findings of the study revealed that in pretest, out of 60 patients, 45(75.0%) had inadequate knowledge, 15(25.0%) had moderate knowledge and none of the patients had adequate knowledge. In post test, out of 60 mothers, 46(76.7%) had adequate knowledge, 14(23.3%) had moderate knowledge and none of the mothers had inadequate knowledge. Enhancement was computed by using paired 't' test at 0.05 level of significance and it was found to be 19.27,indicating that there is a significant improvement in the knowledge on pulmonary rehabilitation among COPD patients. There was statistically significant association found between demographic variables such as age, gender, smoking status and source of information with pre-test level of knowledge on pulmonary rehabilitation. **Conclusion:** The study concluded that the structured teaching program was effective in terms of gain in knowledge of COPD patients regarding pulmonary rehabilitation. For health policy makers, the results of the current study urge for the development of COPD prevention programs failing which the burden of COPD might result in increased mortality, morbidity and economic burden.

KEYWORDS : COPD, Pulmonary rehabilitation

INTRODUCTION

COPD is "a preventable and treatable disease state characterized by airflow limitation that is not fully reversible. The airflow limitation is usually progressive and is associated with an abnormal inflammatory response of the lungs to noxious particles of gases, primarily caused by cigarette smoking. According to an American Lung Association survey, at least half of COPD patients are expected to benefit from rehabilitation.

COPD is caused by long-term exposure to irritating gases or particulate matter, most often from cigarette smoke. People with COPD are at increased risk of developing heart disease, lung cancer and a variety of other conditions. Symptoms include breathing difficulty, cough, mucus (sputum) production and wheezing.

Treatment can ease symptoms, prevent complications, and generally slow disease progression. Bronchodilators are medications that help relax the muscles of the airways. Certain lifestyle changes may also help alleviate symptoms or provide relief such as Quit smoke. Whenever possible, avoid secondhand smoke and chemical fumes, Get the nutrition based on the body needs and regular exercise

The most important effects of Pulmonary rehabilitation in COPD patients are: 1.Increasing the exertion capacity (exercise tolerance), the health status and health related quality of life. 2. Reducing dyspnoea, anxiety, depression and disability. 3. Decreasing the number of hospital admissions, hospital visits due to acute exacerbations and use of medical services. 4. Decreasing the costs of health care paid by community and lengths of hospital admissions for respiratory conditions.

Pulmonary rehabilitation is a therapeutic process, which entails taking a holistic approach to the welfare of the patient with chronic respiratory illness--most commonly chronic obstructive pulmonary disease (COPD). Pulmonary rehabilitation is considered essential throughout the lifetime management of patients with symptomatic chronic respiratory disease. It requires the coordinated action of a multidisciplinary healthcare team in order to deliver an individualised rehabilitation programme to best effect--incorporating multiple modalities, such as advice on smoking cessation, exercise training and patient self-management education, among others.

Global Initiative for Chronic Obstructive Lung Disease (GOLD) reports, COPD is currently the fourth leading cause of death in the world. COPD is projected to be the 3rd leading cause of death by 2020. Estimated a global prevalence of 251 million COPD cases in 2016 (WHO). 3.17 million people died of COPD in 2015 accounting for 5% of all deaths globally in that year. Globally, the COPD burden is expected to rise in coming decades because of continued exposure to COPD risk factors (smoking and air pollution) and aging of the population. Many cases of COPD are preventable by avoidance or early cessation of smoking. COPD is not curable, but treatment can relieve symptoms, improve quality of life and reduce the risk of death. The educational program applied to patients in the pulmonary rehabilitation program was effective to increase the patients' knowledge about their disease, its consequences and its treatment.

Objectives of the study

- To assess the existing knowledge of COPD patients regarding pulmonary rehabilitation.
- To evaluate the effectiveness of structured teaching programme on knowledge regarding pulmonary rehabilitation among patients with COPD by comparing pretest and post test scores.
- To determine the association between pretest knowledge scores of COPD patients with selected demographic variables.

Hypothesis

- **H_1 –** There will be a significant difference between mean pre-test and mean post-test knowledge score regarding pulmonary rehabilitation among patients with COPD.
- **H_2-** There will be a significant association between pretest knowledge score and selected demographic variables.

Assumptions

- Patients with respiratory disease may have inadequate knowledge regarding pulmonary rehabilitation.
- Structured teaching programme regarding pulmonary rehabilitation will improve the knowledge of patient with COPD.
- Enhancing knowledge among COPD patients regarding pulmonary rehabilitation in turn improve self management in their chronic illness.

METHODS AND MATERIAL

An evaluative research approach was used in order to assess the effectiveness of structured teaching program on knowledge regarding pulmonary rehabilitation among patients with chronic obstructive

pulmonary disease. Pre experimental one group pretest and posttest design was used for this study. Purposive sampling technique was used for select samples. 60 COPD patients were selected from Manjunath hospital, Bangalore. The tool consist of two sections.

Section – I: Demographic data

This section consists of 7 items pertaining to COPD patients like age, gender, religion, occupation, smoking status, type of smoking and source of information.

Section - II: Structured knowledge questionnaire regarding pulmonary rehabilitation.

This section consists of 25 items regarding knowledge on pulmonary rehabilitation. For each questionnaire, four options were given and only one correct answer. For each correct answer, the score given was 1 and for the wrong answer, the score given was 0. The highest score was 25.

RESULT

Among 60 samples, 45(75.0%) of patients had inadequate knowledge, 15(25%) of patients had moderate knowledge in pretest. 46(76.7%) of patients had adequate knowledge, 14(23.3%) of patients had moderate knowledge and none of the patients had inadequate knowledge in post test.

In pre test knowledge, the mean and SD is 10.52 and 2.78 and in post test the mean and SD is 19.88 and 2.67. It is evident that the obtained "t" value 19.27 was significant at 0.05 level. Patients had improved their knowledge score from 10.52 to 19.88 after administration of structured teaching programme. This supports that structured teaching program on pulmonary rehabilitation is effective in increasing the knowledge level of COPD patients.

Table 1 : Distribution of level of knowledge regarding pulmonary rehabilitation in pre test among COPD patients n=60

S. No	Level of Knowledge	PreTest	
		Frequency	%
1	Inadequate	45	75.0
2	Moderate	15	25.0
3	Adequate	0	00.0
Total		**60**	**100.0**

Table 2: Distribution of level of knowledge regarding pulmonary rehabilitation in post-test among COPD patients n=60

S. No	Level of Knowledge	Post Test	
		N	%
1	Inadequate	0	0.00
2	Moderate	14	23.3
3	Adequate	46	76.7
Total		**60**	**100.0**

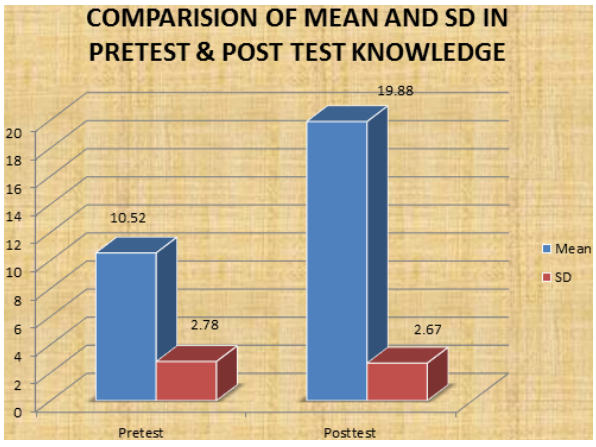

FIG.1. BAR DIAGRAM SHOWING MEAN & SD OF SAMPLES IN PRE AND POST TEST

DISCUSSION

1.Findings related to demographic variables

The distribution of the subjects by age revealed that majority of the samples 40(66.7%) were in the age group of 40-50 years. Majority of the 48(80%) of subjects were males. When considering religion, 34(56.67%) of the subjects are Hindu religion. Majority 22(36.6%) of the subjects were skilled workers. In relation to smoking, 35(58.33%) were smokers. Most 39(65%) of the subjects received information from media.

2.Findings related to assessment of pretest and post test knowledge of patients with COPD regarding pulmonary rehabilitation.

Results had shown that out of 60 samples, about 45(75.0%) of the sample had inadequate knowledge regarding pulmonary rehabilitation, 15(25.0%) had moderate knowledge while none of the samples had good knowledge. This shows inadequate knowledge of COPD patients regarding pulmonary rehabilitation. Out of 60 samples, 46 (76.7%) of patients had adequate knowledge, 14(23.3%) of patients had moderate knowledge during post test.

3.Findings related to comparison of pretest and post test knowledge on pulmonary rehabilitation

The study revealed that mean knowledge score obtained by the subjects was 10.52 in the pre-test whereas the knowledge obtained by the subjects was 19.88 in the post-test. The overall mean difference was found to be 9.36 with the 't' value 19.27 found to be significant. So the knowledge scores of COPD patients on pulmonary rehabilitation had an enhancement as observed. Since the post test value is more than the pre test value, so the structured teaching program was effective.

4. Findings related to association between pretest knowledge score and selected demographic variables

Findings revealed that there is no significant association between selected demographic variables such as religion, occupation and type of smoking and there is a significant association between selected demographic variables such as age, gender, smoking and source of information.

CONCLUSION

The study findings signify the importance of formulating and implementing structured teaching programme by nursing personnel. Since there is a gross inadequacy in knowledge regarding pulmonary rehabilitation, they should equip themselves with proper advanced knowledge based on education. The education of patients in this regard needs to be incorporated into standard health care practice in order to improve their self-management skills and their quality of life.

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