

Effect of Health Education on Self-Care Management Among Patients with Chronic Obstructive Pulmonary Disease (COPD) At Selected Urban Region of Maharashtra

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Abstract—A pre-experimental design with one group pre-test post-test design was used to assess the effect of health education on self-care management is effective among patients with chronic obstructive pulmonary disease (COPD) at selected urban region of Maharashtra. To collect data demographic variable & Effect of health education on self-care management among patients with chronic obstructive pulmonary disease (COPD) before and after intervention after a pretest the health education was used among 80 patient COPD However, after one week, the post test was conducted among patient to assess the Effect of health education on self-care management among patients with chronic obstructive pulmonary disease From the findings, it was observed that the pre-intervention demographic variables had similar characteristics. It was observed that the percentages of knowledge (30%) on self-care management among patient were more or less similar before intervention. However, after an intervention, the percentage of knowledge (72%) on self-care management was significantly increased There was a significant difference ($p < 0.05$) was found between knowledge on self-care management with COPD age, gender, educational status, occupation, family income duration of diseases. But significant association ($p < 0.05$) was found between knowledge of patient with COPD. Findings of study revealed that on effect of health education on self-care management was effective among patient with COPD

Index Terms— Self-care management, Health Education Among Patient with (COPD) Uban Region Maharashtra.

I. INTRODUCTION

In affluent nations, chronic obstructive pulmonary disease (COPD) is a significant source of illness and mortality.[1] The third greatest cause of death worldwide is COPD almost 90% of COPD-related fatalities take place in low-and middle-income nations.[2]

A preventable and treatable condition known as chronic obstructive pulmonary disease (COPD) is characterized by the persistence of respiratory symptoms and restriction of airflow brought on by abnormalities of the respiratory tract and/or alveolar duct, which are typically brought on by exposure to toxic gases or mediated by occupational exposure, among other causes.[3]

Age, a prior history of asthma, genes, and early respiratory infections are the chief risk factors for the host factors, which appear to be important. BMI and socioeconomic level are also two important factors.[4] Several methods can be used to evaluate and categorize the severity of COPD. Depending on the techniques employed for diagnosis and classification, incidence and prevalence figures can vary significantly. To track long-term trends and evaluate the efficacy of proposed treatments or preventative measures, it is crucial to comprehend the true epidemiology of COPD. In order to find studies on the epidemiology of COPD, an organized, thorough literature evaluation was conducted as part of this study.[5]

The theory behind it is "Health Promotion for Illness Prevention." Health education must be started as a

social project at the grassroots level to increase its effectiveness. Institutions of society, communities, and families.[10] The findings of the current study should be helpful in developing more focused health education programs that can aid patients in developing positive self-management behaviors.[6]

Research on self-management therapies has a particular interest in educating patients on the behavior and abilities required to successfully manage COPD, enhance health-related quality of life, [8]

II. BACKGROUND OF STUDY

Chronic Obstructive Pulmonary Disease (COPD) represents an important public health challenge and is a major cause of chronic morbidity and mortality throughout the world. COPD is currently the fourth leading cause of death in the world but is projected to be the 3rd leading cause of death by 2020. More than 3 million people died of COPD in 2012 accounting for 6% of all deaths globally. Globally, the COPD burden is projected to increase in coming decades because of continued exposure to COPD risk factors and aging of the population.[28]

Chronic obstructive pulmonary disease (COPD) is a principal source of morbidity and mortality globally, and projections indicate that COPD will become the third most likely reason for death in the world by 2030. Increasing the capability of patients to identify and control their disease using patient education is not only a healthcare precedence but also a critical part of care for chronic conditions such as COPD. In viewed patient self-management as comprising partnerships between patients and healthcare providers and stated that the practice should be encouraged while the individual is still in the acute healthcare setting. A review established that self-management education

might considerably impact the lessening of COPD-related hospital inpatient stays and is clinically appropriate.[14]

III. OBJECTIVES

To Find Out the Effect of Selfcare Management on Patient Among COPD At Selected Urban Region of Maharashtra

IV. MATERIALS AND METHODS

A quantitative research approach was adopted and one group pre-test posttest pre-experimental design was used for this study. The study was carried out in the selected at urban region of Maharashtra. The period of data collection was three weeks. has obtained formal permission from authorities concerned selected hospitals of Maharashtra to conduct research study. Purposive sampling technique was used to select the patient with COPD urban region Written consent was obtained from the samples and pretest has been assessed for all the 80 patients of hospital urban region using demographic and Structured interview schedule for assessing knowledge. Then the health education was given for patient hospital urban region to whom the pre-test was conducted. After 7 days, the post test was taken and the data was analyzed.

Statistical Analysis The data was analyzed by descriptive and inferential statistics. Demographic data was analyzed using frequency and percentage, data from the questionnaire before and after health education administered was also analyzed using frequency, percentage and ‘t’ test. The association between knowledge findings and demographic variables was found by using t test and one way ANOVA.

V. RESULTS

Table 1: Percentage wise distribution of COPD Patient according to their demographic characteristics n=80

Demographic Variables	Schools' children	Percentage (%)
Age(yrs) frequency		
31-40	8	10.0
41-50	27	33.8
51-60	35	43.8
60 and above	10	12.5
Gender frequency		
Male	66	82.5
Female	14	17.5

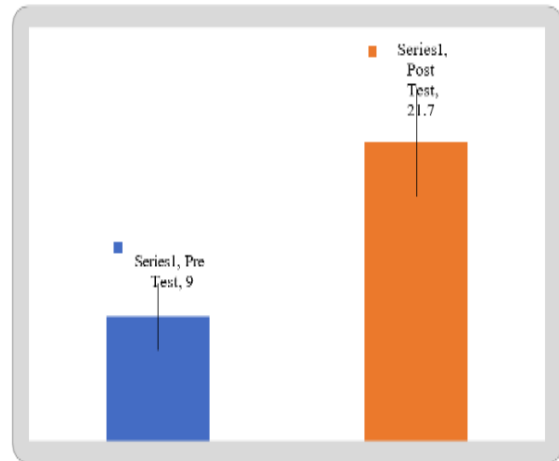
Educational status frequency		
Primary education	28	35.0
Secondary education	27	33.8
Higher secondary education	16	20.0
Graduation and above	9	11.3
Occupation		
	Frequency	Percentage (%)
Government service	4	5.0
Privet service	30	37.5
unemployed	17	21.3
farmer	29	36.3
Family income		
Below Rs.10,000	15	18.8
Rs.10,001- 15,000	37	46.3
Rs.15,001- 20,000	22	27.5
Rs.20,000 and above	6	7.5
Duration of diseases		
	Frequency	Percentage (%)
>2 years	8	10.0

Table 2: Overall Mean & Standard deviation of between pre-test and post-test knowledge scores of self-care management among patient with COPD at selected Urban region of Maharashtra in Post-test

Test	Mean	SD	Mean Difference	t-value	p-value
Pre-Test	9.00	2.44	12.70±2.40	47.13	0.0001 S,p<0.05
Post Test	21.70	3.94			

This table shows the comparison of pretest and post-test knowledge scores of patients with COPD regarding self-care management from selected hospital of the city. Mean, standard deviation and mean difference values are compared and student’s paired ‘t’ test is applied at 5% level of significance. The tabulated value for n=80-1 i.e. 79 degrees of freedom was 1.98. The calculated ‘t’ value i.e. 47.13 are much higher than the tabulated value at 5% level of significance for overall knowledge score of patients with COPD which is statistically acceptable level of significance. Hence it is statistically interpreted that the Health Education on knowledge regarding self-care management among patients with COPD from selected hospital was effective. Thus, the H₁ is accepted.

Significance of difference between knowledge score in pre and post-test of patients with COPD



VI. DISCUSSION

A study on COPD patients revealed several demographic patterns. Most patients (43.80%) were aged 51-60, followed by 33.80% in the 41-50 group, 10% in 31-40, and 12.50% were over 60. A supporting study by Anne Lindberg found 4.1% of COPD cases were under 45, and 9.7% over 45. Regarding gender, 82.50% of patients were male and 17.50% female,

similar to findings by Tevfik Ozlu and colleagues. In terms of education, 35% had primary education, 33.80% secondary, 20% higher secondary, and 11.30% were graduates, which aligns with findings by Mecit Suerdem et al. Occupationally, 36.30% were farmers, 37.50% in private jobs, 21.30% unemployed, and 5% in government service, with similar patterns noted by Ece Yigit et al. Income-wise, 46.30% had a monthly income between Rs 10,001–15,000, 27.50% earned Rs 15,001–20,000, 18.80% earned below Rs 10,000, and 7.50% earned over Rs 20,000, consistent with a study by Atherine E. Lowe. Regarding disease duration, 43.80% had COPD for 6–8 years, 33.80% for 2–6 years, 10% for 2 years, and 12.50% for over 8 years, similar to findings by Esra Yazar and team.

VII. CONCLUSION

From the findings of present study, it was concluded that the pre intervention demographic variables of patients with COPD were more or less similar revealing had similar characteristics. Percentage of knowledge and the mean scores of patients with COPD were more or less similar before intervention. However, after an intervention, the percentage of knowledge and the mean scores of patients with COPD were significantly increased. There was a significant difference between pretest and posttest knowledge scores. Thus, it was concluded that the health education on self-care management of patient with COPD as a method of teaching was effective among patients with chronic obstructive pulmonary disease (COPD) at selected urban region of Maharashtra.

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