

National Consortium for Ph.D in Nursing

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Title: Evaluate the Effectiveness of proactive integrated approach on self-management of COPD in terms of Knowledge, Six minutes Walking Distance, and Health Related Quality of Life of COPD patients.

Introduction

Respiration is a complex physiological process by which a living organism meets its oxygen requirements, and expels carbon dioxide from the lungs. Adult respiratory health to a large extent, originates early in life. There is a cyclic process called pulmonary ventilation, by which fresh air enters the lungs and an equal volume of air leaves the lungs. It is the volume of air moving in and out of lungs per minute in quiet breathing, its normal value is 6000 ML (6 liters/ minute).

COPD is characterized by progressive, largely irreversible airflow limitation, leading to disability and mortality. COPD primarily is coined with chronic bronchitis and emphysema, a pair of two commonly co-existing diseases of the lungs in which the airways become narrowed. While bronchitis involves inflammation and scarring of the main airways, the bronchial tubes, and emphysema is permanent damage to the walls of the air sacs, and loss of lung elasticity, both causing obstruction of the normal air flow.

Epidemiology: COPD is preventable and treatable. It has its harmful-effects outside the lung also. WHO reported that Worldwide that nearly 3 million people die every year, COPD is the third leading cause of death and 1.1 smokers and this may increase to 1.6 billion by the year of 2025 in low and middle income countries. It has been estimated that one in 10 adults over the age of 40 years may have COPD. 4.1% above the age of 30 years may have COPD. Comparison of COPD in male to female ratio of 1.56:1.

Indian scenario:

Ministry Of Health and Family Welfare (2010) reported that

- India has 17 million persons living with COPD
- Smoking causes 80% of COPD
- It is distinctly more common in males and the male: female- 1.32:1 to 2.6:1
- The prevalence of COPD in North India is 2.12% to 9.45 and in South India is 1.4% to 4.08%
- Prevalence rates are estimated as 5% for males and 2.7% for females of over 30 years of age.

Objectives

The objectives of the study are to

1. assess the level of knowledge on COPD before and after Proactive Integrated Approach (PIA) on Self management of COPD patients
2. assess the six minutes walking Distance (6MWD) before and after Proactive Integrated Approach on Self management of COPD patients
3. assess the health-related quality of life (HRQoL) before and after Proactive Integrated Approach on Self management of COPD patients

4. evaluate the effectiveness of Proactive Integrated Approach on Self management of COPD in terms of knowledge, six minutes walking distance and HRQoL of COPD patients
5. find the relationship between Knowledge, six minutes walking distance, and Health-Related Quality of Life of COPD patients
6. associate the pre test scores of Knowledge, Six Minute Walking distance and Health Related Quality of Life with selected demographic variables of COPD patients

Methods

The Present study was carried out to evaluate the effectiveness of Proactive Integrated Approach on self management of COPD in terms of Knowledge, Six minute Walking Distance, and Health Related Quality of Life of COPD patients. Pre experimental one group pre and post test research design was used. This study was carried out in Bhopal Memorial Hospital and Research, MP State. The sample selection was carried through simple random sample selection with the sample size of 94 COPD patients. The tool used before and after the intervention was structured knowledge questionnaire, Six Minute Walk Distance

(6MWD)Assessment, and Health Related Quality of Life by St.George Respiratory Questionnaire. The data collected period for each subject was 12 weeks. Data were analyzed by using descriptive and inferential statistics.

Results

- Majority of COPD patients 39(41.49%) were in the age group of 56-65 years
- Majority of samples 63(67.02%) were males and 60(63.83%) of them were non literate
- Majority of the samples were 61(64.89%) were unemployed.
- Most of them 57(60.64%) were from rural areas.
- 48(51.06 %) of the samples were non smokers.
- Among the smokers, majority 17(18.09%) had the habit of smoking 10-20 times per day.
- Near half of the participants 44(46.81%) had 1-5 years aware of their COPD diagnosis.
- Above half of the participants 57(60.64%) were hospitalized less than two times per year.

- Majority of the participants 93(98.94%) had no family history of COPD.
- Assessment of level of knowledge after Proactive Integrated Approach revealed majority 66(70.21%) had moderately adequate knowledge, 16(17.02%) had adequate knowledge and 12(12.77%) had inadequate knowledge on COPD.
- In 6- minutes walking distance before the Proactive Integrated Approach, only 9(10%) walked 201 - 350 meters in six minute after the Proactive Integrated Approach, 46(49%) walked 201 - 350 meters in six minute.
- The overall HRQoL before proactive integrated approach portrays that majority 69(73.40%) had better HRQoL and 25(26.90%) had good HRQoL. After proactive integrated approach shows that majority 52(55.32%) had better HRQoL and 42(44.68%) had good HRQoL.
- Proactive Integrated Approach on self management of COPD patients administered was effective in increasing (9.09 ± 3.23 to 15.62 ± 2.84) the level of knowledge on COPD after PIA ($t_{93} = .26.5$, at the level of $p < 0.001$).
- The administration of proactive integrated approach on self management of COPD patients was effective in increasing

(161.84±27.68 to 209.94±40.03, Gain of 6MWD: 48.10 meters) the six Minute Walking Distance of COPD patients ($t_{93} = 19.123$, at $p < 0.001$ level).

- Proactive integrated approach on self management of COPD patients was found effective in increasing (55.06±8.69 to 50.26±7.98) the HRQoL of COPD patients ($t_{93} = 5.601$, at $p < 0.001$ level).
- The association of pretest level of knowledge with demographic variables revealed a statistically significant association with COPD patient's age educational status and occupational status at $P < 0.001$ and with residential area, how many smokes per day and family history of COPD at $P < 0.05$. It was observed that the above stated demographic variables influences the pretest level of knowledge of COPD patients on self management of COPD.
- The association of level of Six Minute Walking Distance of COPD patients with their demographic variables in pretest revealed that statistically significant association was found with age at $p < 0.001$ level. It seems that the age of COPD patients influences the 6 minute walk distance in the pretest.
- The association of COPD patients pretest level of Health Related Quality of Life with demographic variables revealed statistically

significant association with smoking status at $p < 0.05$ level. It seems that the smoking status of COPD patients influence the pretest level of health related quality of life.

Conclusion

The present study indicate that the effectiveness of Proactive Integrated Approach on COPD and its outcome significant improvement were observed for variables related to knowledge, six minute walking distance and HRQoL.

Hence, the COPD patients need to be taught to aware of their disease condition, symptoms management and motivate them to take an active part in their treatment and management of the diseases in order to aware and early management of their symptoms, reduce the frequency of hospitalization, and improve the health related quality of life.

Key words

Effectiveness, Proactive Integrated Approach, Self management, six minute walk distance, COPD, Health Related Quality of Life.