ROLE OF PHARMACIST INTERVENTION ON COPD PATIENTS OF SELECTED AREAS IN CHITRADURGA: A KAP STUDY

Melvin K Mathews[*], Abubaker Siddiq, Bharathi D R

SJM College of Pharmacy, Chitradurga, Karnataka.

Corresponding Author:

ABSTRACT:
Background: Chronic obstructive pulmonary disease (COPD) is preventable and treatable disease state characterized by air flow limitation that is not fully reversible. Severity of the symptoms is increased during exacerbations.
Objectives: The purpose of the study is to assess and improve the knowledge regarding COPD among study subjects.
Materials and Methods: A Cross-sectional interventional study was carried out among the peoples in selected areas of the Chitradurga city for a period of six months.
Result: A total 207 subjects enrolled in the study in that 155 male and 52 females. In our study mean score of post test was more (5.87±1.68) when compare to pre-test (2.63±1.46) which show significant increase in their knowledge after educating them (p=0.000). A total of 207 subjects were enrolled into the study. SPSS Software was used to calculate the statistical estimation. Paired t-test was used to detect the association status of different variables.
Conclusion: The relatively good level of COPD awareness needs to be maintained to facilitate future prevention and control of the disease. This study had identified that negative illness perceptions should be targeted, so that they will not avoid patients from seeking for COPD treatment and adhere to it.
Key words: Cross sectional study, Knowledge, practice, COPD.

INTRODUCTION

(COPD) is preventable and treatable disease state characterized by airflow limitation that is not fully reversible. The airflow limitation that is usually progressive and associated with an abnormal inflammatory response of the lungs to noxious particles or gases, primarily caused by cigarette smoking. Prevalence is directly related to the prevalence of tobacco smoking and in low and middle income countries, the use of biomass fuels. Current estimates suggest that 65 million people have moderate to severe COPD[1]. COPD is majorly classified as Chronic Bronchitis and Emphysema, Chronic bronchitis is associated with recurrent excess

mucus secretion into the bronchial tree with cough that occurs on most of the days for at least 3 months of the year for at least 2 consecutive years. Emphysema is defined as abnormal, permanent enlargement of air spaces distal to terminal bronchioles, accompanied by destruction of their walls, but without obvious fibrosis.[2]Patients suffering from COPD have an impaired quality of life especially on physical health compared with psychological and social health owing to the frequent experience of symptoms and limitation on their physical activities.[3]The symptoms of COPD ranges from dyspnoea, chronic cough with or without sputum production to poor exercise tolerance. Severity of the symptoms is increased during exacerrbations.[4]The risk factor includes exposure to particles such as occupational exposures, air pollution from extensive use of biomass fuel living in rural communities puts women at increased risk of exposure to indoor air pollution for comparatively long periods of time and heating in poorly ventilated dwellings, low socioeconomic status, and lung disorders are other cited environmental risk factors for the development and the progression of COPD. For patients with COPD, health education focusing on disease and need for long term treatment provided by the clinical pharmacist plays an important role in improving the ability to cope up with illness and health status. It is also effective in accomplishing certain goals, including smoking cessation. Pharmacists are in an ideal position to provide patient education and optimize patient care. Greater understanding about the illness and a change of attitude and practice would in turn results in a better therapeutic outcome.[5]So, from the above maintained statement it is very well clear that a study need to be conducted about

"**Role of Pharmacist Intervention on COPD Patients of selected areas in Chitradurga: A KAP Study**"

MATERIALS AND METHODS

A Cross-sectional interventional study was carried out among the peoples in selected areas of the Chitradurga city for a period of six months. A total of 207 subjects were enrolled into the study. SPSS Software was used to calculate the statistical estimation. Paired t-test was used to detect the association status of different variables. Vide number: SJMCP/IEC/PHARM D/08/2017-18.

STUDY CRITERIA

Inclusion Criteria

- Subjects of both genders.
- Subjects who are willing to participate in the study.

Exclusion Criteria

- Subjects who are below 18 years
- Subjects who is having Asthma

STATISTICAL ANALYSIS

After the completion of the study, the data will be entered into **Microsoft Excel** sheets and further analysis done by student paired "t" test in SPSS 24 version and the study was carried out for 6 months.

RESULTS

A cross sectional study was undertaken to assess the impact of Knowledge, Attitude and Practices of COPD in Chitradurga district. A total of 207 peoples (155 males & 52 females) satisfied the inclusion and exclusion criteria and were included as the study subjects.

QUESTIONNAIRE DIVISIONS

Table 1: Response to question 1

According to you what is COPD?

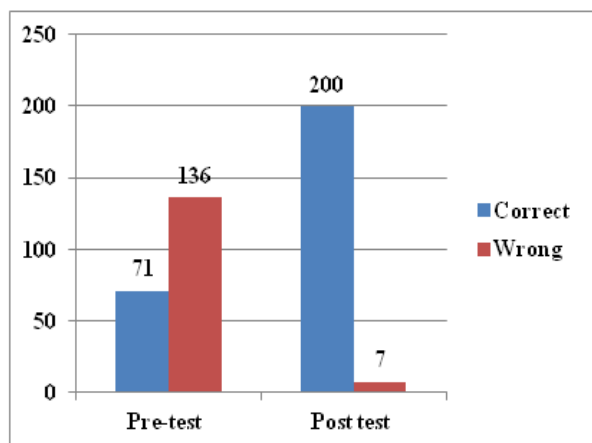| Response	Pre-test	Post test
Correct	71	200
Wrong	136	7

Figure 1: Response to question 1

According to you what is COPD?

Table 1 & Fig 1 depicts that about 200 subjects responded the right answer for the above asked question in the post test which was about 71 during the pre-test and 7 subjects responded the wrong answer for the above asked question in the post test which was about 136 during the pre-test.

Table 2: Response to question 2

Which part of the body is affected by COPD?

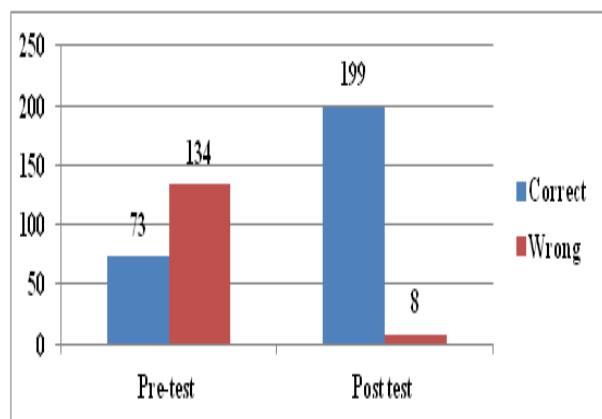| Response	Pre-test	Post test
Correct	73	199
Wrong	134	8

Figure 2: Response to question 2

Which part of the body is affected by COPD?

Table 2 & Fig 2 depicts that about 199 subjects responded the right answer for the above asked question in the post test which was about 73 during the pre-test and 8 subjects responded the wrong answer for the above asked question in the post test which was about 134 during the pre-test.

Table 3: Response to question 3

What are the common symptoms of COPD?

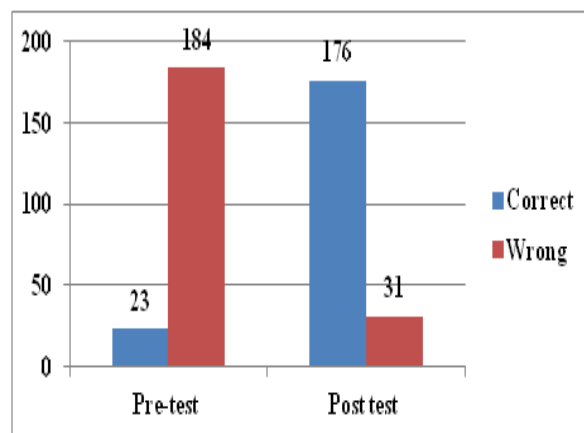| Response	Pre-test	Post test
Correct	23	176
Wrong	184	31

Figure 3: Response to question 3

What are the common symptoms of COPD?

Table 3& Fig 3depicts that about 176 subjects responded the right answer for the above asked question in the post test which was about 23 during the pre-test and 31 subjects responded the wrong answer for the above asked question in the post test which was about 184 during the pre-test.

Table 4: Response to question 4

How COPD is diagnosed?

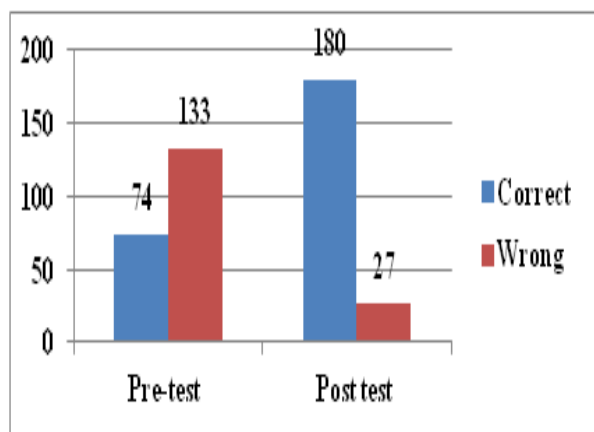| Response	Pre-test	Post test
Correct	74	180
Wrong	133	27

Figure 4: Response to question 4

How COPD is diagnosed?

Table 5 & Fig 5 depicts that about 180 subjects responded the right answer for the above asked question in the post test which was about 74 during the pre-test and 27 subjects responded the wrong answer for the above asked question in the post test which was about 133 during the pre-test.

Table 5: Response to question 5

How often you smoke?

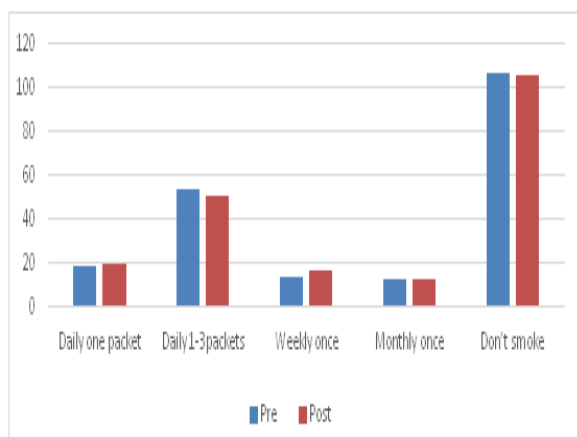| Response	Pre-test	Post test
Daily one packet	19	20
Daily 1-3 packet	54	51
Weekly once	14	17
Monthly once	13	13
Don't smoke	107	106

Figure 5: Response to question 5

How often you smoke?

Table 5& Figure 5 shows 20 subjects taking daily one packet cigarettes, 51 taking daily 1-3 packets, 17 taking weekly once, 13 taking monthly once and 107 peoples don't smoke.

Table 6: Response to question 6

How often do you drink liquor?

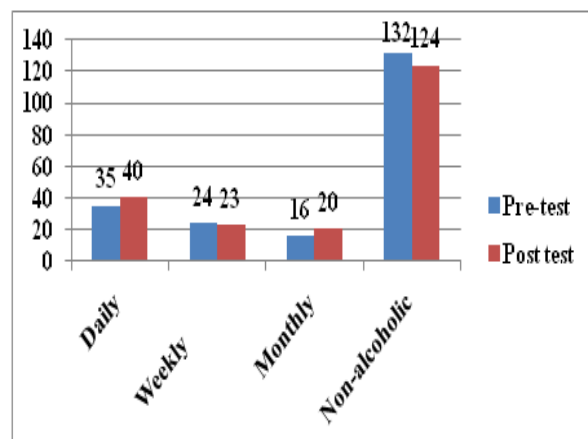| Response	Pre-test	Post test
Daily	35	40
Weekly	24	23
Monthly	16	20
Non-alcoholic	132	124

Figure 6: Response to question 6

How often do you drink liquor?

Table 6 & Figure 16shows 40 taking daily alcohol, 24 taking weekly alcohol, 20 taking monthly alcohol and 132 are non-alcoholic.

Table 7: Response to question 7

According to you is COPD can be completely cured?

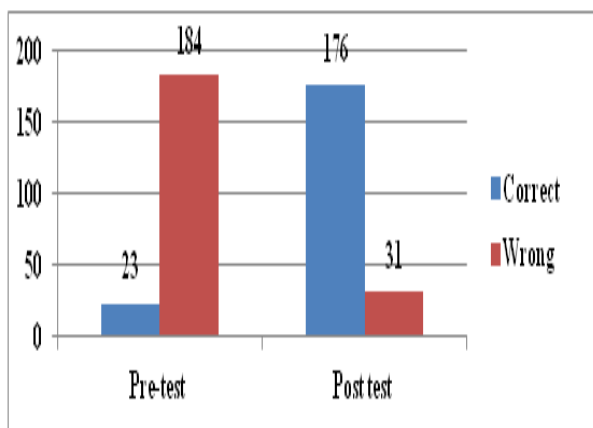| Response	Pre-test	Post test
Correct	23	176
Wrong	184	31

Figure 7: Response to question 7

According to you is COPD can be completely cured?

Table 7 & Fig 7 depicts that about 176 subjects responded the right answer for the above asked question in the post test which was about 23 during the pre-test and 31 subjects responded the wrong answer for the above asked question in the post test which was about 184 during the pre-test.

Table 8: Response to question 8

What is the best form to take medications in the COPD?

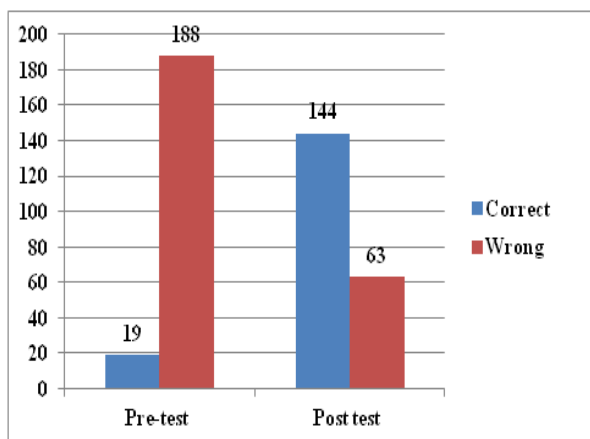| Response	Pre-test	Post test
Correct	19	144
Wrong	188	63

Figure 8: Response to question 8

What is the best form to take medications in the COPD?

Table 8 & Fig 8 depicts that about 144 subjects responded the right answer for the above asked question in the post test which was about 19 during the pre-test and 63 subjects responded the wrong answer for the above asked question in the post test which was about 188 during the pre-test.

COMPARISON OF KNOWLEDGE (COMPARISON OF MEAN SCORE)

In our study mean score of post-test was more (5.87±1.68) when compare to pre-test (2.63±1.46) which show significant increase in their knowledge after educating them (p=0.000).

Table 9: Comparison of Knowledge (Comparison of Mean Score)

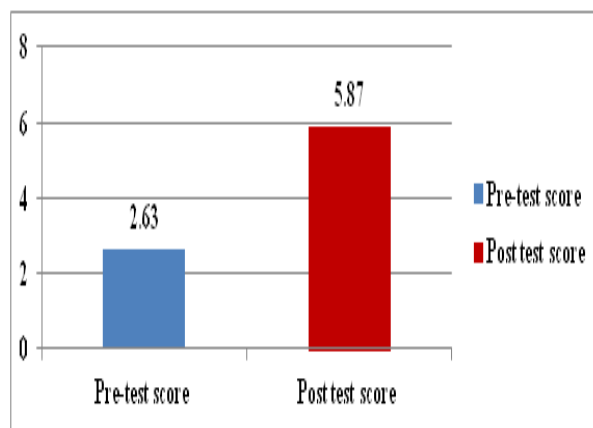| Test	Mean	SD	t-value	p-value
Pre-test score	2.63	1.68	17.012	0.000 (sig)
Post test score	5.87	1.46		

Table 11: Comparison of Knowledge (Comparison of Mean Score)

DISCUSSION

The study aimed to create awareness on different aspects of COPD among the local people and thus improve their knowledge on the same by means of the KAP study. It was carried out among the carpenters, daba-workers, cotton-mill, quarry-workers and housewife of Chitradurga district.

A similar study was conducted by Woodruff PG et al involving 126 current or former smokers and controls who had never smoked and measured their respiratory symptoms using the COPD Assessment Test (CAT; scores range from 0 to 40, with higher scores indicating greater severity of symptoms).[6] In our study it shows that 176 subjects responded to the right answer for the question "Is COPD can be cured" and in the post test about 23 during the pre-test and 31 students responded the wrong answer for the above asked question in the post test which was about 184 during the pre-test. A similar study also done by Vestbo j et al was also reported that the COPD cannot be completely cured[8]

During the study period we found that a positive attitude could be brought out among the subjects regarding their approach towards the COPD patients which was a very essential element in the society. A similar study also done by Reema T et al by a total of 27 patients with COPD were enrolled, into the three months study.Knowledge, Attitude and Practice (KAP) of patients regarding COPD were assessed and recorded at baseline by using a suitably designed questionnaire. The baseline KAP result suggested that patients had a poor perception of their disease.[9]

CONCLUSION

This study had identified that negative illness perceptions should be targeted so that they will not avoid patients from seeking for COPD treatment and adhere to it. The negative illness perceptions and quality of life have an impact on COPD calls for programmers to strengthen COPD information, education and counselling and is carried out by considering the socio-demographic characteristics of the target population. In 207 subjects who were enrolled for the study majority were not aware about the different aspects on COPD, which was changed during the post test. These acts could further enhance the effective COPD control among the Chitradurga population. Context specific causes of poor COPD knowledge and still persisting negative attitudes need to be studied further in order to tailor interventional strategies.

REFERENCES

1. Subba HK, Subba R. Knowledge on self care among COPD patients attending at Chitwan medical college, teaching hospital, Bharatpur. Journal of Chitwan Medical College, 2014; 4(8): 34-37.
2. Watson HC, Henry N, Tseng TS, Parada N, Qingzhao Y, Celestin M, Guillory D, Winn K Thomas SM. Self-management practices of smokers with asthma and/or chronic obstructive pulmonary disease: a cross-sectional survey. COPD research and practice, 2017; 3(3): 2-7.
3. Sharma K, Joshi S. Quality of life of patients with chronic obstructive pulmonary disease in Chitwan, Nepal: a pilot study report. International Journal of Medical Science and Public Health, 2015; 4(9): 1235-1241.
4. Thakrar R, Alaparthi GK, Kumar SK, Vaishali K, Zulfeequer CP, Aanad R. Awareness in patients with COPD about the disease and Pulmonary rehabilitation: A survey. Patients with COPD awareness both disease and pulmonary rehabilitation, 2010; 31(2): 135-138.

5. Shill MC, Das AK. Medication practices in bangladesh roles of pharmacists at current circumstances. International Journal of Pharmacy and Pharmaceutical Sciences, 2011; 3(4): 5-8.

6. Woodruff PG, Barr RG, Bleecker E, Christenson SA, Couper D, Curtis JL, Gouskova N A, Hansel NN, Hoffman EA, Kanner RE, Kleerup E, Lazarus S, Martinez FJ, Paine R, Rennard S, Tashkin DP, Han MK. Clinical Significance of Symptoms in Smokers with Preserved Pulmonary Function. The New England Journal of Medicine, 2016; 374(19): 1811-1821.

7. Light RW, Despars JA, Gordon GH, Mutalipassi LR. Prevalence of Depression and Anxiety in Patients with COPD. Clinical Investigations (CHEST Journal), 1985; 87(1): 35-38.

8. Vestbo J, Hurd SS, Agust AG, Jones PW, Vogelmeier C, Anzueto A, Barnes PJ , Fabbri LM, Martinez FJ, Nishimura M, Stockley RA, Sin DD, Roisin RR. Global strategy for the Diagnosis, Management, and Prevention of Chronic Obstructive Pulmonary Disease. American Journal of Respiratory and Critical Care Medicine, 2013; 187: 347-365.

9. Reema T, Adepu R, Sabin T. Impact of Clinical Pharmacist Intervention on Knowledge, Attitude and Practice (KAP) of Patients with Chronic Obstructive Pulmonary Disease. International Journal of Pharmacy and Pharmaceutical Sciences, 2014; 2(4): 54-57.