A descriptive study to assess the knowledge and practice regarding COPD among patients in selected hospital at Puducherry

[1]Jean Luc. A, [2]Jaiganesh. E, [3]Priyanka. S, [4]Rajeswari. R, [5]Ramya. V

[1]Assistant professor, Department of Psychology, Vinayaka Mission's College of Nursing, Puducherry
[2]Assistant professor, Department of Medical Surgical Nursing, Vinayaka Mission's College of Nursing, Puducherry
[3, 4, 5] B.Sc. Nursing students, Vinayaka Mission's College of Nursing, Puducherry

Email – [1]jenastha@gmail.com, [2]ganesh31.jai@gmail.com, [3]sspriyanka044@gmail.com,
[4]rrajeswari2206@gmail.com, [5]vramya826@gmail.com

Abstract: *Chronic Obstructive Pulmonary Disease (COPD) is a progressive disease associated with significant morbidity and mortality. The aim of the study was descriptive study to assess the knowledge and practice regarding COPD among patients in selected hospital at Puducherry. A non-experimental research design of 47 COPD patients by non-probability convenience sampling technique. The knowledge and practice questionnaire regarding COPD among patients were assessed. The level of knowledge regarding COPD among patients, 26(55.32%) had adequate knowledge, 19(40.42%) had moderately adequate knowledge and 2(4.26%) had inadequate knowledge regarding COPD among patients. The level of practice regarding COPD among patients, 27(57.45%) had moderately adequate practice, 19(40.42%) had adequate practice and 1(2.13%) had inadequate practice regarding COPD among patients. The mean score of knowledge was 10.79±2.21 and the mean score of practice was 14.94±2.51. The calculated Karl Pearson's Correlation value of r = 0.562 shows a moderate positive correlation which was found to be statistically significant at p<0.001 level. The clinical setup intervention and make awareness are very needed to develop the level of knowledge among COPD patients.*

Key Words: *Knowledge, Practice, COPD, Puducherry*

1. INTRODUCTION:

Chronic Obstructive Pulmonary Disease (COPD) is a progressive disease associated with significant morbidity and mortality. A common preventable and treatable disease characterized by persistent airflow limitation that is usually progressive and associated with an enhanced chronic inflammatory response in the airways and the lung to noxious particles or gases. [1]

The term "Chronic Bronchitis" come into use in 1808 while the term "COPD" is believed to have first been used in 1965. [2]

William Briscoe is believed to be the first person to use the term COPD in discussion at the 9th aspen emphysema conference. This term becomes established and today we refer to COPD as the designation of this growing health problem. COPD is a major public health problem in many parts and the world. [3]

Reduction to total personal exposure to tobacco smoke, occupational dusts and chemicals, and indoor and outdoor air pollutants are important goals to prevent the onset and progression of COPD. The overall approach to managing stable COPD should be characterized by stepwise increase treatment, depending on the severity of the disease. Exacerbation of respiratory symptoms requiring medical intervention are important clinical events in COPD. [4]

The World Health Organization (WHO) estimates that COPD as a single cause of death shares 4th and 5th places with HIV/AIDS (after coronary heart disease, cerebrovascular disease and acute respiratory infection).The WHO estimates that in 2000, 2.74 million people died of COPD worldwide. In 1990, a study by the World Bank and WHO ranked COPD 12th as a burden of disease; by 2020, it is estimated that COPD will be ranked 5th. According to the WHO, passive smoking carries serious risks, especially for children and those chronically exposed. The WHO estimates that passive smoking is associated with a 10 to 43 percent increase in risk of COPD in adults. Although cigarette smoking is the primary cause of COPD, the WHO estimates that there are 400,000 deaths per year from exposure to biomass fuels. [5]

In Algeria, the prevalence of tuberculosis and acute respiratory infection has decreased since 1965, but an increase in chronic respiratory diseases (asthma and COPD) has been observed in the last decade. COPD is estimated to be 6.2 percent in 11 Asian countries surveyed by the Asian Pacific Society of respiratory diseases. The study was carried out in the pulmonary research laboratory. Department of Medicine, SMS Medical College and Hospital, Jaipur, forty patients participated in the study. Their mean age was 59.37 + 6.4 years (range 48 to 75 years). Out of these 32 (80%) were males and 8 (20%) females. Twenty patients were included in each group, control and experimental. Both the control and the experimental groups were comparable in respect of age and sex, as in one second (FEV), and forced vital capacity (FVC). In experimental group, the mean (+SD) FEV, was 28% (7.5) while in the control group it was 26% (7.1) of the predicted value. [6] So, investigator selected this descriptive study to assess the knowledge and practice regarding COPD among patients.

2. MATERIALS & METHODS:

Design: A non-experimental research design was adapted for the present study.
Sample Size: A sample of 47 COPD patients.
Sampling Technique: Non probability convenience sampling technique was used to select the sample.
Data collection Procedure: The formal setting permission was obtained from AVMC&H and Medical officer Ariyankuppam PHC at Puducherry. The investigator instructed the procedure of the study to the participants. The knowledge and practice questionnaire regarding COPD among patients were assessed. Part-A assessed Demographic data consist of 19 no of questions such as age, gender, education, marital status etc. Part-B assessed knowledge regarding COPD consists of 15 no of questions. Part-C assessed practice in the clinical settings regarding COPD techniques consists of 10 no of questions. Then practice in the clinical setting for the subject participation 20 to 30 minutes.

3. RESULTS:

Frequency and percentage distribution of demographic variables of COPD patients, most of the COPD patients, 18(38.3%) were aged 41 – 50 years, 38(80.9%) were male, 31(66%) were Hindus, 17(36.2%) had primary school education, 37(78.7%) were married, 28(59.6%) belonged to nuclear family,18(38.3%) were clerical, shop-owner, farmer, 18(38.3%) had monthly income of 3,908-11,707, 34(72.3%) were residing in urban area and 20(42.6%) were getting health information through media.

Frequency and percentage distribution of clinical variables of COPD patients, most of the COPD patients, 18(38.3%) were above 30 years at onset of COPD, 20(42.6%) had COPD for 3 – 4 years, 19(40.4%) had medicine as regular management of COPD, 37(78.7%) had no family history of COPD, 36(76.6%) were non-vegetarian, 20(42.6%) had pulmonary embolism as comorbidities of COPD, 21(44.7%) had no past history of COPD, 24(51.1%) heard first about COPD in hospital and 37(78.7%) were alone had no family.

The level of knowledge regarding COPD among patients, 26(55.32%) had adequate knowledge, 19(40.42%) had moderately adequate knowledge and 2(4.26%) had inadequate knowledge regarding COPD among patients. **(Figure 1)**

Figure 1: Level of knowledge regarding COPD among patients
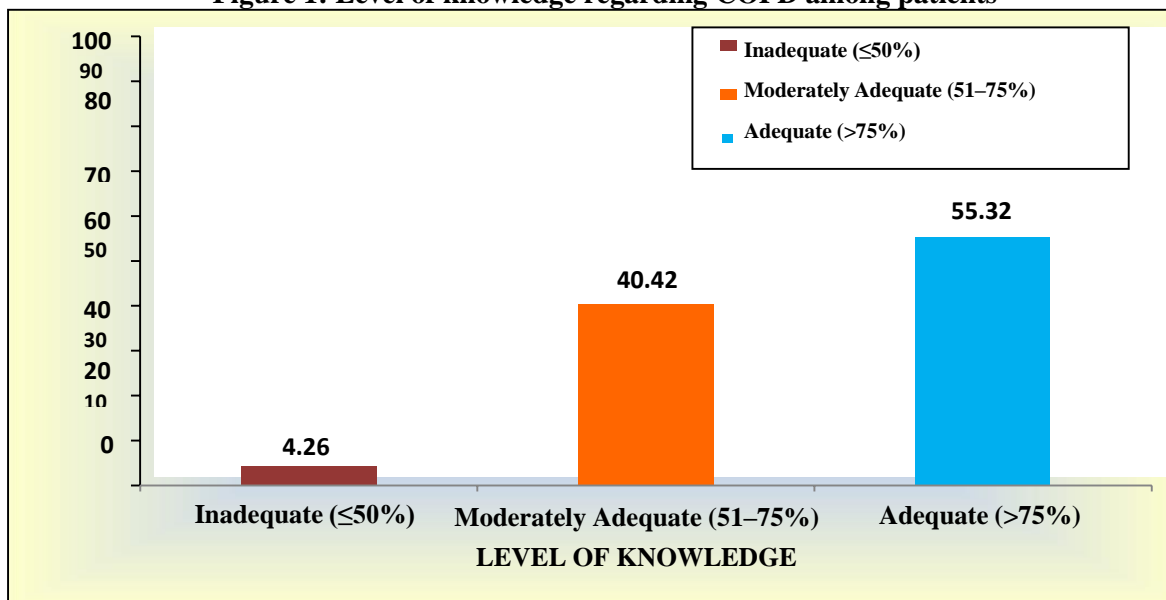
The level of practice regarding COPD among patients, 27(57.45%) had moderately adequate practice, 19(40.42%) had adequate practice and 1(2.13%) had inadequate practice regarding COPD among patients. (**Figure 2**)

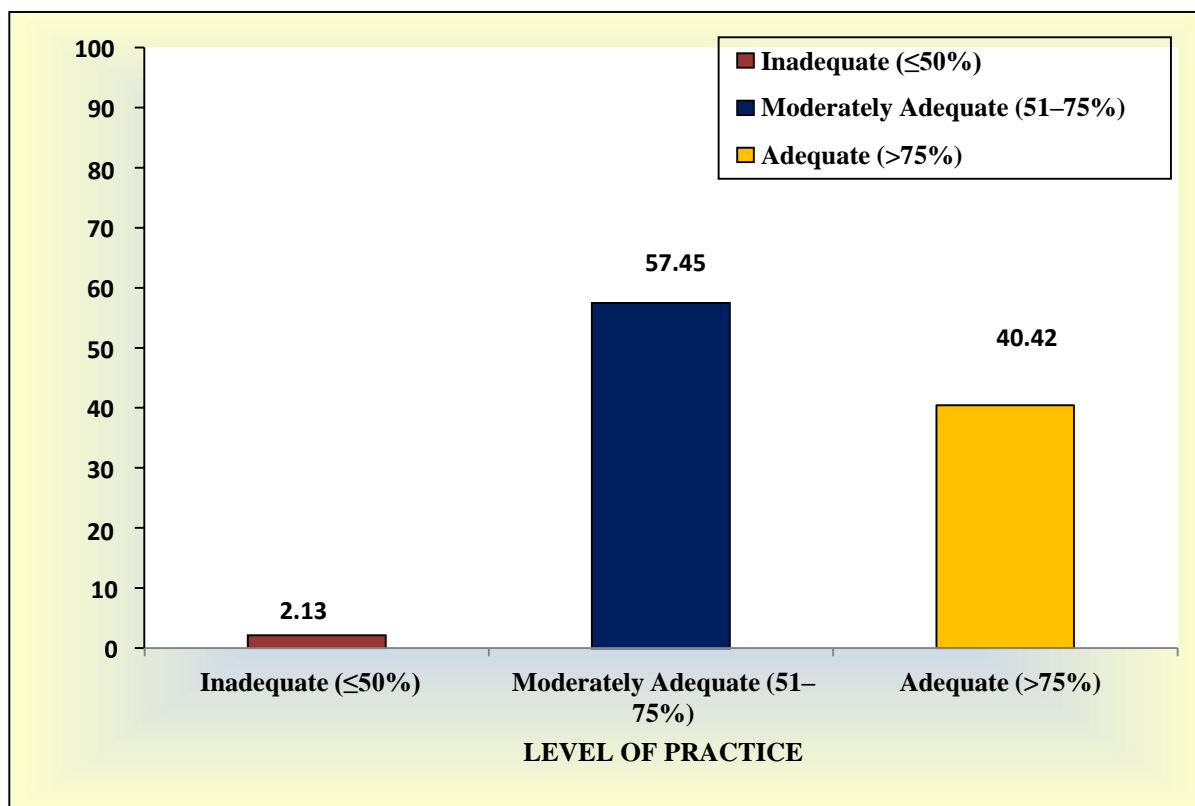**Figure 2: Level of practice regarding COPD among patients**

Table 1: Correlation between knowledge and practice scores regarding COPD among patients

Variables	Mean	S.D	Karl Pearson's Correlation "r" Value
Knowledge	10.79	2.21	**r=0.562**
Practice	14.94	2.51	**p=0.0001, S***

***p<0.001, S – Significant

The mean score of knowledge was 10.79±2.21 and the mean score of practice was 14.94±2.51. The calculated Karl Pearson's Correlation value of r = 0.562 shows a moderate positive correlation which was found to be statistically significant at $p<0.001$ level. This clearly infers that when knowledge regarding COPD among patients increases their practice regarding COPD also increases. (**Table 1**)

The demographic variables of educational status ($\chi2=37.629$, p=0.0001), occupation ($\chi2=33.656$, p=0.0001) and monthly income ($\chi2=18.796$, p=0.016) had shown statistically significant association with level of knowledge regarding COPD among patients at $p<0.001$, $p\leq0.001$ and $p<0.05$.

The demographic variable of occupation ($\chi2=22.618$, p=0.031) had shown statistically significant association with level of practice regarding COPD among patients at $p<0.05$.

The clinical variables did not show statistically significant association with level of knowledge and practice regarding COPD among patients.

4. DISCUSSION:

A non-experimental research design was used to select the sample; Total 47 COPD patients were selected by non-probability convenience sampling technique. The aim of the study was descriptive study to assess the knowledge and practice regarding COPD among patients.

The first objective was to assess the level of knowledge regarding COPD patients in selected hospital at Puducherry

Regarding the knowledge level of COPD among patients 26(55.32%) had adequate knowledge, 19(40.42%) had moderately adequate knowledge and 2(4.26%) had inadequate knowledge regarding COPD among patients

The supported study was conducted by Diana Tymoszuk et.al (2017) shows more than a half of the pulmonogists correctly described environmental risk factors of COPD, while only 23.4% could define precisely occupational risk factor of COPD. Less than 60% pulmonogists routinely ask COPD patients about occupation and work place exposure. 39.4% pulmonogists have referred the patients with suspicion of occupational COPD for further diagnostics, however 60% did not have knowledge about certification regulation covering recognition of occupational diseases.[4]

The second objective was to assess the Practice regarding COPD patients in selected Hospital at Puducherry

Regarding this study, the majority of people practice regarding COPD majority of the patients 57.45% are moderately adequate level of practice regarding COPD and 2.13% in adequate practice regarding COPD.

The supported study was conducted by Souheil Hallit, Rouba Karen Zeidan, et al. (2020) shows mean practice score was 15.82 ± 3.03, 347 (48.9%) had adequate practice of Lebanese Community Pharmacists toward Chronic Obstructive Pulmonary Disease. [7]

The third objective was to find the association knowledge and practice regarding COPD patients with selected demographic variables

The demographic variables of educational status ($\chi2=37.629$, $p=0.0001$), occupation ($\chi2=33.656$, $p=0.0001$) and monthly income ($\chi2=18.796$, $p=0.016$) had shown statistically significant association with level of knowledge regarding COPD among patients at $p<0.001$, $p\leq0.001$ and $p<0.05$.
The demographic variable of occupation ($\chi2=22.618$, $p=0.031$) had shown statistically significant association with level of practice regarding COPD among patients at $p<0.05$. The clinical variables did not show statistically significant association with level of knowledge and practice regarding COPD among patients.

The supported study was conducted by Mira Adhikari Baral et.al (2018) shows correct practice of dry powder inhalation was associated with younger age ($p=0.008$), urban residence ($p=0.024$), and literacy ($p=0.012$). The practice was comparatively more accurate among those who received practical classes/demonstration on the inhalation technique from health care providers ($p<0.001$). [8]

5. CONCLUSION:

The study concluded that the clinical setup intervention and make awareness are very needed to develop the level knowledge among COPD patients.

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