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Impact of Clinical Pharmacist Intervention on Patients with Chronic Obstructive Pulmonary Disease's Knowledge, Attitude, and Practise (Kap)

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ABSTRACT

Background: The study assessed the knowledge, attitude, and behaviour of COPD patients as well as the variables that affected the effectiveness of treatment.

Aims & Objectives: To study of an effects of clinical pharmacist intervention on knowledge, attitude, and practise of patients with chronic obstructive pulmonary disease (kap).

Methods & Materials: In the three-month trial, a total of 26 COPD patients were included. A well created questionnaire was used to examine and record the baseline Knowledge, Attitude, and Practice (KAP) of patients regarding COPD. The initial KAP result indicated that patients had a dim view of their illness. On subsequent follow-up visits, a clinical pharmacist informed patients about COPD and their medications. The KAP was once more given after the conclusion of the investigation.

Results: The KAP of the patients improved as a result of patient education, and they were able to satisfactorily respond to the same questions that were posed at baseline. After counselling, the results revealed a sizable improvement in KAP.

Conclusion: We reached the conclusion that the clinical pharmacist's health education can improve the course of treatment for COPD patients.

Keywords: Chronic Obstructive Pulmonary Disease, Knowledge, Attitude and Practice, Forced Expiratory Volume in one second, Global initiative on Chronic obstructive lung disease.

1. INTRODUCTION

The chronic lung illness known as chronic obstructive pulmonary disease (COPD) is mostly brought about by prolonged cigarette smoking, which causes permanent lung tissue loss and dilatation [1]. Breathlessness worsens with time as a result of COPD, especially after physical exercise [2]. Bronchitis or emphysema are the primary causes of the blockage. When the disease is at the bronchitis stage, it affects the bigger airways; when it is in the emphysema stage, it affects the distal section of the lung, the smaller airways, and the alveolar sacs. Although it is generally recognised that disease severity and psychosocial factors contribute

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to asthma and COPD morbidity, the impact of patient education and understanding has gotten less attention [3].

Long-term exposure to toxic gases, as well as other factors including cigarette use and industrial pollution, are the main causes of COPD. The primary risk factor for COPD is tobacco use [4]. Around 2.7 million people die from COPD each year, making it the second most prevalent non-infectious disease in the world. By 2030, mortality is expected to more than quadruple globally5. It was responsible for 2.8% of all deaths in India in 1990, and by 2020, it's predicted to account for 6.5% [6]. The majority of COPD cases—between 80 and 90 percent—are caused by smoking, while the remaining cases are brought on by exposure to industrial pollution. Forced vital volume in one second (FEV1) declines between 20 and 30 ml per year in nonsmokers beyond the age of 35, and between 50 and 120 ml per year in smokers. Therefore, quitting smoking is one of the key therapies that is proven to be successful in altering the condition [7].

Patients' views about medications and the ailment that the prescription is meant to cure or prevent are likely to have an impact on their decisions to follow the suggested course of treatment [8]. The fact that medical knowledge cannot and does not affect people's health has come to be widely accepted. The level of basic education and public understanding about the condition, which affects health and therapeutic outcomes, is a partner that is equally significant and, in the end, aids the patient in taking the doctor's advice seriouslyTherefore, recognising and identifying psychological components is necessary for chronic illnesses like COPD in order to improve treatment outcomes. The advantages of educational programmes for the general COPD population have now been examined in numerous trials. The purpose of the study was to evaluate the patients' knowledge, attitude, and practise about COPD as well as the variables that affect how well they respond to treatment.

2. MATERIALS AND METHODS

Patients were enrolled if they were above 30 years old, had no history of smoking, and had stable COPD classified as mild to very severe by the Global Initiative for Obstructive Lung Disease (GOLD). The questionnaire was completed by 26 patients in total. A standardised, structured questionnaire in the local language was given to every patient who met the inclusion criteria in order to evaluate their KAP. Name, age, sex, smoking history (number of cigarettes or beedis per day and years of smoking), past medical history, family history, allergy history, duration of the disease, symptoms, diagnosis, inpatient/outpatient number, educational background, and address were also collected as part of the demographic data.

For a better therapeutic result in patients with chronic progressive disorders, it is crucial that the patients are aware of their condition and how to manage it. So, after patient education, we compared the Knowledge, Attitude, and Practice of COPD patients at the start of the trial and at the end. The purpose of the questionnaire was to gain insight into how the patients saw the illness, how they felt about it, and how they actually dealt with the illness. Patients were provided closed-ended questions that only offered three possible responses (yes, no, and don't know), which helped us gauge the KAP. All participants were free to discuss their thoughts and opinions regarding COPD, socioeconomic status, educational background, family issues, and other factors that might have an impact on the therapeutic process.

Patients' knowledge and attitudes on COPD, its symptoms, causes, and risk factors were evaluated by a questionnaire. Patients had to respond to inquiries like "Is COPD contagious? Is it potentially fatal? and ‘Is it totally curable?’. Questions about whether COPD patients

should take regular medicine, how frequently patients took medication, if patients with COPD should quit smoking, the disease of using an inhaler device, and how patients should use inhalers were used to evaluate the practise of patient medication use. A clinical pharmacist informed patients on COPD and their medications on regular follow-up occasions, such as on the 15th day, 30th day, and 60th day of enrolment, based on data gathered at baseline. This education was done verbally and with the aid of a patient information pamphlet. A second round of the questionnaire was given out on day 90 of the study.

Study approval

The study protocol was approved by the ethics committee of Santosh University, and all patients gave written informed consent.

3. RESULTS

The surveys were completed by 26 patients in all, who had an average age of 61. The average number of packs smoked per year was 8, and the average number of years smoked was 43. Male patients made up 79.36% of all patients. Most of the patients were in the middle- or lower-income bracket and worked in agriculture. Their degree of schooling was indicative of this. The majority of the patients received little formal schooling. Only 3.4% of the patients surveyed for the study had education beyond class [10], while 46% had education between class 1 and class 10, and 54% had no formal education at all. Table 1 displays the patients' demographic information.

Table 1: Demographic detail of the study patients

Demographic Data	
Age (yrs)	60.48±12.8
Gender	
Male	79.36%
Female	20.64%
GOLD grading	Grade 3
Smoking history (Pack yrs)	43 ± 42.78
Duration of COPD (Yrs)	7.41±10.39

Patients had a negative opinion of their disease at the entrance level, according to the KAP research. Their behaviour and attitude both fell short of expectations. The signs of COPD and if it is infectious were generally known to patients. More over half of the patients believed that COPD could be fully cured. A small number of smokers were not aware that smoking increases the risk of COPD. The majority of individuals, especially the villagers, smoke beedis (a local cigarette), and smoking was prevalent among the patients. Most patients did not receive routine care and only took medication when they experienced acute exacerbations. 20% of the patients thought that drugs were only necessary for an exacerbation. This is most likely the result of ignorance or could be linked to the low socioeconomic issue.

Most people were unable to buy prescription medications because of their high cost. As a result, just 14% of patients were getting treatment through inhalation. None of the patients employed the proper inhaling method, despite shaking the medication canister before using it. 11% of these patients thought it was easy to use the inhalers. Patients received counselling and education during follow-up visits. In addition to verbal messages, patients also received a

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patient information booklet in Kannada, the local tongue. In order for someone in their family or community to read the booklet and notify them of its contents, many patients accepted it even though they were unable to do it themselves. The higher percentage of right answers to the same questions given at baseline at the end of the trial demonstrated that patient education boosted their knowledge. A COPD patient should stop smoking, according to 95% of the patients, and smoking is a risk factor for COPD, according to 65%. Everyone with COPD is aware that it is a contagious disease. Medication use increased, and 90% of respondents believed that COPD patients should regularly take their prescription drugs. Therefore, advancements in patient comprehension and attitude have an impact on the practise of utilising drugs. By the end of the study, 80% of the patients could easily use inhalers.

The initial KAP result indicated that patients' perceptions of their illness were not favourable. Most patients did not receive routine care and only took medication when they experienced acute exacerbations. Patient education increased their KAP and allowed them to satisfactorily respond to the same questions that were asked at baseline. The outcome indicated a notable improvement following counselling. The response to KAP questions both before and after instruction is represented graphically.

2. DISCUSSION

Patient compliance with their drug regimen and medical follow-up treatment can be improved by educational initiatives. Understanding the illness will reduce the likelihood that a patient will stop taking their medication without first consulting their doctor. Smoking cessation is one lifestyle change that will help patients experience fewer COPD acute exacerbations. In our study, patients used their medications more effectively as a result of their increased understanding, which in turn assisted patients in reducing their symptoms. Patients' quality of life improved as a result of their improved ability to manage their illness. Patients develop COPD, a prevalent and significant condition that causes significant morbidity, as a result of their ignorance of the dangers and consequences associated with smoking.

In this study, we have discovered a number of variables that may affect how COPD patients respond to medication and how they view their condition. Understanding these variables may be helpful in understanding how patients feel about their condition and its treatment. Illiteracy was one of these things that was thought to be crucial. Patient education (to ensure that patients comprehend the treatment plan) and motivation are two broad ideas in enhancing treatment adherence (encouraging the patient to adhere to the therapy). In our study, the majority of COPD patients (81%) were illiterate. The effectiveness of the treatment will undoubtedly be impacted by a patient's lack of understanding of the ailment and its treatment. A person must possess problem-solving and decision-making abilities in order to successfully navigate the health care system and fulfil their role as a health care consumer [9]. A person who has adequate health literacy can read, comprehend, and use health information effectively. Health literacy is a better indicator of health status than socioeconomic level, age, or ethnic origin, according to research [10]. Health information presented orally and in writing might be confusing to people with low health literacy. Numerous studies have shown that self-management education for COPD has substantial economic benefits [11].

Another significant factor that contributed to people only taking medications during exacerbations was poverty. For patients receiving inhaled medication, pricey refilling frequently led to therapy discontinuation, which typically ended in multiple hospital stays and trips to the emergency room. Dependency was also taken into consideration. The majority of the study participants were over 60 years old, and due to their poor health, they were unable

to work. They had to rely on others to provide them with their drugs as a result. Since the prognosis of their illness was dismal, they frequently felt like a burden to their family. 18% of the study participants were smokers in the past, compared to almost all of the patients. The majority of them had tried numerous times to stop smoking, but were ultimately driven to cease by recurrent exacerbations. However, some patients who were taking medications and benefiting from them made the decision to keep smoking, which is a bad habit that is typically impossible to break. The recommendation to stop smoking should be given to patients at all points of contact as it is a key component of managing COPD.

The majority of the patients who participated in the survey chose oral pills or parenteral drugs over inhalers because they were less expensive. The major obstacle to adherence is cost of the medication8. Due to their lower cost and longer-lasting effects than injectable steroids, oral steroids were preferred by the majority of patients. This was mostly because the patients' local doctors had been regularly prescribing them oral medications like steroids, so they had not yet had a chance to benefit from frequent usage of inhaled meds. The most common causes of poor medication adherence were factors like forgetfulness, symptom improvement, drug side effects, complexity of therapy, reliance, and financial issues. Only 14% of the participants in the research had ever used an inhaler before. Although all of the patients regarded using inhalers to be simple, their inhaling technique was improper. Effective use of inhalers is crucial to the success of treatment. Controlling the symptoms will be possible with effective counselling to guarantee proper aerosol use. The pharmacist may have a role in the patient's pharmaceutical care by identifying patients with COPD in the early stages, lowering risk factors for the disease, such as quitting smoking, and controlling the condition.

According to studies, patients who believe they have received adequate education from their doctor or another healthcare provider are more likely to be pleased with their overall experience. Patient education enhanced patient outcomes and decreased expenses, according to Frode Gallefoss' conclusion [12].

3. CONCLUSION

The ability of patients with COPD to cope with illness and their health condition is improved by the clinical pharmacist's health education, which focuses on the disease and the need for long-term therapy. Additionally, it helps people stop smoking, among other objectives. The best way to educate patients and improve patient care is for pharmacists to do so. A greater therapeutic effect would be achieved by increasing knowledge of the ailment and changing one's behaviour.

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