

AN EXPLORATORY STUDY CARRIED OUT IN HONG KONG EXAMINED THE EFFECTS OF A COUNSELING SERVICE AND NURSING EDUCATION PROGRAM ON MEDICATION ADHERENCE AND QUALITY OF LIFE IN PATIENTS WITH CHRONIC OBSTRUCTIVE PULMONARY DISEASE.



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An exploratory study carried out in Hong Kong examined the effects of a counseling service and nursing education program on medication adherence and quality of life in patients with chronic obstructive pulmonary disease.

HU YUE<sup>1\*</sup>, DR FARIDAH MOHD SAID<sup>2a</sup>

<sup>1</sup>PhD Research Scholar in Nursing. Lincoln University College Malaysia

<sup>2</sup>Professor in Lincoln University College Malaysia

Contact Details: [faridah.msaid@lincoln.edu.my](mailto:faridah.msaid@lincoln.edu.my)

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**Abstract**

People with chronic obstructive lung disease frequently struggle with not utilizing their inhalers as prescribed. This has a negative impact on one's health and overall quality of life. A variety of studies have found that patients who rigorously adhere to their medication schedules had fewer hospitalizations and a higher quality of life. Nurse education and counselling have been found to improve both quality of life and adherence to therapy for chronic obstructive pulmonary disease (COPD). A nursing education and counselling plan has been shown to be an effective new technique for improving medication adherence and patient quality of life in COPD patients. This dissertation aims to accomplish three things: (1) Research and develop a strategy for executing an educational program in a clinical context; (2) Create a protocol

for evidence-based practice; and (3) assess the feasibility of applying the method.

Six studies that met the criteria were chosen from two separate online databases. The studies were thoroughly examined to verify that they were of adequate quality and validity. SIGN (Scottish Intercollegiate Guidelines Network) checklists were used during the evaluation. The acquired data was then examined.

The implementation's viability and flexibility were assessed. The evidence-based recommendations were also evaluated in terms of their practicality. The next step was to determine whether clinical suggestions supported by research were possible for healthcare practitioners to implement. Following that, we'll discuss the potential drawbacks and benefits of developing technology and experiment with cost-benefit analyses. Furthermore, the EBP technique was designed with real-world clinical applications in mind.

## **INTRODUCTION**

Chronic Obstructive Pulmonary Disease (COPD) is a major health condition that affects millions of people globally. The World Health Organization (WHO) predicts that by 2030, COPD will be the world's third leading cause of death. COPD also has an adverse effect on Hong Kong's healthcare system. As Hong Kong's population ages, the number of older people suffering with COPD is increasing. As a result, the community faces substantial social and economic expenses. Contrary to popular assumption, one of the most common problems encountered by COPD patients is poor respiratory compliance. This has an adverse effect on your health.

Life Quality (QOL). Several studies have shown that great drug compliance can reduce hospital admissions and improve quality of life. Nursing education and counselling, according to researchers, can improve drug adherence and quality of life for COPD patients. A nursing education and counselling programme is intended to assist COPD patients, as it is a promising new strategy to improving drug compliance and patient quality of life. This dissertation has three primary objectives: to study and construct a strategy for implementing an educational program in a clinical setting, to establish an evidence-based practice (EBP) protocol, and to assess the implementation potential.

## **LITERATURE REVIEW**

According to the Global Initiative for Chronic Obstructive Lung illness (GOLD), this chronic lung illness results in gradual airflow limitation as well as chronic inflammation in the airways and lung caused by exposure to hazardous particles or gases. COPD is an incurable illness, although its symptoms and signs can be controlled and prevented. Exacerbations and comorbidities have an impact on a patient's overall severity (GOLD, 2013). COPD symptoms include dyspnea, chronic coughing or sputum production, shortness of breath, and other respiratory ailments. COPD can also be induced by prior exposure to risk factors such as cigarette smoke and occupational dust, as well as a family history of the disease. The existence of an COPD can also be diagnosed by the post-bronchodilator FEV1/FVC 0.70 ratio. The GOLD classification system divides COPD airflow restriction into four severity levels.

In the actual world, pharmacological and non-drug therapies are the most popular forms of COPD treatment. There are numerous pharmaceutical options for reducing the symptoms and severity of exacerbations. COPD is treated with a variety of medications, including bronchodilators and corticosteroids.

Non-pharmacological therapy include quitting smoking, physical activity, and immunization. A study found that smoking cessation programs can significantly reduce mortality (Anthonisen NR et al., 2005). Quitting smoking early can improve the prognosis and health condition.

According to the study, more than a quarter of people aged 40 and up had moderate airway limitation. According to research, COPD is the world's fourth leading cause of death, accounting for around 2.75 million deaths per year (Decramer M et al., 2012). Many people around the world are touched by this. According to the World Health Organization (WHO), COPD will be the third leading cause of mortality by 2030, surpassing heart disease and stroke (Jemal A et al., 2005). As a result, society bears considerable social and economic expenses, including high medical bills.

Between 1991 and 2000, COPD hospital admissions in the UK doubled, accounting for 1% of all hospital admissions in 2000. (The Lung and Asthma Information Agency, 2003). COPD is exceedingly expensive, which

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adds to the burden on global healthcare systems. Respiratory sickness expenses in the European Union account for 6% of the overall health-care budget, with COPD accounting for 56% (38.6 billion Euros) of the total cost. As a result, COPD has a negative impact on persons in many ways around the world, resulting in poor quality of life, a greater mortality and hospitalization rate, and increased social and economic costs for those who suffer from it.

### **STATEMENT OF THE PROBLEM**

Insufficient inhalation compliance is a common concern among COPD patients. As a result, one's health and quality of life suffers. A few studies have shown that excellent medication adherence can reduce hospital admissions while improving quality of life. Nursing education and counselling, according to researchers, can improve drug adherence and quality of life for COPD patients. A nursing education and counselling programme is intended to assist COPD patients, as it is a promising new strategy to improving drug compliance and patient quality of life. The dissertation has three basic objectives: To study and construct a strategy for the implementation of an educational program in a clinical environment, to establish an evidence-based practice (EBP) protocol, as well as an analysis of the prospective implementation.

Nursing education and counseling programs should be conducted in clinical settings to protect patients, healthcare practitioners, and the Hong Kong healthcare system.

The study aims to evaluate the effectiveness of education programs in increasing medication compliance and quality of life among COPD patients.

### **RESEARCH QUESTIONS**

Using the PICO approach, this research question is phrased as follows: When used in evidence-based practice, the PICO technique can assist define and answer clinical questions (Huang X, Lin J, Demner-Fushman D, 2006). When P (population) and I (intervention) are established, along with the comparison and outcome, a research question can be developed. This dissertation refers to COPD patients as P, nurse education and counselling as I, routine care as C, and medication compliance and quality of life as O. So, the study question is: How does nurse? How do education and counselling compare to regular care in patients with chronic obstructive pulmonary disease in terms of medication compliance and quality of life?"

### **RESEARCH METHODOLOGY**

According to SIGN's 2014 grading approach, all eligible study will be assessed on its degree of evidence and recorded in TOE. According to the system hierarchy, it ranges from 1++ to 4 depending on the research design and bias risk. ITT analysis and blinding techniques were employed in E.O, Efraimsson et al's (2008) and Wei, L. et al's (2014) studies, both of which were rated 1+ for their well-conducted RCTs. The remaining four journals received a score of one due to severe bias concerns, such as small sample sizes and poor generalizability. As a Overall, the degree of evidence was strong, and the research findings provided us with a solid platform for developing the evidence-based method.

### **RESEARCH DESIGN**

ARCT is a randomised controlled trial (RCT), therefore its advantages can be used to establish evidence-based methods. In reality, RCTs are an ideal research design for assessing the efficacy of pharmaceutical interventions in clinical trials. The benefits of RCTs are easily demonstrated due to their great reliability in terms of scientific

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evidence. Random allocation, blinding, and allocation concealment reduce research bias while boosting study quality. Using Wei et al's research design, we can think of the study technique as an RCT, as it fits the majority of the requirements in SIGN checklists.

### **DATA ANALYSIS**

There was nearly complete agreement among academic publications about the favorable correlation between Medication adherence education and improved quality of life. Leiva-Fernández et al. (2014) discovered no significant differences in SGRQ ratings between those getting treatment and those receiving a placebo. The SGRQ, NHP, Morisky scale, and dose counter values were all statistically significant in the majority of studies. For example, Wei, L. The study by et al. (2014) showed statistically significant improvements in SGRQ subscale ratings and dose-response curves after 6 and 12 months of follow-up.

### **CONCLUSION**

The study's examination was expected to have an impact on medication compliance as well as quality of life. The SF-36 and Nottingham Health Profile were used to assess quality of life, and medication adherence was monitored using the Morisky scale and a dosage counter (NHP). Quality of life and drug adherence studies have confirmed its accuracy. A poor state of health was reflected in higher SGRO and NHP scores. Fewer dose counters suggested better compliance, but a larger Morisky score indicated worse compliance.

### **LIMITATIONS OF THE STUDY**

People and systems treatments must be evaluated; but, given their complexity, the randomized controlled trial (RCT) research approach suffers from fundamental restrictions. Public health and related disciplines, such as population and social services, have been debating RCT alternatives for some time, attempting to determine the trade-offs in their use when randomization is impractical or unethical. The study's significant limitations include a review of current discussions as well as consideration of pragmatic and economic considerations associated with evaluating whole-population treatments while maintaining scientific validity and credibility.

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