


Thesis Title: The Effectiveness of a Pulmonary Rehabilitation Program in Patients with Chronic Obstructive Pulmonary Disease (COPD)

By: Nukul Ploybutr

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Thesis Advisor: Assistant Professor Nuntavarn Vichit-Vadakan, M.S., M.P.H.  
Dr.P.H.

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 Dean of the College of Public Health  
( Samlee Plianbangchang, M.D., Dr.P.H.)

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Thesis Advisor

( Assistant Professor Nuntavarn Vichit-Vadakan, M.S., M.P.H. Dr.P.H.)



Member

( Associate Professor Ong-arj Viputsiri, M.D., Dr.P.H.)

## ABSTRACT

This project of the effectiveness of a pulmonary rehabilitation program in patients with chronic obstructive pulmonary disease (COPD) aimed to evaluate the effects of a 6-week pulmonary rehabilitation program for the patients with chronic obstructive pulmonary disease (COPD) on the quality of life, the exercise capacity and the perception of dyspnea. The study group was thirteen patients diagnosed as COPD, from 42 to 78 years of age who were being treated at Chiangmuan Hospital, Chiangmuan District, Phayao Province. The study group participated in the pulmonary rehabilitation program. The 6 weeks hospital based rehabilitation program consisting of education, exercise training, psychological support, 6 months of individualized regimens of home-based exercise practice with monthly supervised exercise by home visit nurse, and 6 months of monthly hospital follow up care.

The outcome evaluation was completed by comparing data on three main patients outcome at baseline, 3 and 6 months after completed the program. The study measured three main patients outcome namely; the quality of life measured by the Chronic Respiratory Disease Questionnaire (CRQ), the exercise capacity measured by the 12-minutes Distance Walk Test (12 MD), and the perception of dyspnea after exercise measured by the Horizontal Visual Analogue Scale (HVAS).

The results of the study revealed that after the pulmonary rehabilitation program the participants showed a statistically significant increase in all three main patients outcome. There were significant differences in the study group in quality of life

measured by the Chronic Respiratory Disease ( $p < .05$ ), the exercise capacity that measured by the 12-min distance walk test ( $p < .05$ ) and changed in the perception of dyspnea measured by the Horizontal Visual Analogue Scale ( $p < .05$ ) between preprogram, 3 and 6-month after the program.

This study also examined the interactive effects of age and the different stages of the disease on each of the dependent variables. Participants who were over-61 years of age group showed a greater response to the intervention on the quality of life, the exercise capacity and the perception of dyspnea than those with 40 - 50 and 51 - 60 age groups. And the patients with mild airway obstruction response more positively to the rehabilitation program on the three patients' outcomes than the moderate and severe airway obstruction groups.

It could be concluded from this study that the pulmonary rehabilitation program that combined education and exercise training with supervised exercise practiced showed improvement the patients' outcomes and help the COPD patients to learn the ways to help themselves achieve and maintain an optimal level of life.

Nevertheless, the future study in this area should use an experimental design or cohort design for could be certain that the results. In addition the pulmonary rehabilitation program need to be tested in a larger sample of COPD subjects and should be considered for every COPD. There should be evaluated the effect of a pulmonary rehabilitation program on health care cost, survival, the short- and long-term success of the rehabilitation program. Finally, the rehabilitation program should be applied to chronic diseases other than COPD.