

INTRODUCTION

Chronic obstructive pulmonary disease (COPD) is a group of disorders, that produces irreversible impairment of lung function.⁽¹⁾ These disorders are the fifth leading cause of death in the United States, and is one of the few diseases whose prevalence is increasing.⁽²⁾ It is estimated that more than 23 million Americans suffer from chronic bronchitis, emphysema, or asthma.⁽³⁾ The WHO statistical records showed that the number of patients who died of COPD in Egypt during the year 1991, was 7738. Their ages ranged between 20 and 75 years.⁽⁴⁾ According to the statistical records of *Banha Main University Hospital*, it was estimated that the number of patients, admitted to the Medical Department during the year 1994, was 1070. Out of these, approximately 140 patients were afflicted with COPD.⁽⁵⁾

The pathologic changes in COPD produce airflow obstruction with resultant arterial blood gas abnormalities including an oxygen deficit. The progressive deterioration in pulmonary function leads to multiple symptoms, such as worsening shortness of breath and a steady decline in physical functioning which causes inactivity. Inactivity promotes diminished muscle efficiency, easy fatigability and progressive physical disability.^(8,9,10)

Chronic obstructive pulmonary disease creates numerous emotional and socioeconomic problems for patients and their families. Progressive invalidism is both emotionally and financially burdensome, requiring changes in life patterns and withdrawal from many normal activities of daily life.⁽⁸⁾ Patients with COPD also have been found to experience psychological problems as feelings of fear, depression, anxiety, anger and uncertainty which may result from

unpredictable symptoms, lack of information and skills and unfamiliar events.^(1,9,11,12,13)

Weaver and Narsavag,⁽¹⁴⁾ and *Rubenstein et al*,^(14,15) have declared that both the physiological and psychological variables affect the individual functional status including daily life activities. Therefore, COPD patients require strongly attention, not only for acute care, but also require chronic long-term care where there is consideration of the psychological, emotional, socioeconomic and physical disabilities influencing these patient's daily functions.^(8,16)

The health care system may contribute to a focus on the symptoms of a disease rather than on the disabilities and the behavior and life style changes, it produces.⁽¹⁷⁾ The chronic nature of a pulmonary disease requires that the health care be provided with consideration for the patient's life style and warrants the early introduction of rehabilitation activities into the acute-care setting.^(16,17)

Rehabilitation is as a process of assisting a disabled, acutely or chronically-ill, or convalescent person to realize his particular goals in living and working to the "**almost of his potential**". This process involves various aspects, such as *physiological, psychological, social, economic, emotional* and *vocational* for the proper functioning of the individual. It allows the patient, family and physician and other health care providers to deal with the whole person and not just to focus on a specific physical manifestation common to disorders.^(17,18)

Pulmonary rehabilitation programs of persons with COPD can be as successful as that of persons with neuromuscular and skeletal disabilities. Rehabilitation procedures will not only reverse the permanent structural pulmonary damage caused by COPD, but they can enable the patient to live with limited cardiorespiratory reserve, and they can prepare the person for employment or self-care at-

tuned to his or her mental and physical capacities.⁽⁸⁾ In addition, patients may experience reduced symptoms, improved exercise tolerance, lesser complications, fewer hospitalizations and physician visits as well as optimal capability for carrying out his/her activities of daily living.^(8,17,19)

Health professionals and nurses are frequently being asked to place great emphasis on the preventive and rehabilitation aspects of illness. However, in spite of the great advances in medicine and nursing, pulmonary rehabilitation programs in Egypt, especially at Banha Hospitals, continue to be rare constraints relating to ward routines and pressures, economy and lack of resources, are always, there. It is thus, essential that hospital personnel and nurses, in particular, realize their responsibility and collaborations in this regard. This can be achieved by initiating well-planned scientifically studied rehabilitation programs, that can be maintained, thereafter, as appropriate to the patient and the available resources, in order to contribute to patient's welfare.

The rehabilitation processes involved, often entail the application of individual assessment, education, instruction, and explanation of the normal lung, disease process, preventive measures, activity adaptations, and such treatment procedures as medication, dietary restrictions, pulmonary physiotherapy (*postural drainage, breathing exercises, exercise retraining programs, effective coughing techniques*), respiratory therapy techniques (*oxygen administration and aerosol treatment*), psychological support and supervised exercise training appropriate to the disabilities of the patient.^(8,17,19)

In order that patients can fulfill the rehabilitation program objectives, they must have the appropriate instruction or education to understand their basic health needs so as to achieve an optimal level of health. It is part of the nurses' role to improve the patients'

level of understanding and thus, promote their health. It implies that a two-way process occurs; that of teaching by the nurse, and learning by the patient, with the purpose of achieving a specific goal, that is optimum health.^(19,20)

Assessment of the patient's individual learning needs is the key to effective patient rehabilitation, since it will serve many purposes for their teaching. It will ensure individuality by finding out what the patient wants and needs to know.^(7,21) Therefore, this present study is expected to illustrate the effectiveness of a pulmonary rehabilitation program. It also highlights the importance of assessing patients' teaching-learning needs as well as physiological and functional status as indicators of this program success.

