شبكة المعلومات الجامعية

التوثيق الإلكتروني والميكروفيلم

بسم الله الرحمن الرحيم

HANAA ALY

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جامعة عين شمس

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قسم

نقسم بالله العظيم أن المادة التي تم توثيقها وتسجيلها
علي هذه الأقراص المدمجة قد أعدت دون أية تغيرات

يجب أن

تحفظ هذه الأقراص المدمجة بعيدا عن الغبار

HANAA ALY

Introduction

Chronic obstructive pulmonary disease (COPD) is an important cause of morbidity and mortality worldwide. Accurate prediction of outcomes such as rate of lung function decline, exacerbations, healthcare utilization of resources and risk of death are important because it helps to identify patients whom the implementation of therapeutic measures could improve their outcomes **(*Celli, Anderson, Brook,2019)***

COPD is currently the fourth leading cause of death in the world but it is projected to be the 3rd leading cause of death by 2020. More than 3 million people died by COPD in 2012 representing 6% of all deaths globally. COPD is an important public health challenge as it could be preventable and/or treatable. COPD is a major cause of chronic morbidity and mortality all over the world and die from it or its complications ***(GOLD, 2018).***

COPD is a chronic inflammatory lung disease that causes obstructed airflow from the lungs. Symptoms include breathing difficulty, cough, mucus (sputum) production and wheezing. The main cause of chronic obstructive pulmonary disease in developed countries is tobacco smoking, long-term exposure to irritating gases or particulate matter, most often from cigarette

smoke. People with chronic obstructive pulmonary disease are at increased risk of developing heart disease, lung cancer and a variety of other conditions (***Murray, Atkinson, Bhalla, 2016).***

Pharmacological therapy for COPD is used to reduce symptoms, as well the frequency and severity of exacerbations, and improve exercise tolerance and health status. The choice within each class depends on the availability and cost of medication and favorable clinical response balanced against side effects. Each treatment regimen needs to be individualized as the relationship between severity of symptoms, airflow limitation, and severity of exacerbations can differ between patients. Pulmonary rehabilitation and self management should be considered as a part of integrated patient management, and usually includes a range of healthcare professionals to ensure optimum coverage of the many aspects involved ***(Rose, Istanboulian, Carriere., 2018)***

Self-efficacy is described as a cognitive process, as the individuals learn through environmental and social influence, new behaviors that affect their abilities to improve future events. Promoting self-efficacy can improve the outcomes and quality of life for patients living with chronic diseases ***(Wu, et al., 2016).***

Bandura (1977) describes self-efficacy as an expectation where a person believes in taking a particular action to produce a specific outcome. Self-efficacy is not a trait, but rather a set of beliefs. People must believe that they can produce certain effects with their actions or they will not be persevere in difficult situations. People's beliefs in their efficacy have a direct impact on meeting their one's goals, therefore, to improve self-management of disease processes, patients should increase self-efficacy and believe that they can manage their disease **(Bandura, 2018).**

Significance of the study:

Chronic obstructive pulmonary disease is expected to become the third leading cause of death by 2030, surpassed only by heart disease and stroke. More than 3 million people died with chronic obstructive pulmonary disease in 2005, which is equal to 5% of all deaths globally during that year ***(WHO,2019).***

Increasing prevalence of smoking in developing countries, and aging populations in high-income countries, the prevalence of COPD is expected to rise over the next 40 years and by 2060 there may be over 5.4million deaths annually from COPD and related conditions. ***(GOLD, 2020).***

Aim of the Study

This study aims to assess level of self efficacy among patients with COPD through the following:

1- Assessing patient's level of knowledge regarded chronic obstructive pulmonary disease.

2- Assessing level of self-efficacy among patients with chronic obstructive pulmonary disease.

Research question:

This study is based on answering the following questions:

- What are the level of knowledge of patients regarding chronic obstructive pulmonary disease?
- What are the level of self-efficacy among Patients with chronic obstructive pulmonary disease?
- What are the factors that affect the level of Self-Efficacy among patients with chronic obstructive pulmonary disease?

Anatomy and Physiology of Respiratory Tract

The airway, or respiratory tract, allow airflow during ventilation. which reach from the nares and buccal opening to the blind end of the alveolar sacs. The airflow are subdivided into different regions with various organs and tissues to perform specific functions. The airway can be subdivided into the upper and lower airway, each of which has numerous subdivisions ***(Wani, Bissonnette, Engelhardt, Buchh, Arnous et al., 2019).***

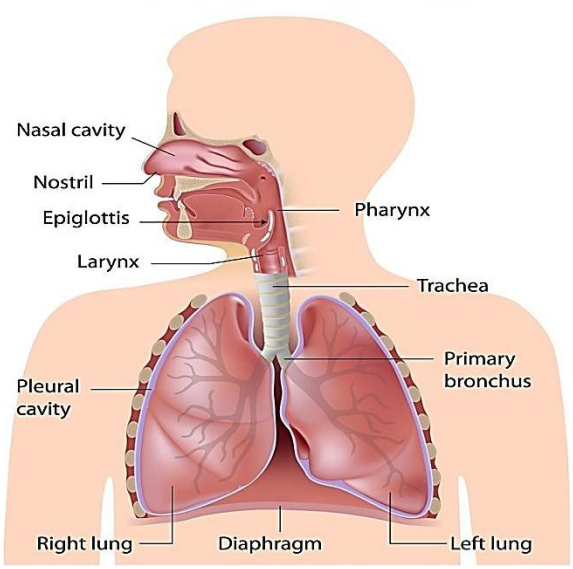

Figure (1): Respiratory System ***(Lutfi MF. The physiological basis and clinical significance of lung volume measurements. Multidiscip Respir Med. 2017)***.

The upper respiratory tract include the nostrils, the nasal cavity, the pharynx, the epiglottis, and the larynx. The upper respiratory tract is lined with a mucous membrane. Mucus helps to trap smoke, dust and other small particles. The membrane is lined with cilia (hair-like structures that move the mucous upwards only in the upper respiratory tract). The lining of the tract and the close laying blood vessels (especially in the nose) help to warm and moisten air as it passes ***(Lutfi, 2017)***.

Pharynx, commonly called the throat, is a passageway that extends from the base of the skull to the level of the sixth cervical vertebra. It serves both the respiratory and digestive systems by receiving air from the nasal cavity, food, and water from the oral cavity. Inferiorly, it opens into the larynx and oesophagus ***(Chaudhry, Bordoni, Stat, 2020).***

Larynx, commonly called the voice box or glottis, it is passageway for air between the pharynx above and the trachea below. It extends from the fourth to the sixth vertebral levels. The larynx plays an essential role in human speech. During sound production, the vocal cords close together and vibrate as air expelled from the lungs passes between them. Epiglottis**,** acts like a trap door to keep food and other particles away from entering the larynx ***(Chaudhry, 2019)***

The lower respiratory tract include the trachea, right & left bronchus, the bronchioles, and the lungs which containing the alveoli. Deep in the lungs, each bronchus divides into secondary and tertiary bronchi, which continue to branch to smaller airways called the bronchioles. The bronchioles end in air sacs called the alveoli. Alveoli are bunched together into clusters to form alveolar sacs. Gas exchange occurs on the surface of each alveolus by a network of capillaries carrying blood that comes through veins from other parts of the body ***(Schittny, 2017).***

Trachea, commonly called the windpipe, is the main airway to the lungs. It divides into the right and left bronchi at the level of the fifth thoracic vertebra, channeling air to the right or left lung. The cartilage in the tracheal wall provides support and keeps the trachea from collapsing. The mucous membrane that lines the trachea is similar to that in the nasal cavity. Mucus traps airborne particles and microorganisms, and the cilia propel the mucus upward, where it is either swallowed or expelled ***(Schittny, 2017).***.

Alveoli are grouped together like a lot of interlinked caves, rather than existing as separate individual sacs. The alveoli have a structure specialised for efficient gaseous

exchange: the alveoli walls are extremely thin; they have a large surface area in relation to volume, they are fluid lined enabling gases to dissolve; and they are surrounded by numerous capillaries ***(Brinkman, Toro, Sharma, 2020).***

Inspiration the dome-shaped muscle of the diaphragm flattens, and the inter-costal muscles pull the rib cage upwards and outwards. This increases the volume of the chest cavity and air is drawn into the lungs. In Expiration the diaphragm relaxes and resumes its dome shape. The inter-costal muscles also relax and the rib cage falls inwards and downwards. This reduces the volume of the chest cavity and air is forced out of the lungs ***(Rhodes, Varacallo, 2019).***

Gaseous Exchange once the inspired air reaches the smallest part of the lungs, the alveoli, gaseous exchange can take place. This refers to the process of Oxygen and Carbon Dioxide moving between the lungs and blood ***(Phillip, Marsh, Hacking, 2017).***

Chronic Obstructive Pulmonary Disease (COPD)

COPD is acommon, preventable and treatable disease that is characterized by persistent respiratory symptoms and airflow limitation that is due to airway and/or alveolar abnormalities usually caused by significant exposure to noxious particles or gases. The chronic airflow limitation that is characteristic of COPD is caused by a mixture of small airways disease (obstructive bronchitis) and parenchymal destruction (emphysema), the relative contributions of which vary from person to person ***(GOLD, 2019).***

Chronic inflammation of airflow causes structural changes, narrowing of the small airways and destruction of the lung parenchyma that leads to the loss of alveolar attachments to the small airways and decreases lung elastic recoil. In turn, these changes diminish the ability of the airways to remain open during expiration. A loss of small airways may also contribute to airflow limitation and mucociliary dysfunction is a characteristic feature of the disease process ***(Kim, Crapo, Zhao, 2016).***

COPD is more common in older people, especially those ages 65 old years and older. Associated mortality in women has more than doubled over the man in the past 20

years and now matches each other. COPD was ranked by the world health organization (WHO) as the third leading cause of death especially with a particular burden in low- and middle-income countries**.** It affects more than 5 percent of the population and is associated with high morbidity and mortality rate ***(GOLD, 2017).***

The prevalence of COPD is directly related to increased global exposure to tobacco, smoking and ex smoking, aging populations, poor awareness and inadequate access to diagnosis . COPD exacerbations are a major event in the natural history of the disease associated with worsening of symptoms often resulting in hospitalization and poor prognosis ***(WHO, 2019).***

Various classification systems for COPD have been developed. The purpose of any classification is to allow categorization of patients in meaningful ways, so as to predict symptoms, functional outcomes, prognosis or response to therapies. The cardinal feature of COPD is airflow limitation. Therefore, the initial classification of COPD by GOLD was based on a post bronchodilator forced expiratory volume in 1 second (FEV_1) FEV1/FVC forced vital capacity ratio of <0.70 is commonly considered diagnostic for

COPD. The Global Initiative for Chronic Obstructive Lung Disease (GOLD) system categorizes airflow limitation into stages ***(Mirza, Clay, Koslow 2018)***.

The GOLD guidelines recommend the use of forced expiratory volume in 1 second (FEV_1) to measure the severity of airflow limitation in COPD. Patients with COPD with routinely recorded spirometry were stratified by 4 severity stages recommended by GOLD: mild, FEV_1 80% or more predicted; moderate, 50% or more FEV_1 but less than 80% predicted; severe, 30% or more FEV_1 but less than 50% predicted; and very severe, FEV_1 less than 30% predicted ***(GOLD,2018).***

Causes worldwide, the most commonly encountered risk factor for COPD is tobacco smoking other types of tobacco, (e.g. pipe, cigar, water pipe) and marijuana are also risk factors for COPD. Outdoor, occupational, and indoor air pollution the latter resulting from the burning of biomass fuels are other major COPD risk factors. Nonsmokers may also develop COPD ***(Denguezli, 2016).***

Tobacco smoking, cigarette smokers have a higher prevalence of respiratory symptoms and lung function abnormalities, a greater annual rate of decline in FEV and a

greater COPD mortality rate than non-smokers. Other types of tobacco (e.g., pipe, cigar, water pipe) and marijuana are also risk factors for COPD. Passive exposure to cigarette smoke, also known as environmental tobacco smoke (ETS), may also contribute to respiratory symptoms and COPD ***(Woodruff, Barr, Bleecker, 2016).***

Occupational exposure, after smoking, being exposed to chemicals and substances such as coal mine dust, cotton dust, silica, and grain dust in the workplace, particularly long term, are among the leading causes of COPD. Isocyanates, natural rubber latex, animal dander, and platinum salts are among a host of other occupational agents that can damage the lungs, leading to COPD. Exposure to vapors, dust, fumes, and gases containing hazardous materials increases the risk for developing COPD by22% of the cases ***(Sadhra, Kurmi , Lam, Ayres 2017)***

Indoor and outdoor, pollutants that can irritate airways include mold, pollen, pet dander, and particles from dust mites and cockroaches, along with secondhand smoke. Combustible pollutants in your home can also be a problem. These include fireplaces (wood smoke), furnaces, heaters, and water heaters that use gas, oil, coal, or wood as fuel sources Ozone