



Identification of Changes in the Lifestyle of Patients with COPD: A Literature Review

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Article History	Abstract
Received: 06 June 2023 Revised: 05 Sept 2023 Accepted: 11 Sept 2023	<p><i>Chronic Obstructive Pulmonary Disease (COPD) is a chronic lung disease consisting of chronic bronchitis and emphysema. Its main clinical manifestations include dyspnea, chronic cough, and fatigue, symptoms that progress as the disease develops, potentially leading to hospitalization in severe stages. The aim of this study was to identify changes in the lifestyle of patients with COPD. A documentary literature review was conducted, searching for changes in quality of life in chronic obstructive pulmonary disease using various databases; Google Scholar, Scielo, Scopus, Web of Science, Elsevier, for the period 2018-2022. It is concluded that lifestyle changes in people with COPD are numerous and affect physical, functional, psychological, and economic aspects, posing a significant challenge for both friends and family of the affected individuals. COPD is the third leading cause of death worldwide and has become a public health issue in the country, underscoring the importance of considering the quality of life changes that arise with this disease.</i></p>
CC License CC-BY-NC-SA 4.0	<p>Keywords: <i>Chronic Obstructive Pulmonary Disease (COPD), Quality of life, Lifestyle, Clinical manifestations</i></p>

1. Introduction

As stated by (1) chronic obstructive pulmonary disease (COPD) is a common, preventable and treatable chronic disease that affects men and women without discrimination, it is the third cause of death in the world. It is characterized by being composed of two diseases: chronic bronchitis and pulmonary emphysema. Characteristic components of the disease and that can be considered irreversible damage to the patient's health.

Chronic bronchitis consists of "chronic cough with sputum due to inflammation of the airways," however, Robbins and Cotran add that it is a "persistent cough with expectoration for at least 3 months, at least 2 consecutive years." The main habit associated with the development of chronic bronchitis is smoking (active or passive), a very common practice in today's society, which causes pulmonary emphysema, which has been defined as the "destruction of the pulmonary alveoli". Whereas, in this regard, Robbins and Cotran define it as the "irreversible increase in size of the airspaces distal to the terminal bronchiole, accompanied by the destruction of its walls" (2-4).

In the same way, the main habit associated with the appearance of pulmonary emphysema is smoking, both active (person who has the habit of smoking) and passive (person who does not smoke, but is in a smoking environment and inhales the smoke expelled by the other people present). The most frequent symptomatology that occurs during COPD is: Dyspnea that progresses as the disease

progresses, chronic cough that is usually accompanied by sputum and fatigue. This symptomatology appears from middle age and produces numerous exacerbations that can even be lethal. This is exacerbated today by the COVID-19 pandemic, which occurred in 2020 and continues to be a cause for concern in today's society. (5.6)

The diagnosis and timely treatments are of vital importance, since in this way the disease and the symptomatology in general are better controlled. However, the quality of life of people with COPD decreases considerably depending on the severity of the symptoms and the number of exacerbations that the patient has had. (7)

Quality of life is defined according to Soto & Failde as "the individual's perception of his situation in life, within the cultural and value context in which he lives, and in relation to his objectives, expectations, values and interests". This denotes that quality of life is not only linked to the cultural context, but also includes the goals and expectations of the person (8). Due to its importance, the present research aims to identify changes in the lifestyle of patients with COPD through a documentary bibliographic study.

2. Materials And Methods

Of documentary bibliographic type where a search was carried out on the changes of the quality of life in chronic obstructive pulmonary disease, for this reason different databases were used; Google scholar, Scielo, Scopus, Web of Science, Elsevier, in the period 2018-2022. During the search, keywords were used referring to the impact on the quality of life that the patient suffers from having COPD. The search began with keywords "Chronic obstructive pulmonary disease" then other terms were added such as "Quality of life" "Changes" "Sequelae" "Clinical manifestations".

Useful articles for research were selected, those not useful that did not talk about the problems that the patient develops in the quality of life and those that focused on the prevention of the disease were discarded. The search focused mainly on articles related to studies where patients had problems in their daily lives due to the sequelae of the disease.

Among the main problems when searching for information is the inability to access certain files because they are on sites that require payment or certain subscriptions to view them completely. A total of 11 articles were selected from different databases such as: Elsevier, Google scholar, NCBI, among others, from which the information was analyzed in detail to obtain a compendium of truthful and effective data. Information such as the description of the disease, its components, causes, consequences and the lifestyle change they produce was included. It is worth mentioning that in the collection of information articles were included in other languages such as English, in this way the information obtained was of much more relevance.

A total of 11 articles were selected from the different databases, from which they were thoroughly analyzed to obtain an accurate and effective data collection, which included information such as the origin of the disease, the causes, consequences and lifestyle that influence the pathology. It is worth mentioning that the selection of articles was not limited only to those in Spanish, but also articles in English were taken into account.

The methodology used to cite and write the bibliographic references was the Vancouver standards.

3. Results and Discussion

After carrying out the analysis of the articles chosen to carry out the research, collected data are presented:

Health-related quality of life is grouped into 4 sections:

- **Physical condition and functional capacity:** Health, physical safety and motor skills of the person.
- **Psychological state and well-being:** Productivity, good mood, emotional and mental state.
- **Social interactions:** That the person has personal relationships, family and friendships.
- **Economic status and its factors:** Income, housing, transportation and expenses (8).

All of the groups described above are detailed below, highlighting the main lifestyle changes of people with chronic obstructive pulmonary disease in each group.

Fitness and Functional Capacity

Changes in the patient's physical status are described in relation to the classification of disease stages according to the Global Initiative for Chronic Obstructive Lung Disease (GOLD).

Tabla 2.4. Clasificación de la gravedad de la limitación del flujo aéreo en la EPOC (basada en el FEV ₁ posbroncodilatador)		
En pacientes con un valor de FEV ₁ /FVC < 0,70:		
GOLD 1:	Leve	FEV ₁ ≥ 80% del valor predicho
GOLD 2:	Moderada	50% ≤ FEV ₁ < 80% del valor predicho
GOLD 3:	Grave	30% ≤ FEV ₁ < 50% del valor predicho
GOLD 4:	Muy grave	FEV ₁ < 30% del valor predicho

Figure 1. Classification of severity in COPD, according to GOLD. Source: (1, 2)

Table 1. Changes in the quality of life of patients with COPD

Quality of life	
Changes in the quality of life of patients with COPD	
Physical condition and functional capacity:	<p>GOLD 1 (Light):</p> <ul style="list-style-type: none"> • < Mild airflow limitation. • < Cough with possible mucus production. • No need for oxygen therapy. • Quality of life not affected. <p>GOLD 2 (Moderate):</p> <ul style="list-style-type: none"> • > Limitation in airflow. • Exertional dyspnea. • > Cough accompanied by sputum. • Initiation of medical treatment. <p>GOLD 3 (Serious):</p> <ul style="list-style-type: none"> • > Limitation in airflow. • > Dyspnea accompanied by fatigue. • Limitations in daily activities. • Onset of exacerbations. <p>GOLD 4 (Very serious):</p> <ul style="list-style-type: none"> • Drastic airflow limitation • Involvement at the level of the cardiovascular system. Great impact on the patient's quality of life. • > Respiratory distress and exacerbations. • The patient requires oxygen therapy accompanied by hospitalization.
Psychological state and well-being:	<ul style="list-style-type: none"> • Anxiety: Patients present negativity due to all the change and processes to which the patient has to adapt. • Depression: Fear of contracting infectious diseases and helplessness when needing help to perform daily activities and being a burden to others. • Feeling of inadequacy and loss of control: There is the progressive appearance of dyspnea accompanied by anxious symptoms.
Social interactions:	<ul style="list-style-type: none"> • Guilt: Guilt of the development of the disease by habits such as smoking and cannabis use. • Social isolation and reduction of activities in family or friends: Contact 0 with society to avoid being a burden or not feeling minimized.

Economic status and its factors:	High cost of treatment involving medication, medical care and alternative processes. For this reason, the expenditure involved in the treatment of COPD is high taking into account the economic average of the Ecuadorian population.
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Source: Authors.

- **GOLD 1 (Mild):** There is a slight limitation of airflow, accompanied by cough with possible mucus production. No need for oxygen therapy. It does not significantly affect the patient's quality of life.
- **GOLD 2 (Moderate):** There is a greater limitation in the flow of air, with the presence of dyspnea of effort, the cough that occurs is greater and accompanied by sputum. At this stage patients usually start with medical treatment.
- **GOLD 3 (Severe):** Presence of a greater limitation in airflow, there is greater dyspnea accompanied by fatigue. There are limitations in daily activities. Onset of exacerbations.
- **GOLD 4 (Very serious):** A drastic limitation of airflow, resulting in involvement at the level of the cardiovascular system. There is a great impact on the quality of life of the patient, because the respiratory difficulty is greater and there is a greater presence of exacerbations. The patient requires oxygen therapy accompanied by hospitalization (9).

Psychological State and Well-Being

- **Anxiety:** Mainly because of the negative idea of the disease and the whole process to which patients have to adapt to control the symptoms and avoid exacerbations.
- **Depression:** Development of negative emotions from fear of death, needing help to perform daily activities, contracting infectious diseases that severely affect the airways or even becoming a burden to friends and family.
- **Feeling of inadequacy and loss of control:** Mainly due to the progressive appearance of dyspnea and anxious symptoms generated by repressing emotions. In addition to the progressive loss of capabilities (10).

Social Interactions

- **Feeling of guilt:** Society holds people with COPD responsible and judges the development of the disease for habits related to it, such as smoking and cannabis use.
- **Social isolation and reduction of activities with family or friends:** People who suffer from the disease prefer not to have contact with society so as not to be a burden or feel vulnerable (10).

Economic Status and Its Factors

The cost of treatment including medication, medical care and alternative processes is relatively high. The average annual cost in Mexico of a COPD patient is \$4502.16. Of this amount, \$3082.70 corresponds to medications used in treatment, taking into account hospitalization and oxygen therapy in more severe cases (11).

Taking into account the aforementioned values, the expenditure involved in the treatment of COPD is high, especially if it is related to the economic average of the Ecuadorian population. So, a person who works and has a basic salary will have difficulty in paying for adequate treatment of the disease.

There are other studies related to the evaluation of the quality of life of patients with chronic obstructive pulmonary disease (COPD), in this way an article entitled "Quality of life in COPD patients" mentions that the quality of life of these people deteriorates in the course of the disease, which also denotes an increase in SGRQ-C. In addition, they denote that the psychological and psychiatric evaluation of these patients is very important since the appearance of disorders can worsen the condition of patients and seriously affect their quality of life (12,13).

A study titled "Nutritional status, dietary intake, and health-related quality of life in outpatients with COPD" mentions that there is a high probability of malnutrition in COPD patients, however, weight

loss does not appear to be intentional. The nutritional status of patients is closely related to the severity of the disease (14).

Another study entitled "Efficacy of a respiratory muscle strengthening program with electrical stimulation in people with COPD: a research project" mentions that there are respiratory muscle strengthening programs with electrical stimulation for patients with COPD, in this way the patient's condition can be improved and thus improve the patient's quality of life in some way (15, 16).

4. Conclusion

COPD is a chronic, treatable and preventable lung disease that has two components: chronic bronchitis and emphysema. The quality of life of a patient with COPD focuses on 4 categories such as physical state and functional capacity, psychological state and well-being, social interactions and economic status and its factors, in this way the changes and affectations that the disease has in the lifestyle of the person can be evaluated.

The changes in the quality of life of patients with COPD are remarkable, in the emotional aspect of the patient there is the presence of fear, anxiety and depression due to the change experienced by the person, in the social aspect they feel that they are a burden for society and close people, so they live in a constant environment of guilt and isolation. The patient will present progressive exertional dyspnea, which implies the need to use oxygen therapy for the patient's well-being. The costs of treatment and medication are high which implies a large expense in the homes of people with COPD.

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