

Chronic Respiratory Diseases: Lung and Respiratory Disease

Abstract

Barely any examinations have evaluated the personal satisfaction (QOL) connected with constant respiratory illnesses in the old. A questionnaire was completed by elderly residents of 53 selected nursing homes as part of the geriatric study on the health effects of air quality in elderly care centers (GERIA) study. It remembered different segments for request to survey respiratory protests, QOL (World Wellbeing Association QOL (WHOQOL)-BREF), and the mental and discouragement status. The result factors were the presence of a score lower than 50 (<50) in every one of the WHOQOL-BREF spaces (actual wellbeing, mental wellbeing, social connections, and ecological wellbeing). Potential risk factors included chronic bronchitis, frequent cough, current wheezing, asthma, and allergic rhinitis. The sample that was surveyed consisted of (n = 887) 79% women, with a mean age of 84 (SD: 7 years). In the multivariable analysis, wheezing in the previous year was correlated with a physical domain score of 50 (odds ratio (OR): 2.03, interval of confidence (CI): 1.25–3.31) as well as asthma 1.95, CI: 1.12–3.38). A frequent cough was associated with the psychological domain (OR: 1.43, CI: 0.95–2.91). Chronic bronchitis was associated with a score of 50 in the environmental domain (OR: 2.89, CI: 1.34–6.23) as well as emphysema 3.89, CI: 1.27–11.88). According to these findings, the presence of respiratory conditions appears to be a significant risk factor for low QOL in elderly residents of nursing homes. Both communicable and noncommunicable chronic respiratory diseases (CRDs) account for the majority of global mortality, morbidity, economic and societal burden, and disability-adjusted life years (DALYs). Multiple parts of the respiratory system are affected by CRDs, including the airways, parenchyma, and pulmonary vasculature. Even though noncommunicable respiratory diseases like asthma, COPD, interstitial lung disease (ILD), cystic fibrosis (CF), and lung cancer (LC) account for a significant portion of the disease burden, the therapies that are currently available only focus on relieving the symptoms of diseases rather than providing the most effective treatment and/or prevention.

Keywords: Asthma • Matured individuals • COPD • Personal satisfaction • Chronic obstructive pulmonary disease • Cystic fibrosis

Introduction

Numerous studies have shown an increase in the prevalence of chronic respiratory disease (CRD), particularly asthma and chronic obstructive pulmonary disease (COPD), which may also converge and overlap in older people.^{2–4} Among patients with CRD, the elderly may require significantly more care resources than younger patients,⁵ as it is anticipated that they present additional comorbidities and a more pronounced lung function and immunological decline, resulting in a higher predisposition to respiratory infections [1]. While the life expect In this sense, a patient's QOL assessment turned into a significant result in a few clinical studies.^{8–10} Various instruments have been proposed to quantify QOL. One of these is the World Health Organization QOL (WHOQOL)-BREF, a WHO questionnaire that evaluates various aspects of life.^{11,12} this questionnaire is one of the most well-known instruments and was designed for cross-cultural comparisons [2].¹¹ It has been used worldwide on healthy and unwell individuals, allowing for comparisons between various populations and diseases [3]. In addition, the reliability and validity of the WHOQOL-BREF and the St. George's Respiratory Questionnaire for COPD patients are comparable [4].¹³ Very few studies have examined QOL related to CRD in the elderly^{3,13–15} and examined the extent to which these conditions may constitute an independent

Dr. Joil Jemas*

Department of Medical Science and Chronic Disease, University of SRR Science and technology, United States

*Author for correspondence:

joil.j@gmail.com

Received: 01-5-2023, Manuscript No. OARCD-23-99334; **Editor assigned:** 03-5-2023, Pre QC No. OARCD -23-99334; **Reviewed:** -17-5-2023, QC No. OARCD-23-99334;

Revised: 23-5-2023, Manuscript No. OARCD-23-99334 (R); **Published:** 30-5-2023; DOI: 10.37532/rcd.2023.7(3).036-038

risk factor for a low QOL. Asthma and COPD's health-related quality of life (QoL) should be taken into consideration for this reason [5].¹⁶ The number of adults and children suffering from chronic respiratory diseases (CRDs) worldwide is steadily rising. It is unclear what causes respiratory diseases to cause mortality and morbidity; However, the World Health Organization (WHO) and other organizations recently released statistics that revealed that an estimated 400 million people worldwide suffer from COPD and Asthma alone, both of which are mild to moderate conditions[6]. Additionally, the annual death toll from lower respiratory tract infections caused by *Haemophilus influenzae* ranges from 250,000 to 500,000[7]. 10.4 million people worldwide were infected with a lower respiratory tract infection caused by *Mycobacterium tuberculosis* in 2015, and 14% of those patients died[8]. It was discovered that noninfectious conditions such as lung cancer brought on by smoking tobacco or inhaling environmental carcinogens kill 1.6 million people annually, with an alarmingly rising trend. Respiratory disorders directly account for 10% of all disability-adjusted life years (DALYs) in the human workforce, in addition to the death toll [9].

Lungs and respiratory disease

The respiratory framework in people is partitioned into two significant parts: the upper respiratory tract (URT) and the lower respiratory tract (LRT). The mouth, nose/nostrials, and the beginning of the trachea make up the URT. The trachea is part of the LRT, and it divides into the bronchi, bronchioles, and functional units called alveoli[10]. The lung parenchyma provides support for the airways, and the pulmonary vasculature facilitates gas exchange. The main capability of the respiratory framework is the trading of gases, or at least, assimilation of oxygen (O₂) and arrival of carbon dioxide (CO₂). This gas trade into the pneumonic vessels happens through the single layers of the respiratory alveolus. Inhalation, or the inhalation of air into the lungs primarily through expansion of the chest volume, is part of breathing. After that, the air moves through the progressively smaller "conductive" airways; what's more, exhalation, that is to say, the ejection of air from the lungs, which is the aftereffect of constriction of chest volume. The course of inward breath/exhalation is worked with by overwhelmingly two sorts of muscles, that is to say, stomach

and intercostal muscles. Lungs have an internal surface area of between 50 and 75 m². The blood in the pulmonary vasculature accounts for approximately half (40 percent–50 percent) of the average weight of a normal human lungs, which weigh approximately 1 kg. Estimating the volume and activity of inward breath/exhalation of air is vital to lay out the presence of prohibitive and additionally obstructive lung infections, like asthma and COPD.

Developing populace supplemented with a changed way of life of the 21st century has opened a window for a large number of sicknesses that are right now threatening human existence across the lines. Respiratory conditions were found to be most prevalent among these, affecting large populations in both middle- and lower-income nations worldwide. Respiratory conditions are frequently overlooked or given far less attention than is necessary despite their high prevalence. The only internal organ in the human body that is regularly exposed to a wide range of environmental pollutants, including organic, inorganic, and biological agents from a variety of natural and anthropogenic sources, are the lungs. As a result, the lungs are constantly at risk of developing simple to complex pulmonary disorders, which can lower one's quality of life and ultimately result in death. The following text provides a brief overview of some of the respiratory conditions that are currently posing a threat to the lives of millions of people worldwide.

Conclusion

These findings suggest that the presence of respiratory morbidities is a significant risk factor for elderly QOL decline. The quality of life (QOL) of residents in nursing homes may rise if these respiratory health conditions are better managed. The weight of ongoing respiratory infections (CRDs) is tremendous and progressively turning out to be more common around the world, essentially because of maturing populaces and absence of successful measures to diminish the gamble factors related with the turn of events/movement of these pneumonic illnesses. Moreover the absence of powerful therapies that might actually be used for treating as well as forestalling these constant lung infections further mixtures both the cultural and financial weight related with persistent lung sicknesses. Additionally, efforts should be made to ensure that treatments are delivered

to the site of pathology, which is the airway epithelium, parenchyma, and bronchioles, in the most effective manner possible. In addition, the treatments ought to concentrate on particular kinds of cells that might be essential to the progression of the diseases. For the purpose of maximizing the drug delivery and absorption/adsorption of prescription drugs in CRDs, a variety of biomolecular entities can be utilized. To find out if these drug delivery vehicles are safe and effective, more research is needed.

References

1. Leithner A, Maurer-Ertl W, Glehr M *et al*. Wikipedia and osteosarcoma: a trustworthy patients information. *J Am Med Inform Assoc*. 17,373-374 (2010).
2. Clauson KA, Polen HH, Kamel Boulos MN *et al*. Scope, completeness, and accuracy of drug information in Wikipedia (PDF). *Ann Pharmacother*. 42, 1814-1821 (2008)
3. Kant AK. Dietary patterns and health outcomes. *J Am Diet Assoc*. 104,615-635 (2004).
4. Rezazadeh A, Rashidkhani B, Omidvar N. Association of major dietary patterns with socioeconomic and lifestyle factors of adult women living in Tehran, Iran. *Nutrition*. 26, 337-341 (2010).
5. Delaunoy L. Anatomy and physiology of collateral respiratory pathways. *The European Respiratory Journal*. 2,893-904 (1989).
6. Meldrum OW, Chotirmall SH. Mucus, Microbiomes and Pulmonary Disease. *Biomedicines*. 9, 675 (2021)
7. Jiménez-Ruiz CA, Fagerström KO. Smoking cessation treatment for COPD smokers: the role of counselling. *Monaldi Arch Chest Dis*. 79,33-37 (2013).
8. Cheyne L, Irvin-Sellers MJ, White J. Tiotropium versus ipratropium bromide for chronic obstructive pulmonary disease. *Cochrane Database Syst Rev*. CD009552 (2015).
9. Reavley NJ, MacKinnon AJ, Morgan AJ *et al*. Quality of information sources about mental disorders: A comparison of Wikipedia with centrally controlled web and printed sources. *Psychol Med*. 42. 1753-1762 (2011).
10. Kräenbring J, Monzon Penza T, Gutmann J *et al*. Accuracy and Completeness of Drug Information in Wikipedia: A Comparison with Standard Textbooks of Pharmacology. *PLoS one*. 9, e106930 (2014).