Review Psikiyatride Güncel Yaklaşımlar-Current Approaches in Psychiatry 2024; 16(3):439-450
doi: 10.18863/pgy.1335836

Chronic Obstructive Pulmonary Disease (COPD) and Evidence-Based Psychosocial Interventions

Kronik Obstrüktif Akciğer Hastalığı (KOAH) ve Kanıt Temelli Psikososyal Müdahaleler

Özcan Özdemir[1], Mualla Yılmaz[2]

[1]Kilis 7 Aralık University, Kilis
[2]Mersin University, Mersin

ABSTRACT

Respiratory tract diseases emerge as a significant global health concern accompanying the aging process. Among the escalating chronic conditions associated with aging, Chronic Obstructive Pulmonary Disease (COPD) stands out as a notable concern due to its high disease burden, mortality, and morbidity rates, necessitating intervention. The indispensability of Consultation-Liaison Psychiatry (CLP) in averting, treating, and rehabilitating psychosocial predicaments encountered by individuals remains indisputable. Individuals with COPD and their families face challenges spanning social, economic, psychological, physical, and healthcare access domains. A scrutiny of studies reveals that evidence-based efforts by healthcare professionals targeting psychosocial challenges faced by COPD-afflicted individuals pivot towards enhancing problem management. This article particularly examines psychosocial interventions for COPD patients over the past five years. The identified studies emphasize interventions focusing on domiciliary medical support, exercise routines, self-management, psychological comorbidities, and the improvement of life quality, thereby underscoring the cardinal importance of physical activity in augmenting mental well-being. Ultimately, the conducted research has been analyzed through the prism of evidence-based practice to profoundly comprehend the ramifications of psychosocial interventions for COPD patients. Such research endeavors have been deemed to hold pivotal significance in enhancing patients' quality of life and optimizing treatment outcomes.
Keywords: COPD, evidence-based practices, consultation-liaison psychiatry, psychosocial care

ÖZ

Yaşlanma ile birlikte artan kronik hastalıklar arasında solunum yolu hastalıkları dünya genelinde önemli bir sağlık sorunu olarak karşımıza çıkmaktadır. Dünya genelinde Kronik Obstrüktif Akciğer Hastalığı (KOAH), hastalık yükü, mortalite ve morbidite oranlarının fazla olması açısından müdahale edilmesi gereken önlenebilir ve tedavi edilebilir olarak sınıflandırılmıştır. Bireylerin yaşadıkları psikososyal problemlerin önlenmesi, tedavisi ve rehabilitasyonunda Konsültasyon ve Liyezon Psikiyatrisinin (KLP) önemi yadsınamaz bir gerçektir. KOAH'lı bireyler ve aileleri sosyal, ekonomik, ruhsal, fiziksel ve sağlık hizmetlerine erişim noktasında bazı problemler yaşadıkları belirlenmiştir. Çalışmalar incelendiğinde KOAH'lı bireylerin yaşadıkları psikososyal problemlere yönelik sağlık profesyonellerinin yaptıkları kanıt temelli çalışmalar sonucunda bu problemlerin yönetimine katkı sağlamaya odaklandıkları görülmektedir. Makale, özellikle KOAH hastalarına yönelik psikososyal müdahalelerin son 5 yıllık çalışmalarını incelemektedir. Bu çalışmalar, hastaların evde tıbbi destek, egzersiz, öz-yönetim, psikolojik komorbiditelere ve yaşam kalitesine odaklandığı gibi zihinsel sağlığı geliştirmeye yönelik müdahalelerde fiziksel aktivitenin önemini de vurgulamaktadır. Sonuç olarak gerçekleştirilen araştırmalar, Kanıt temelli çalışmalar perspektifinde KOAH hastalarına yönelik psikososyal müdahalelerin etkisini daha derinlemesine anlamak amacıyla incelenmiştir. Bu tür çalışmaların, hastaların yaşam kalitesini artırmak ve tedavi sonuçlarını optimize etmek için kritik önem taşıdığı sonucuna varılmıştır.
Anahtar sözcükler: KOAH, kanıta dayalı uygulamalar, konsültasyon ve liyezon psikiyatri, psikososyal bakım

Introduction

Due to medical advancements today, the life expectancy of individuals with chronic illnesses has increased. However, this situation leads to a growing number of people affected by diseases that require long-term treatment and care, necessitating more healthcare interventions (Coster and Norman 2009). Among the chronic diseases that increase with aging, respiratory diseases emerge as a significant global health issue (Boscart et al. 2022). Chronic Obstructive Pulmonary Disease (COPD) is a progressive condition characterized by narrowing of the airways and lung tissue damage caused by respiratory irritation, resulting in limited airflow in the lungs

Address for Correspondence: Özcan Özdemir, Kilis 7 Aralık University, Yusuf Şerefoğlu Faculty of Health Sciences, Department of Mental Health and Psychiatric Nursing, Kilis, Türkiye **E-mail:** ozcanozdemir3333@gmail.com
Received: 01.08.2023 | **Accepted:** 08.11.2023

(Safiri et al. 2022). COPD holds a prominent place among chronic diseases on a global scale due to its high disease burden, ranking high in terms of morbidity and mortality (Salcicciol et al. 2018, Boscart et al. 2022).

According to the World Health Organization (WHO), COPD is the third leading cause of death worldwide among respiratory diseases, resulting in 3.23 million deaths in 2019 (Safiri et al. 2022, WHO 2023). In Türkiye, when examining the mortality rates of respiratory diseases between 2019 and 2021, it is observed that they accounted for 12.9%, 15.8%, and 13.4% of the most lethal diseases in successive years (TÜİK 2021). During the COVID-19 pandemic, although mortality rates in Türkiye are not known statistically, it has been reported in the United States that mortality rates have increased and are associated with a higher rate of hospitalization (Meza et al. 2021). Based on the data, the WHO has included COPD in the Global Action Plan for the Prevention and Control of Non-Communicable Diseases (NCDs), and the United Nations has included it in the 2030 Sustainable Development Agenda (Safiri et al. 2022).

In recent times, despite the growing interest in identifying the needs of individuals with COPD, disease management, and related topics (Rzadkiewicz and Nasiłowski 2019, Bourne et al. 2022, Farver-Vestergaard et al. 2022), the careful monitoring of the patients' psychosocial well-being is essential (Rzadkiewicz and Nasiłowski 2019). This review addresses the psychosocial challenges faced by both COPD patients and their families, highlighting the crucial importance of evidence-based practices in the realm of psychosocial care, as implemented by mental health professionals working within the Consultation Liaison Psychiatry unit. In the last five years, evidence-based studies on individuals with COPD have been systematically reviewed in the Web of Science, PubMed, Science Direct, Scopus, EBSCO, Ulakbim, and TRDizin databases.

Psychosocial Issues Experienced by Individuals with COPD

The symptoms of diseases such as COPD not only involve physical problems but also encompass psychosocial dimensions (Gorman and Sultan 2008, Aydemir and Çetin 2019). Mental health practitioners, particularly psychiatric nurses, psychologists, social workers, and psychiatrists working within the field of Consultation Liaison Psychiatry (CLP), need to accurately identify psychosocial issues to effectively carry out their roles. These issues are delineated below in categorized headings.

Social Issues

COPD is not only a medical condition but also a complex social issue that affects millions of individuals worldwide, and stigma is just one of these problems (Boscart et al. 2022). Stigma associated with COPD is a complex phenomenon and is rooted in the inseparable link between COPD and smoking. Depending on the society's acceptance and awareness levels, individuals diagnosed with COPD may experience stigmatization and exclusion, being held responsible for their own illness (Woo et al. 2021). In some communities, the symptoms of the disease (such as coughing, sputum production, etc.) may not be accepted, leading to feelings of aversion and self-stigmatization. This can negatively impact the individual's psychological well-being and discourage them from seeking help (Woo et al. 2021, Padmanabhan et al. 2022, Zanolari et al. 2023). Additionally, symptoms like breathlessness can disrupt speech flow and lead to social isolation. The desire of COPD patients to avoid bothering others, not being a burden, or not appearing disabled are internal processes that can influence their help-seeking behaviors (Zanolari et al. 2023).

Psychological stresses within the family, failure to fulfill social roles, and conflicts between family members or partners can arise due to the inability to fulfill these roles, leading COPD patients to experience sadness and feelings of worthlessness, sometimes resulting in divorce (Clari et al. 2018, Padmanabhan et al. 2022). Functional losses experienced by COPD patients may require them to rely on caregivers for many years. In a study, it was reported that 64.66% of COPD patients were dependent on caregivers to perform daily activities, and the average annual caregiving time for these patients was 195.6 hours (Rehman et al. 2021). Another burden carried by both patients and caregivers is making decisions regarding life-sustaining treatments for terminally ill patients. A study found that caregivers were more willing than patients themselves to opt for life-sustaining treatments, but their preferences changed based on the prognosis of the disease (Chen et al. 2019). The quality of life, social activities, and productivity of both COPD patients and caregivers can be affected, imposing a significant burden on society (Erdal et al. 2014).

Economic Issues

Individuals diagnosed with COPD often find themselves in disadvantaged positions due to the health

inequalities they experience as a result of their illness. In low-income countries, the higher prevalence of chronic diseases like COPD can create challenges in accessing early diagnosis and treatment. To reduce health inequalities, it is essential to develop health policies and services in these countries. In this regard, the World Health Organization (WHO), through the Global Alliance against Chronic Respiratory Diseases (GARD), has set key objectives to achieve universal health coverage by 2030 (WHO 2023, Aldhahi et al. 2023).

Different cost estimations conducted in various countries have revealed that the direct costs of COPD treatment constitute a significant portion of each country's healthcare budget (Shah et al. 2020, Rehman et al. 2021). The expenses incurred by COPD patients are approximately 2.4 times higher compared to other patients (Montes de Oca et al. 2016). This condition leads to productivity losses due to worsened health, early retirement, and disability benefits, making COPD patients less preferred for physically demanding jobs (Padmanabhan et al. 2022). Approximately 40% to 60% of individuals diagnosed with COPD are of working age, and it ranks as the 11th leading cause of disease burden. It is expected to rise to the 7th rank by 2030. Employees diagnosed with COPD experience nearly 5 times more productivity loss and 3 times more activity limitations compared to non-COPD employees. Moreover, the chance of finding a job for COPD patients is reduced by 9% compared to healthy individuals. Additionally, COPD patients miss an average of 19.4 workdays per year due to exacerbations or clinic visits and 27.5 workdays due to productivity loss or poor performance at the workplace (Rai et al. 2017, Rehman et al. 2021).

In addition to these factors, caregivers of COPD individuals may have to work more due to economic necessities, leading to a reduction in social support provided to COPD patients (Rehman et al. 2021). The psychosocial and economic burdens experienced also negatively affect the ability of caregivers to carry out their daily activities and disrupt their sleep patterns. Caregivers assist COPD patients during hospitalization or outpatient treatment and provide support for their daily life activities. In a study, 38.9% of caregivers reported reduced working hours, and 11.4% mentioned leaving their jobs due to increased caregiving responsibilities (Erdal et al. 2014).

Physical Problems and Access to Healthcare Services

As COPD progresses, individuals may experience physical function losses and an increased need for palliative care. When COPD is considered as the 9th leading cause of disability-adjusted life years (DALYs), it is highly likely that patients may experience limitations in their social behavior and daily activities (Rehman et al. 2021, Aldhahi et al. 2023). Symptoms such as fatigue, shortness of breath, and decreased muscle tone can lead patients to engage in low levels of physical activity and adopt a sedentary lifestyle. Studies have shown that this approach is associated with higher hospitalization rates and increased risk of death (Arbillaga-Etxarri et al. 2018, Armstrong et al. 2019). The respiratory and gas exchange problems experienced by COPD patients, combined with obstructive sleep apnea, disrupt REM sleep and sleep efficiency, impacting their quality of life. Research indicates that 74.8% of COPD patients experience poor sleep quality, and 50% are adversely affected in their daily life activities (Gudmundsson et al. 2006, Burge et al. 2020, Clímaco et al. 2022).

Managing the uncertainty, chaos, health fluctuations, multiple medication use, and coping with comorbidities among COPD patients necessitate a flexible and continuous multidisciplinary therapeutic approach (Sigurgeirsdottir et al. 2019). Moreover, in advanced stages of COPD, dependency on long-term medication and oxygen therapy can make it challenging to manage daily life and social activities (Clari et al. 2018, Padmanabhan et al. 2022).

Healthcare providers' approaches and healthcare structures can contribute to the psychosocial challenges faced by individuals with COPD and worsen their physical health. In COPD patients, the presence of comorbidities, complex factors related to disease management and costs, may lead healthcare professionals to perceive them as challenging patients. As a result, patients may hesitate to seek healthcare or exhibit non-adherence to treatment, thereby increasing the risk of relapse or recurrence (Padmanabhan et al. 2022). Incomplete information transfer by healthcare providers can lead COPD patients to unintentionally overdose, mix medications, miss appointments, or fail to adhere to treatment, and they may even refuse treatment due to financial reasons (Rehman et al. 2021). Studies have shown that individuals with lower socioeconomic status encounter more barriers in accessing COPD-related healthcare services. These barriers include a lack of qualified personnel, limited geographical accessibility to Pulmonary Rehabilitation (PR) programs, and the cost of required medications and medical examinations (Pleasants et al. 2016, Arbillaga-Etxarri et al. 2018). Additionally, with the advent of the COVID-19 pandemic, the challenges in accessing healthcare services for COPD patients have further intensified (Sharafkhaneh et al. 2020). Addressing these issues and improving access to healthcare services for individuals with COPD is crucial to enhance their overall well-being and ensure

effective disease management. Healthcare systems need to implement strategies to provide adequate support, improve communication, and reduce barriers to ensure better outcomes for COPD patients.

Psychological Issues

COPD is a disease that deeply affects individuals' lives in physical, social, economic, and emotional aspects (Wang et al. 2022). Heck et al. (2022) pointed out the impact of respiration on emotional and cognitive processes. COPD can contribute to the neurobiological understanding of disorders such as anxiety. The physical discomfort experienced by COPD patients also influences various areas such as body image, self-confidence, sense of identity, life purpose, and social relationships. This situation can lead to an increase in depression, anxiety, low physical activity, and psychosocial problems (Zanolari et al. 2023).

COPD is frequently accompanied by psychiatric illnesses. Depression and panic disorder are the most common psychiatric comorbidities in COPD patients. Studies have reported a bidirectional relationship between psychiatric comorbid diagnoses and the diagnosis of COPD (Sullivan et al. 2018, Heslop-Marshall and Burns 2019). In a study conducted in our country, symptoms of anxiety (35.1%) and depression (43.7%) were observed to be highly prevalent among COPD patients (Kokturk et al. 2018). Another study suggested that psychosocial conditions in COPD patients may be potential factors responsible for the increased prevalence of psychiatric comorbidity (Dar et al. 2019).

The unmet needs of COPD patients can hinder their effective disease management (Clari et al. 2018, Chen et al. 2019, Puteikis et al. 2021). During the coping process with the nature of the disease, negative emotions such as feelings of loss, anger, fear of death, anxiety, depression, and hopelessness are commonly experienced (Clari et al. 2018, Rehman et al. 2021, Puteikis et al. 2021). Additionally, coping with disease-related complications, stigmatization, loss of self-confidence, changes in self-perception due to physical alterations, and fears of abandonment are also encountered. All these transformative dynamics lead to cognitive, emotional, behavioral, and physiological reactions at the individual and community levels, which can result in progressively deteriorating health outcomes. Psychological support for COPD patients is crucial for the effectiveness of treatment and improving their quality of life (Martire et al. 2004, Clari et al. 2018).

Evidence-Based Studies on Psychosocial Care for COPD Patients

Evidence-based practice (EBP) has gained significant prominence in the delivery of healthcare services in recent years. It assists healthcare professionals in adopting more effective and patient-centered treatment approaches. The utilization of EBP by healthcare practitioners also facilitates informed decision-making based on the most current and relevant research data for patient care (Zhang and Zhao 2021, Wood et al. 2023). Recent studies concerning psychosocial interventions for COPD patients encompass home medical support, exercise, self-management, and mental well-being (Rzadkiewicz and Nasiłowski 2019, Farver-Vestergaard et al. 2022). However, there is a limited number of studies focusing on preserving mental health in cases of severe COPD. Enhancing patients' self-efficacy, embracing palliative care, and completing pulmonary rehabilitation can yield promising effects on mental well-being. Furthermore, the literature review highlights the diminishing effectiveness of psychosocial interventions with advancing age (Rzadkiewicz and Nasiłowski 2019, Schrijver et al. 2022, Farver-Vestergaard et al. 2022). Literature findings suggest that interventions aimed at improving mental health should incorporate physical activity, and studies are recommended to monitor changes in medication and treatment adherence throughout the assessment period to explore potential interactions between psychosocial and medical treatments (Rzadkiewicz and Nasiłowski 2019, Farver-Vestergaard et al. 2022). Within this section, evidence-based studies conducted between 2018 and 2023 have been compiled and explained based on psychosocial issues.

Interventions for Providing Home-Based Care Support

For individuals diagnosed with moderate and severe COPD, participation in hospital treatment can sometimes pose challenges. To mitigate this, Benzo et al. (2021) developed an 8-week intervention program that incorporates health coaching and is based at home. The program includes guided video exercises. This program has shown an improvement in conditions, including increased interpersonal relationships, enhanced self-management skills, and the adoption of behavioral changes for a healthier lifestyle. Jiang et al. (2020) aimed to instill hope through telemedicine applications in home-based PR interventions. Jiang and colleagues developed a social media-based Wechat application within the framework of a chronic care model, choosing to implement it alongside a behavioral intervention strategy that focuses on self-efficacy. This program, conducted over a 3-

month period with a total of 94 participants, was monitored for 3 months. As a result of the 6-month PR program, an increase in patients' self-efficacy and quality of life was reported, along with a reduction in symptoms (Jiang et al. 2020). Furthermore, incorporating exercise training for home-based walking programs into patient education has been suggested as a way to encourage individuals to be more active at home (de Roos et al. 2018). In a study investigating the effectiveness of home-based hospital-level care, a Randomized Controlled Trial (RCT) was conducted, with 9 patients receiving care at home and 11 patients receiving care in the hospital. The 30-day care was provided in a multidisciplinary manner. Patients were visited by a specialist physician in internal medicine at least once a day and by a nurse at least 2 days a week. At the end of the 30-day period, individuals receiving home health care showed fewer signs of frailty, possible cognitive disorders such as dementia, and depression. In addition to these findings, a higher level of functional status, health literacy, and social support, as well as a moderate level of quality of life, were observed in the patients. Secondary outcomes included a decrease in requests for tests and consultations, readmissions, and costs (Levine et al. 2018).

A national study was conducted to assess the impact of education provided to individuals engaged in the care of patients diagnosed with COPD receiving home care services, aiming to determine its effects on caregiving burden and quality of life. The education covered topics such as the functioning of the respiratory system, etiology of COPD, medication treatments, chest physiotherapy practices, daily life implications of disease symptoms, approaches to identifying disease indicators, and its overall importance for caregivers. The educational approach employed a demonstration method, accompanied by short stories and case examples. Results indicated a reduction in caregivers' burden and an improvement in quality of life at both one-month and three-month follow-up assessments after the education (Janjua et al. 2021).

Interventions for Encouraging Self-Management

Self-management interventions encompass education, physical therapy, and monitoring. The outcomes of evidence-based studies have emphasized the significance of patients controlling their own lives. Self-management interventions have reduced the need for hospitalization in individuals diagnosed with stage two and three COPD (Janjua et al. 2021, Smalley et al. 2021). In this field, studies in the literature have shown that nurses tend to focus more on supporting self-management based on models and theories. For instance, interventions conducted by Hu et al. (2022), in accordance with the Knowledge, Belief, and Behavior Model, have successfully increased self-management ability, satisfaction, and adherence in elderly COPD patients. Another RCT involving individuals with COPD in need of primary healthcare was conducted. In this study, a brochure prepared by a nurse was given to both the control and experimental groups, while theory-based telephone conversations were administered to the intervention group for twelve months. The 13-page brochure includes a definition of COPD, a detailed description of related symptoms, how the disease can be managed with inhaler use, how exacerbations can be treated, and details of other resources. During the phone calls, discussions were focused on supporting self-management related to smoking cessation, increased physical activity, proper inhaler technique, medication adherence, and establishing patient confidence. As a result, the study indicated that individuals underwent changes in their self-management activities (Jolly et al. 2018). There are studies suggesting that interventions involving individual self-management in primary healthcare and group counseling can also be effective (Dineen-Griffin et al. 2019, Bourne et al. 2022). COPD patients can benefit from supportive practices aimed at enhancing self-management as a complementary strategy to routine primary healthcare. Based on the findings of RCTs, it has been reported that individuals with COPD can be encouraged in self-management through the utilization of their social networks, leading to increased short-term levels of physical activity, improved conceptual knowledge, changes in disease management strategies, reduced healthcare expenditures, and enhanced quality of life (Nyberg et al. 2019, Welch et al. 2020). In another RCT that focused on peer support, it was observed that while there may not be a significant difference in terms of quality of life for COPD patients receiving peer support, there is an association with fewer acute care events (Aboumatar et al. 2019).

In our country, hospital-based PR and self-management PR have been compared for individuals with COPD to enhance respiratory function, physical activity, cognitive function, quality of life, and reduce anxiety levels. During the hospital-based intervention, guided by expert nurses, sessions were conducted over a 12-week period. In contrast, the self-management PR involved only three sessions with nurse guidance over three days, and at the program's end, both groups were provided with booklets and CDs. As a result of the comparison, significant progress was observed in both groups. However, the hospital-based nurse-led PR intervention was found to be more effective (Kilic et al. 2021). In Baltimore, a structured program was designed to promote self-management involving both patients and their families, with the goal of reducing hospital admissions and improving quality of life. Researchers provided a three-month intervention for hospital patients, followed by three months of

follow-up through telephone calls and home visits conducted by nurses in the field after discharge. Despite numerous studies aiming to reduce hospitalizations, this study did not achieve the intended goals. The program resulted in a significant increase in COPD-related hospital admissions and emergency department visits, without corresponding improvements in quality of life. The authors attribute this outcome to the oversight of not accounting for comorbid conditions in hospital readmissions (Aboumatar et al. 2019).

Based on the results of meta-analyses and systematic reviews, interventions centered around self-management (including exercises or physical activity at home, smoking cessation, diet, medication, coping with dyspnea, and self-recognition of COPD exacerbations) have shown comparable mortality rates to control groups. Although the likelihood of hospital readmission is similar to that of the control group, there is a reduction in hospital visits due to respiratory complaints. Furthermore, these interventions have demonstrated improvements in short and medium-term outcomes such as quality of life, self-efficacy, and respiratory function. However, it is worth noting that self-management groups have reported higher usage of oral corticosteroids and antibiotics (Armstrong et al. 2019, Yadav et al. 2020).

Interventions for Combating Low Physical Activity

Increasing awareness regarding the substantial challenges posed by low levels of physical activity in individuals with COPD across all stages is imperative. This underscores the necessity for interventions aimed at fostering greater engagement in physical activities for individuals afflicted by COPD. In this context, a systematic review by Burge et al. (2020) investigated interventions targeting the issue of low physical activity. The study's findings encompassed a range of interventions, including pulmonary rehabilitation/exercise training, physical activity counseling, self-management approaches, nutritional supplementation, walking aids, pharmaceutical interventions, oxygen supplementation, singing, and neuromuscular electrical stimulation. These interventions were administered through various means, such as face-to-face interactions, phone conversations, smartphone applications, websites, devices, or printed materials. The duration of interventions spanned from one day to 12 months. While the study concluded that optimal timing, essential components, duration, and models of interventions remain uncertain, and evidence regarding the enduring impact of these practices following intervention is limited, the conducted interventions were regarded as promising. In another meta-analysis conducted by Schrijver et al. (2022), self-management interventions were analyzed, including 'home-based exercise components.' As a result, studies that designed COPD exacerbation action plans were reported to lead to less severe exacerbations, faster recovery, and improved physical condition, thereby encouraging prompt treatment of exacerbations. However, despite some studies suggesting the applicability of self-management interventions in technology-based or artificial intelligence interventions for physical activities, certain meta-analyses and randomized controlled trials have yielded results indicating the ineffectiveness of technology-based interventions (Stamenova et al. 2020, Janjua et al. 2021). The effectiveness of these technology-based interventions remains debatable and requires further investigation (Janjua et al. 2021).

Physical activity is a complex health behavior that includes components such as environmental, cultural, and interpersonal factors. The existence of social support mechanisms in individuals with COPD could be a crucial element for promoting increased physical activity. It is important to conduct behavioral and community-based exercise interventions that activate these social support mechanisms. A community-based PR program for COPD patients has been shown to improve exercise capacity, physical activity levels, and quality of life in the medium and long term (Arbillaga-Etxarri et al. 2018, Varas et al. 2018). In this context, it has been reported that individuals with COPD who engage with their grandchildren, walk their dogs, or have an active partner tend to engage in more active physical activities, regardless of prognosis. Similarly, in a 12-month long-term community-based RCT conducted in Spain, respiratory physiotherapists were provided with training in behavioral strategies. Subsequently, these therapists delivered information related to the program to COPD individuals and utilized motivational interview techniques during hour-long sessions. To maintain motivation, researchers conducted 5-10 minute phone conversations. An urban education brochure was prepared, which included walking trail maps, walkable public spaces, and their intensities (low, moderate, high), along with gradual progression guidelines on how to increase these intensities. Each participant was advised to start with a trail intensity suitable for their initial dyspnea and 6-minute walking distance. Over the following 12 months, instructions were given on how to gradually increase the volume (daily walks on the same route) and/or intensity of the trails based on symptoms and motivation. Participants were provided with both a pedometer and a personalized calendar to monitor their physical activities and sustain motivation. As a result, the intervention group reported increased physical activity and satisfaction, with no changes observed in cognitive functions (Arbillaga-Etxarri et al. 2018). Considering the importance of promoting physical activities, a meta-analysis

study utilized pedometers to investigate their effects on physical activities, including data from 19 RCTs. The use of pedometers for promoting physical activity is noted to stimulate behavior change, encouraging patients towards higher daily physical activity levels. Particularly, the addition of pedometer-based physical activity promotion to PR has shown positive increases in daily step counts and is reported to be more effective compared to accelerometers (Armstrong et al. 2019).

Interventions for Psychological Comorbidities and Quality of Life

When examining the literature concerning individuals diagnosed with COPD, researchers have primarily focused on comorbid anxiety and depression levels. Interventions aimed at addressing these issues and enhancing quality of life include exercise therapies (Bricca et al. 2020), alternative and complementary treatments (ACT) (Lin et al. 2019), promotion of self-management and PR applications (Yadav et al. 2020, Schrijver et al. 2022), digital health applications, cognitive-behavioral therapy, psychoeducation, art therapy (Heslop-Marshall et al. 2019, Wood et al. 2023), nurse-led psychological and emotional support interventions (Aranburu-Imatz et al. 2022), motivational interviews (Wang et al. 2022), hypnosis (Anlló et al. 2020), and model-based interventions (Zhang and Zhao 2021). Alongside these studies, recent research indicates that mindfulness and progressive relaxation-based interventions could modestly contribute to reducing the effects of COPD; however, more RCTs are needed (Kilic et al. 2021, Kayser et al. 2022). Furthermore, these studies suggest that metacognitive therapies can effectively reduce self-stigmatization or the impact of stigma for individuals with COPD. Relaxation techniques are reported to enhance patients' self-control perception, modulate emotions, and improve fatigue and sleep quality. While evidence regarding the effectiveness of relaxation techniques in COPD appears inconsistent, approaches such as massage, guided imagery, music therapy, distraction therapy, meditation practices, aromatherapy, biofeedback, and hydrotherapy are reported to assist patients in relaxation and reducing anxiety (Volpato et al. 2023). Overall, these interventions hold promise, but more research, particularly through RCTs, is needed to better understand their full potential and effectiveness.

A systematic review and meta-analysis conducted by Aranburu et al. (2022) determined that various types of nurse-led interventions for COPD patients result in improvements in physical condition, quality of life, and anxiety levels, as well as effective reduction of hospital admissions. Interventions conducted by general, community, palliative, and respiratory nurses involve the utilization of different techniques such as home telemonitoring, telecare, palliative care, health education, respiratory rehabilitation, and smoking cessation education, empowering patients in managing their conditions. Furthermore, in this review, it was found that nurses employing cognitive-behavioral therapy or minimal psychological intervention techniques successfully assist COPD patients in managing anxiety and depression symptoms. Although post-discharge home visits did not significantly reduce readmission rates, patients were better informed about disease management, gained increased self-confidence, and experienced reduced anxiety levels.

Recent health-related studies have brought attention to ACT, which have become crucial for achieving cognitive, emotional, physical, and mental harmony in individuals. A meta-analysis and systematic review, based on findings from 13 RCTs, indicate that mind-body exercises - such as tai chi, health qigong, and yoga - can potentially reduce anxiety and depression levels in individuals diagnosed with COPD. However, it is noted that the efficacy of these exercises may decrease as the disease progresses. Subgroup analysis results suggest that among COPD patients aged 70 and above, engaging in these exercises 2-3 times a week for 30-60 minutes may be more effective in reducing anxiety. Conversely, for depression, the exercises seem to have a higher impact on COPD patients over 70 years of age with less than 10 years of disease progression (Li et al. 2019). In another systematic review, the practice of pranayama (yogic breathing) for a duration of 4-6 months has been found to enhance the quality of life and improve symptom and activity scores in individuals facing respiratory issues like COPD (Jayawardena et al. 2020).

Telehealth applications are being utilized not only to modify and monitor patient behaviors but also to provide support for sustaining healthy behaviors, educating and informing healthcare providers, patient families, and communities. These digital health interventions are becoming increasingly prevalent in enhancing individuals' social, psychological, and overall quality of life. A comprehensive study conducted by Wood et al. (2023) aimed to explore digital psychosocial interventions by including 16 RCTs and 16 studies from other methodologies, focusing on individuals with palliative care needs, including those with COPD. A variety of digital psychosocial interventions were examined, delivered by different professional groups such as healthcare providers, nurses, social workers, psychologists, art psychotherapists, and educational counselors. The results of the study indicated that cognitive-behavioral therapy was the most commonly applied method, alongside other approaches such as psychoeducation, art therapy, and psychological and emotional support interventions. Digital interventions demonstrated their versatility in various stages of disease progression, effectively

addressing stress management, imparting problem-solving and coping skills, providing psychological and emotional support, alleviating both physical and mental challenges, and ultimately enhancing overall quality of life. Furthermore, meta-analyses and systematic reviews have revealed the positive effects of self-management interventions, particularly focusing on the 'coping with breathlessness' component, on anxiety and depression in COPD. These studies have demonstrated that such interventions contribute to respiratory health and the management of symptoms related to breathlessness (Yadav et al. 2020, Schrijver et al. 2022).

Psychosocial Care and Consultation-Liaison Psychiatry for COPD Patients

The underlying mechanisms between psychosocial problems and COPD maintain an element of uncertainty. These bidirectional relationships can influence the severity of the disease and problems (Volpato et al. 2023). The fundamental aim of CLP for COPD patients is to enhance their quality of life by reducing disease symptoms, preventing dependency and negative habits, encouraging the development of self-care skills, providing psychoeducation and informative sessions about the disease and its etiology, employing hope-promoting practices and treatments to minimize and prevent negative emotional and psychological distress, as well as preempting secondary complications that may arise alongside the disease. To achieve these objectives, psychosocial care has become a crucial skill for mental health professionals. CLP plays a pivotal role in increasing the proficiency of these skills within healthcare and addressing the existing deficiencies in health services (Aydemir and Çetin 2019, Arslan and Yazıcı 2021, Wood et al. 2023). Psychosocial care, acknowledged as an integral facet of treatment and care, involves the identification and fulfillment of an individual's social, cognitive, psychosocial, emotional, spiritual, and cultural needs by mental health professionals within the CLP unit. Particularly in the context of COPD, where it is associated with a range of psychosocial challenges, the significance of psychosocial care is further underscored (Gorman and Sultan 2008). For individuals with COPD, psychosocial care encompasses a supportive treatment approach aimed at cultivating adaptive coping skills, assisting in the reevaluation of life plans and priorities, nurturing hope, facilitating the management of relationships with the treatment team and loved ones, and enhancing overall quality of life (Coster and Norman 2009, Jolly et al. 2018, Aydemir and Çetin 2019, Boscart et al. 2022, Aranburu-Imatz et al. 2022, Wang et al. 2022, Wood et al. 2023). However, the presence of social support mechanisms plays a significant role in improving physical well-being (Arbillaga-Etxarri et al. 2018). Moreover, biopsychosocial care can be an effective approach in enhancing treatment and rehabilitation adherence and preventing hospital readmissions (Aboumatar et al. 2019, Burge et al. 2020, Smalley et al. 2021). Nevertheless, in certain instances, the psychosocial approach by healthcare providers may be downplayed or overlooked (Upton et al. 2010, Siltanen et al. 2020, Padmanabhan et al. 2022). Notably, a study conducted in our country revealed an interesting aspect: although nearly all nurses (96.3%) deemed psychosocial care significant in their understanding and practice of biopsychosocial and psychosocial care, 44.9% of nurses felt moderately acquainted with biopsychosocial care, and 27.2% were not fully proficient in psychosocial care (Yıldırım et al. 2019).

Understanding clinicians' perspectives more deeply can aid in identifying potential barriers to biopsychosocial care and offer strategies for enhancing access to psychological care for individuals with COPD. These challenges can impact professionals' roles and impede their effective functioning (McNamara et al. 2008). Studies indeed indicate that healthcare providers, including physicians and nurses, often prioritize medical education related to smoking cessation, pharmacological treatment, and exercise for COPD patients, while overlooking or lacking sufficient knowledge about topics such as stress management, depression, anxiety, fatigue, coping with illness, palliative care, and end-of-life education and initiatives (Upton et al. 2010, Siltanen et al. 2020). Psychosocial care can facilitate patients' adherence to diagnosis and treatment, help manage their psychological reactions, and assist in realistic assessment and acceptance of their current circumstances. A psychological care model developed by Tunmore (1990) underscores the various levels of psychological care within general hospital practices, highlighting the significant role that nurses and other mental health professionals play in promoting psychological well-being. Within the CLP unit, mental health professionals can provide fourth-level psychological care tailored to the needs of COPD patients, including psychological counseling, psychotherapeutic support, healthcare coaching, and liaison services based on a model (Dar et al. 2019, Puteikis et al. 2021). In this context, CLP can be considered a strategic approach to integrating psychiatric services into the general hospital setting by harmonizing physical treatment and care with mental and psychosocial care (Yadav et al. 2020).

Conclusion

Individuals with COPD may encounter various challenges when confronted with a medical illness. Complications associated with the disease can lead to physical, psychological, social, and economic losses. These difficulties can

trigger diverse psychological and behavioral responses in patients. As a result, psychosocial care plays a crucial role in the treatment and management of COPD patients. Within a multidisciplinary approach, the CLP team can intervene in psychosocial issues using evidence-based methods to address the psychosocial challenges of COPD patients. These methods may target home care and caregivers, as well as include approaches that encourage patients to better self-manage, promote physical activity, and aim to enhance psychological resilience.

Furthermore, as authors, we recommend placing a greater emphasis on initiatives based on technology for COPD patients who are economically disadvantaged, have limited access to healthcare, or experience high levels of death anxiety, particularly those with moderate-to-severe disease. Focusing on such interventions can contribute to enhancing care and support for this specific subgroup of COPD patients. When reviewing the literature, it's clear that there is still a lack of research on comorbid psychiatric disorders, particularly panic attacks, in individuals with COPD. However, it is necessary to collaborate with policymakers and local authorities to implement community-based solutions to address the economic challenges faced by COPD patients. In addition, it is recommended that patients be approached with integrative methods through multidisciplinary and interdisciplinary efforts to provide holistic care.

References

Abu-Baker NN, AbuAlrub S, Obeidat RF, Assmairan K (2021) Evidence-based practice beliefs and implementations: a cross-sectional study among undergraduate nursing students. BMC Nurs, 20:13.

Aboumatar H, Naqibuddin M, Chung S, Chaudhry H, Kim SW, Saunders J et al. (2019) Effect of a hospital-initiated program combining transitional care and long-term self-management support on outcomes of patients hospitalized with chronic obstructive pulmonary disease: a randomized clinical trial. JAMA, 14:1371-1380.

Aldhahi MI, Baattaiah BA, Nazer RI, Albarrati A (2023) Impact of psychological factors on functional performance among patients with chronic obstructive pulmonary disease. Int J Environ Res Public Health, 20:1285.

Anlló H, Herer B, Delignières A, Bocahu Y, Segundo I, Mach Alingrin V et al. (2020) Hypnosis for the management of anxiety and dyspnea in COPD: a randomized, sham-controlled crossover trial. Int J Chron Obstruct Pulmon Dis, 15:2609–2620.

Aranburu-Imatz A, López-Carrasco JC, Moreno-Luque A, Jiménez-Pastor JM, Valverde-León MDR, Rodríguez-Cortés FJ et al. (2022) Nurse-led interventions in chronic obstructive pulmonary disease patients: a systematic review and meta-analysis. Int J Environ Res Public Health, 19:9101.

Arbillaga-Etxarri A, Gimeno-Santos E, Barberan-Garcia A, Balcells E, Benet M, Borrell E et al. (2018) Long-term efficacy and effectiveness of a behavioural and community-based exercise intervention (urban training) to increase physical activity in patients with COPD: randomised controlled trial. Eur Respir J, 52:1800063.

Armstrong M, Winnard A, Chynkiamis N, Boyle S, Burtin C, Vogiatzis I (2019) Use of pedometers as a tool to promote daily physical activity levels in patients with COPD: a systematic review and meta-analysis. Eur Respir Rev, 28:190039.

Arslan Y, Yazıcı G (2021) Yoğun bakım hemşirelerinin psikososyal bakım yaklaşımı ve konsültasyon liyezon psikiyatri hemşireliğinin rolü. Türkiye Sağlık Araştırmaları Dergisi, 2:29-35.

Aydemir T, Çetin Ş (2019) Kronik hastalıklar ve psikososyal bakım. Journal of Anatolian Medical Research, 4:109-115.

Benzo RP, Ridgeway J, Hoult JP, Novotny P, Thomas BE, Lam NM et al.(2021) Feasibility of a health coaching and home-based rehabilitation ıntervention with remote monitoring for COPD. Respir Care, 66:960–971.

Boscart V, Davey M, Crutchlow L, Heyer M, Johnson K, Taucar LS, et al. (2022) Effective chronic disease ınterventions in nursing homes: a scoping review based on the knowledge-to-action framework. Clin Gerontol, 5:1073–1086.

Bourne C, Houchen-Wolloff L, Patel P, Bankart J, Singh S (2022) Self-management programme of activity coping and education-SPACE for COPD(C)-in primary care: a pragmatic randomised trial. BMJ Open Respir Res, 9:e001443.

Bricca A, Harris LK, Jäger M, Smith SM, Juhl CB, Skou ST (2020) Benefits and harms of exercise therapy in people with multimorbidity: a systematic review and meta-analysis of randomised controlled trials. Ageing Res Rev, 63:101166.

Burge AT, Cox NS, Abramson MJ, Holland AE (2020) Interventions for promoting physical activity in people with chronic obstructive pulmonary disease (COPD). Cochrane Database Syst Rev, 4:CD012626.

Chan RR, Giardino N, Larson JL (2015) A pilot study: mindfulness meditation intervention in COPD. Int J Chron Obstruct Pulmon Dis, 10:445–454.

Chen TR, Hu WY, Chiu TY, Kuo HP (2019) Differences between COPD patients and their families regarding willingness toward life-sustaining treatments. J Formos Med Assoc, 118:414–419.

Clari M, Ivziku D, Casciaro R, Matarese M (2018) The unmet needs of people with chronic obstructive pulmonary disease: a systematic review of qualitative findings. COPD, 15:79–88.

Clímaco DCS, Lustosa TC, Silva MVFP, Lins-Filho OL, Rodrigues VK, Oliveira-Neto LAP et al. (2022) Sleep quality in COPD patients: correlation with disease severity and health status. J Bras Pneumol, 48:e20210340.

Coster S, Norman I (2009) Cochrane reviews of educational and self-management interventions to guide nursing practice: a review. Int J Nurs Stud, 46:508–528.

Çalışkan MA, Cerit B (2021) Effect of therapeutic touch on sleep quality and anxiety in individuals with chronic obstructive pulmonary disease: a randomized controlled trial. Complement Ther Clin Pract, 45:101481.

Dar SA, Bhat BA, Shah NN, Imtiyaz SB (2019) The pattern of psychiatric morbidity in chronic obstructive pulmonary disease: a cross-sectional, case-control study from a tertiary care hospital in kashmir, North India. J Neurosci Rural Pract, 10:65–70.

de Roos P, Lucas C, Strijbos JH, van Trijffel E (2018) Effectiveness of a combined exercise training and home-based walking programme on physical activity compared with standard medical care in moderate COPD: a randomised controlled trial. Physiotherapy, 104:116–121.

Dineen-Griffin S, Garcia-Cardenas V, Williams K, Benrimoj SI (2019) Helping patients help themselves: a systematic review of self-management support strategies in primary health care practice. PloS One, 14:e0220116.

Erdal M, Johannessen A, Askildsen JE, Eagan T, Gulsvik A, Grønseth R (2014) Productivity losses in chronic obstructive pulmonary disease: a population-based survey. BMJ Open Respir Res, 1:e000049.

Farver-Vestergaard I, Danielsen JTT, Løkke A, Zachariae R (2022) Psychosocial ınterventıon in chronic obstructive pulmonary disease: meta-analysis of randomized controlled trials. Psychosom Med, 84:347–358.

Gorman LM, Sultan DF (2008) Psychosocial Nursing For General Patient Care, 3nd ed. Philedelphia, F.A. Davis.

Heck DH, Correia BL, Fox MB, Liu Y, Allen M, Varga S (2022) Recent insights into respiratory modulation of brain activity offer new perspectives on cognition and emotion. Biol Psychol, 170:108316.

Heslop-Marshall, K, Burns G (2019) The role of cognitive behavioural therapy in living well with COPD. Breathe (Sheff), 15:95–97.

Hu W, Li T, Cao S, Gu Y, Chen L (2022) Influence of nurse-led health education on self-management ability, satisfaction, and compliance of elderly patients with chronic obstructive pulmonary disease based on knowledge, belief, and practice model. Comput Math Methods Med, 8:1782955.

Janjua S, Banchoff E, Threapleton CJ, Prigmore S, Fletcher J, Disler RT (2021) Digital ınterventions for the management of chronic obstructive pulmonary disease. Cochrane Database Syst Rev, 4:CD013246.

Jayawardena R, Ranasinghe P, Ranawaka H, Gamage N, Dissanayake D, Misra A (2020) Exploring the therapeutic benefits of pranayama (yogic breathing): a systematic review. Int J Yoga, 13:99–110.

Jiang Y, Liu F, Guo J, Sun P, Chen Z, Li J et al. (2020) Evaluating an ınterventıon program using wechat for patients with chronic obstructive pulmonary disease: randomized controlled trial. J Med Internet Res, 22:e17089.

Jolly K, Sidhu MS, Hewitt CA, Coventry PA, Daley A, Jordan R et al. (2018) Self management of patients with mild COPD in primary care: randomised controlled trial. BMJ, 361:1-14.

Kayser J, Hu RX, Rosenscruggs D, Li L, Xiang X (2022) A systematic review of the ımpact of select mindfulness ınterventions on psychological outcomes among older adults with chronic health conditions. Clin Gerontol, 46:302-314.

Kilic B, Cicek HS, Avci MZ (2021) Comparing the effects of self-management and hospital-based pulmonary rehabilitation programs in COPD patients. Niger J Clin Pract, 24:362–368.

Kokturk N, Polatli M, Oguzulgen IK, Saleemi S, Al Ghobain M, Khan J et al. (2018) Adherence to COPD treatment in Turkey and Saudi Arabia: results of the ADCARE study. Int J Chron Obstruct Pulmon Dis, 13:1377-1388.

Kuzu F, Tel Aydın H (2022) Effects of education on care burden and quality of life to caregivers of patients with COPD. Turk Thorac J, 23:155–122.

Kütmeç Yilmaz C, Duru Aşiret G, Çetinkaya F (2021) The effect of back massage on physiological parameters, dyspnoea, and anxiety in patients with chronic obstructive pulmonary disease in the intensive care unit: a randomised clinical trial. Intensive Crit Care Nurs, 63:102962.

Lee AYL, Wong AKC, Hung TTM, Yan J, Yang S (2022) Nurse-led telehealth intervention for rehabilitation (telerehabilitation) among community-dwelling patients with chronic diseases: systematic review and meta-analysis. J Med Internet Res, 24:e40364.

Levine DM, Ouchi K, Blanchfield B, Diamond K, Licurse A, Pu CT et al. (2018) Hospital-level care at home for acutely ill adults: a pilot randomized controlled trial. J Gen Intern Med, 33:729–736.

Lin FL, Yeh ML, Lai YH, Lin KC, Yu CJ, Chang JS (2019) Two-month breathing-based walking improves anxiety, depression, dyspnoea and quality of life in chronic obstructive pulmonary disease: a randomised controlled study. J Clin Nurs, 28:3632–3640.

Li Z, Liu S, Wang L, Smith L (2019) Mind-body exercise for anxiety and depression in COPD patients: a systematic review and meta-analysis. Int J Environ Res Public Health, 17:22.

Ma RC, Yin YY, Wang YQ, Liu X, Xie J (2020) Effectiveness of cognitive behavioural therapy for chronic obstructive pulmonary disease patients: a systematic review and meta-analysis. Complement Ther Clin Pract, 38:101071.

Martire LM, Lustig AP, Schulz R, Miller GE, Helgeson VS (2004) Is it beneficial to involve a family member? A meta-analysis of psychosocial interventions for chronic illness. Health Psychol, 23:599–611.

McNamara P, Bryant J, Forster J, Sharrock J, Happell B (2008) Exploratory study of mental health consultation-liaison nursing in Australia: Part 2. Preparation, support and role satisfaction. Int J Ment Health Nurs, 17:189–196.

Meza D, Khuder B, Bailey JI, Rosenberg SR, Kalhan R, Reyfman PA (2021) Mortality from COVID-19 in Patients with COPD: a US study in the N3C data enclave. Int J Chron Obstruct Pulmon Dis, 16:2323–2326.

Montes de Oca M, Aguirre C, Lopez Varela MV, Laucho-Contreras ME, Casas A, Surmont F (2016) Exacerbations and health care resource utilization in patients with airflow limitation diseases attending a primary care setting: the PUMA study. Int J Chron Obstruct Pulmon Dis, 11:3059–3067.

Neşe A, Samancıoğlu Bağlama S (2022) The effect of progressive muscle relaxation and deep breathing exercises on dyspnea and fatigue symptoms of COPD patients: a randomized controlled study. Holist Nurs Pract, 36:E18–E26.

Nyberg A, Tistad M, Wadell K (2019) Can the COPD web be used to promote self-management in patients with COPD in swedish primary care: a controlled pragmatic pilot trial with 3 month- and 12 month follow-up. Scand J Prim Health Care, 37:69–82.

Özer Z, Bahçecioğlu Turan G, Aksoy M (2021) The effects of yoga on dyspnea, sleep and fatigue in chronic respiratory diseases. Complement Ther Clin Pract, 43:101306.

Padmanabhan M, Kadhiravan T, Rajaram M, Batmanabane G (2022) A panoramic view of patients' beliefs and knowledge about chronic respiratory disease. Cureus, 14:e31633.

Pleasants RA, Riley IL, Mannino DM (2016) Defining and targeting health disparities in chronic obstructive pulmonary disease. Int J Chron Obstruct Pulmon Dis, 11:2475–2496.

Puteikis K, Mameniškienė R, Jurevičienė E (2021) Neurological and psychiatric comorbidities in chronic obstructive pulmonary disease. Int J Chron Obstruct Pulmon Dis, 16:553–562.

Rai KK, Adab P, Ayres JG, Siebert WS, Sadhra SS, Sitch AJ et al. (2017) Factors associated with work productivity among people with COPD: Birmingham COPD cohort. Occup Environ Med, 74:859–867.

Rehman AU, Muhammad SA, Tasleem Z, Alsaedi A, Dar M, Iqbal MO et al. (2021) Humanistic and socioeconomic burden of COPD patients and their caregivers in Malaysia. Sci Rep, 11:22598.

Rzadkiewicz M, Nasiłowski J (2019) Psychosocial ınterventions for patients with severe COPD-an up-to-date literature review. Medicina (Kaunas), 55:597.

Safiri S, Carson-Chahhoud K, Noori M, Nejadghaderi SA, Sullman MJM, Ahmadian Heris J et al. (2022) Burden of chronic obstructive pulmonary disease and its attributable risk factors in 204 countries and territories, 1990-2019: results from the global burden of disease study 2019. BMJ, 378:e069679.

Salciccioli JD, Marshall DC, Shalhoub J, Maruthappu M, De Carlo G, Chung KF (2018) Respiratory disease mortality in the United Kingdom compared with EU15+ countries in 1985-2015: observational study. BMJ, 363:k4680.

Schrijver J, Lenferink A, Brusse-Keizer M, Zwerink M, van der Valk PD, van der Palen J et al. (2022) Self-management interventions for people with chronic obstructive pulmonary disease. Cochrane Database Syst Rev, 10:CD002990.

Shah S, Abbas G, Riaz N, Anees Ur Rehman, Hanif M, Rasool MF (2020) Burden of communicable diseases and cost of illness: Asia pacific region. Expert Rev Pharmacoecon Outcomes Res, 20:343–354.

Sigurgeirsdottir J, Halldorsdottir S, Arnardottir RH, Gudmundsson G, Bjornsson EH (2019) COPD patients' experiences, self-reported needs, and needs-driven strategies to cope with self-management. Int J Chron Obstruct Pulmon Dis, 14:1033–1043.

Siltanen H, Aine T, Huhtala H, Kaunonen M, Vasankari T, Paavilainen E (2020) Psychosocial issues need more attention in COPD self-management education. Scand J Prim Health Care, 38:47–55.

Singh D, Mathioudakis AG, Higham A (2022) Chronic obstructive pulmonary disease and COVID-19: interrelationships. Curr Opin Pulm Med, 28:76–83.

Smalley KR, Aufegger L, Flott K, Mayer EK, Darzi A (2021) Can self-management programmes change healthcare utilisation in COPD?:a systematic review and framework analysis. Patient Educ Couns, 104:50–63.

Stamenova V, Liang K, Yang R, Engel K, van Lieshout F, Lalingo E et al.(2020) Technology-enabled self-management of chronic obstructive pulmonary disease with or without asynchronous remote monitoring: randomized controlled trial. J Med Internet Res, 22:e18598.

Sullivan J, Pravosud V, Mannino DM, Siegel K, Choate R, Sullivan T (2018) National and state estimates of COPD morbidity and mortality - United States, 2014-2015. Chronic Obstr Pulm Dis, 5:324–333.

Tunmore R (1990) The consultation liaison nurse. Nursing, 4:31–34.

TÜİK (2021) Türkiye İstatistik Kurumu Ölüm ve ölüm nedeni istatistikleri (Death and cause of death statistics). https://data.tuik.gov.tr/Bulten/Index?p=Olum-ve-Olum-Nedeni-Istatistikleri-2021-45715. (Accessed 10. 09.2023).

Upton J, Madoc-Sutton H, Loveridge C, Sheikh A, Walker S, Fletcher M (2010) Assessment of psychosocial problems in primary care COPD patients. Br J Nurs, 19:554–557.

Varas AB, Córdoba S, Rodríguez-Andonaegui I, Rueda MR, García-Juez S, Vilaró J (2018) Effectiveness of a community-based exercise training programme to increase physical activity level in patients with chronic obstructive pulmonary disease: a randomized controlled trial. Physiother Res Int, 23:e1740.

Volpato E, Farver-Vestergaard I, Brighton LJ, Peters J, Verkleij M, Hutchinson A et al. (2023) Nonpharmacological management of psychological distress in people with COPD. Eur Respir Rev, 32:220170.

Wang C, Liu K, Sun X, Yin Y, Tang T (2022) Effectiveness of motivational interviewing among patients with COPD: A systematic review with meta-analysis and trial sequential analysis of randomized controlled trials. Patient Educ Couns, 105:3174–3185.

Welch L, Orlando R, Lin SX, Vassilev I, Rogers A (2020) Findings from a pilot randomised trial of a social network self-management intervention in COPD. BMC Pulm Med, 20:162.

Wood M, Walshe C, McCullagh A (2023) What are the digitally enabled psychosocial interventions delivered by trained practitioners being offered to adults with life-shortening illnesses and palliative care needs and their informal and professional caregivers? a scoping review. Palliat Support Care,21:727–740.

Woo S, Zhou W, Larson JL (2021) Stigma experiences in people with chronic obstructive pulmonary disease: an ıntegrative review. Int J Chron Obstruct Pulmon Dis, 16:1647–1659.

WHO (2023) Chronic obstructive pulmonary disease (COPD). https://www.who.int/news-room/fact-sheets/detail/chronic-obstructive-pulmonary-disease-(copd). (Accessed 10. 09.2023).

Yadav UN, Lloyd J, Hosseinzadeh H, Baral KP, Harris MF (2020) Do chronic obstructive pulmonary diseases (COPD) self-management ınterventions consider health literacy and patient activation? a systematic review. J Clin Med, 9:646-654.

Yekefallah L, Zohal MA, Keshavarzsarkar O, Barikani A, Gheraati M (2019) Comparing the effects of upper limb and breathing exercises on six-minute walking distance among patients with chronic obstructive pulmonary disease: a three-group randomized controlled clinical trial. Adv Respir Med, 87:77–82.

Yıldırım S, Şimşek E, Geridönmez K, Basma Ş, Vurak Ü (2019) Examination of the knowledge and practices of nurses about consultation liaison psychiatry nursing. J Psychiatric Nurs. 10:96-102.

Zanolari D, Händler-Schuster D, Clarenbach C, Schmid-Mohler G (2023) A qualitative study of the sources of chronic obstructive pulmonary disease-related emotional distress. Chron Respir Dis, 20:14799731231163873.

Zhang Y, Zhao X (2021) Effects of the health belief model-based ıntervention on anxiety, depression, and quality of life in chronic obstructive pulmonary disease. Neuroimmunomodulation, 28:129–136.

Authors Contributions: The author(s) have declared that they have made a significant scientific contribution to the study and have assisted in the preparation or revision of the manuscript

Peer-review: Externally peer-reviewed.

Conflict of Interest: No conflict of interest was declared.

Financial Disclosure: No financial support was declared for this study.

Acknowledgments: A brief summary of this study was presented as an oral presentation titled "Evidence-Based Practices for Psychosocial Problems Experienced by Individuals with COPD and the Role of the Consultation Liaison Psychiatric Nurse" at the 7th International 11th National Psychiatric Nursing Congress.