

## STRESS COPING FRAMEWORK AS AN EFFORT TO IMPROVE QUALITY OF LIFE PATIENTS WITH CHRONIC OBSTRUCTIVE PULMONARY DISEASE: A LITERATURE REVIEW

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Disubmit: 10 Mei 2024

Diterima: 06 Juli 2024

Diterbitkan: 01 Agustus 2024

Doi: <https://doi.org/10.33024/mahesa.v4i8.15169>

### ABSTRACT

COPD patients usually experience a decrease in quality of life due to COPD symptoms such as coughing, shortness of breath, exacerbation, acute disease and comorbidities that occur in COPD patients cause limitations in daily activities. Stress coping is one of the factors that causes good or bad self-care behavior in COPD patients. To describe the influence, stress coping and level of self-care in COPD patients on their quality of life. The method of this study is a literature review. Literature searches using electronic databases such as PubMed, Google Scholar and Science Direct. A literature review was carried out on international journals published in the last 5 years, available in full text. The keywords used were "self-care", "stress coping" and "quality of life" for COPD patients. The selection of articles followed the PRISMA approach. This review summarizes eighteen articles. Five articles discussed self-care, the Self Efficacy scale, and discriminative validity with higher self-care scale scores in individuals with greater COPD severity and poorer health status. Five articles discuss coping stress in COPD sufferers. COPD patients who have good knowledge will have more coping mechanism strategies so that their quality of life becomes more prosperous. Seven articles discussed the quality of life of COPD sufferers. If a COPD patient has good stress coping and strong confidence and confidence in his or her abilities, this will influence self-care actions and improve the COPD patient's quality of life. Future researchers are encouraged to explore similar research themes using other journal search engines to enrich the study.

**Keywords:** Self Care, Stress Coping, Quality Of Life, COPD

### INTRODUCTION

Chronic obstructive pulmonary disease (COPD) is an inflammatory lung disease caused by long-term inhalation exposure to harmful substances such as tobacco smoke. Pulmonary Obstructive Pulmonary Disease (COPD) is a common cause of morbidity and mortality worldwide, characterized by a gradual decline in health and progressive organ function, with

acute exacerbations and reduced chances of survival. COPD is also the third cause of death worldwide, causing 3.23 million deaths. Around 300 million people suffer from COPD in the world with a prevalence of 12.16%. According to the prevalence in Indonesia, it reaches 3.7% or around 9.2 million people suffer from COP. In East Java Province, COPD ranks fourth in the number of

non-communicable disease cases in hospital outpatient units with a total of 52,316 cases (Andaenes, 2006); (Marpaung, 2024).

Stress coping is one of the factors that causes good or bad self-care behavior in COPD patients. Stress is a person's reaction to changes in circumstances or threatening circumstances. Coping is visible and hidden behavior that a person does to reduce or eliminate psychological tension in stressful conditions. According to Lazarus and Folkman, stress coping is a method used by people to control their behavior to solve the simplest and most realistic problems, as well as to free themselves from real and unreal problems. One study found that coping mechanisms in COPD patients can affect quality of life (Bagnasco, 2021).

According to the transactional model of stress and coping, there are 2 factors that influence a person's stress coping management, namely personal factors and situational factors. Personal factors are internal factors which include the patient's values, commitment, goals, beliefs. while situational factors are external factors which include demands, external resources, constraints, temporal aspects (Abdallah, 2021)' (Balkan, 2021). Personal factors that can influence stress coping include data on age, gender, education level, religion, income, employment, smoking habits and marital status. Meanwhile, situational factors that can influence stress coping are family support, residence status, number of family members, support from health workers, distance to health facilities and health insurance (Benzo, 2016) (Luckett, 2020).

One study states that stress coping is related to self-efficacy. Self-efficacy is a person's belief

about their ability to change their life and do the things they want. Those with high levels of self-efficacy expect success in achieving goals, while those with low levels of self-efficacy doubt their ability to achieve Health goals. Someone who has effective coping will have effective efficacy in carrying out management himself. Positive self-efficacy can also show a person's persistence in facing obstacles and a person's ability to control their problems (Farver-Vestergaard, 2022). Improving the physiological and psychological status of COPD patients can improve their quality of life. This can be achieved by convincing patients to receive certain treatments that can help them breathe better, be more active, and live longer. One study shows that someone with good self-efficacy will show a good quality of life in self-care for managing their illness. High self-efficacy can help improve self-care behavior and so that patients can initiate and maintain health behaviors.

## LITERATURE REVIEW

Stress is a common phenomenon in life. In fact, in this modern age, stress has become a symptom of the biggest disease<sup>1</sup>. If not dealt with properly, stress can have a negative impact on someone who experiences it. Several psychological strategies are used to adapt to the stress faced so that stress does not have a bad impact on a person. Some strategies that may be used when someone faces stress in order to reduce or withstand the effects of stress are coping with stress, hope for self-efficacy, fortitude or psychological endurance, optimism, social support, and ethnic identity. Coping as a way to deal with stress often overlaps with other terms, namely

adjustment and/or problem solving. All three are ways to solve problems, but there are differences between the three terms. Adjustment refers to problems in dealing with everyday life (Guimond, 2009).

Forms of Stress Coping Lazarus divides forms of coping into two things<sup>7</sup>, namely emotion-focused coping or coping that focuses on emotions. This term is used as an individual's strategy of responding to stressful situations in an emotional way, especially by using defensive judgment. Second, problem-focused-coping or coping that focuses on problems. This term is used as a cognitive strategy used by individuals to deal with stress or coping to face problems and try to solve them.

a. Emotion-Focused-Coping This type of strategy focuses on how a person responds to stress. Most of the strategies consist of cognitive processes directed at reducing emotional stress, including avoidance, minimizing, distancing, selective attention, positive comparisons, and forcibly extracting positive value from negative events. Apart from that, this strategy also includes consuming alcohol, eliminating unpleasant facts through cognitive strategies.

b. Problem-Focused Coping A form of coping strategy that focuses on problems is similar to the strategies used to solve problems. Likewise, efforts with this strategy are often directed at describing the problem, considering alternatives and their advantages and disadvantages, choosing between them and taking action (Herman, 2009).

The difference with problem solving is that the problem-focused coping strategy integrates the problem orientation rather than just solving the problem.

Sources of Coping Stress Several sources of

copied either from within or outside the individual are as follows:

a. Health and Energy Someone who has health and energy will be better at coping compared to someone who lacks energy or is sick.

b. Positive beliefs Positive beliefs are the basis for maintaining coping efforts in adverse circumstances.

c. Problem solving skills These problem solving skills include searching for information, analyzing situations to identify problems, in order to find alternative actions. Consider alternative courses of action, weigh wisely to expect or anticipate the outcome, and choose the appropriate plan.

e. Social Support Having people who can receive emotional, information, and/or real support has become a growing concern in coping resources in stress research, behavioral healing, and social epidemiology.

f. Material Resources This refers to monetary resources, objects and services that can be purchased with money (Benzo, 2016).

Chronic Obstructive Pulmonary Disease (COPD) is a disease of the respiratory tract, which can result in airflow obstruction with manifestations of shortness of breath and impaired tissue oxygenation and is followed by chronic airway obstruction, reduced work capacity, and frequent relapses leading to decreased quality of life of sufferers. Signs and symptoms of chronic obstructive pulmonary disease According to Ikawati (2016), the signs and symptoms commonly experienced by COPD patients who experience ineffective airway clearance are as follows:

a. Chronic cough for 3 months a year, occurs intermittently or every day, and often occurs throughout the day.

b. Chronic production of sputum.

c. Tired and lethargic.

d. Shortness of breath (dyspnea) is progressive over

time, worsens with exercise, and worsens with respiratory infections. e. Decreased tolerance for physical activity (tired quickly, panting) (Cudris-toris, 2023).

### RESEARCH METHODOLOGY

Other research on diabetes patients shows that there is a relationship between self-efficacy and self-care. Behavioral approaches can be used to reduce the number of complications and improve the quality of life in diabetes. So if a COPD patient has strong confidence and is confident in his or her abilities, this will influence self-care actions and improve the COPD patient's quality of life. Method The research design used is the literature review method. The use of this method is related to chronic obstructive pulmonary disease (COPD). Search Results and Study Selection

Literature search and study selection used the PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analysis) strategy. First, the author searched for literature in various databases such as Google Scholar, PubMed and Scopus with the keywords self-care, stress coping, quality of life, COPD. Search articles using keywords and boolean operators (And, Or Not, Or And Not). Inclusion criteria for this study were: 1) nationally or internationally accredited articles, 2) published after 2018, 3) diagnosed with COPD, 4) age over 18 years, 5) duration of suffering from COPD for at least 1 month. The exclusion criteria for this study were: 1) articles published before 2018, 2) COPD patients who experienced decreased consciousness during the study and 3) COPD patients who were experiencing severe exacerbations.

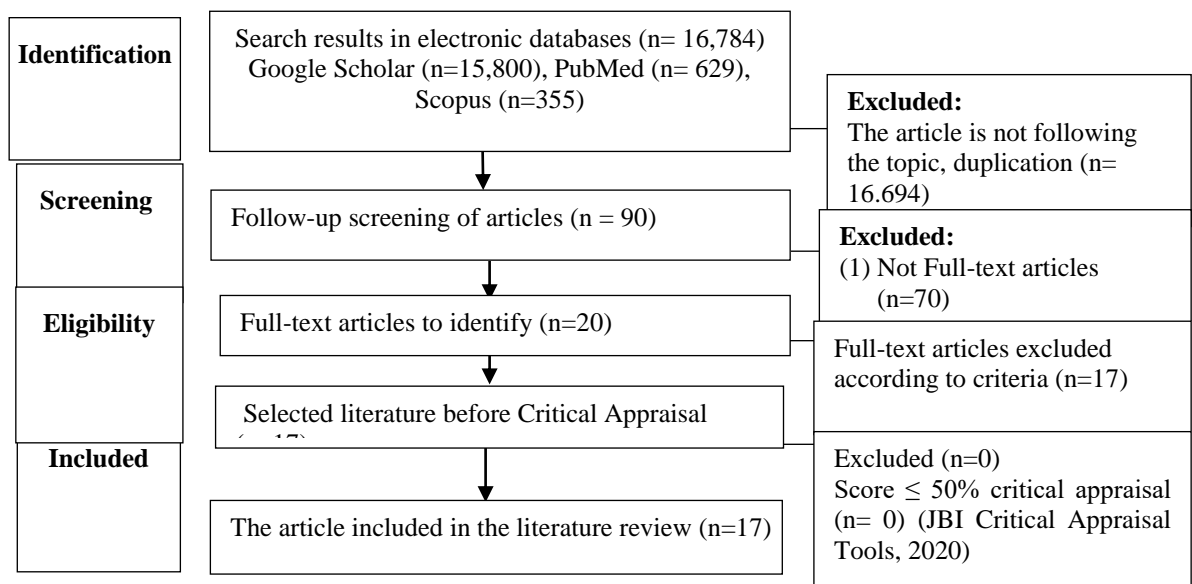


Figure 1. Study Selection Based On The PRISMA Flow Chart

## RESULTS RESEARCH

Tabel 1. Summary Of Research On The Stress Coping Framework As An Effort To Improve The Quality Of Life For Patients With Chronic Obstructive Pulmonary Disease.

No	Author (s) (Year)	Purposes of the study	Methods (Design, Subject, Variable, Instruments, and Analysis)	Main Finding
1.	Farag et al., 2018	The aim of this research is assess the quality of life of COPD patients and its relationship with disease severity.	D: Cross sectional study S: 200 respondents V: Quality of life, health of COPD patients I: Arabic version of the St George's Respiratory Questionnaire, (HRQoL) A: analyzes were performed by using the mean, SD, and x2 by using the (SPSS), version 20 (IBM Corp., Armonk, New York, USA)	COPD patients experience decreased HRQoL. Frequent exacerbations, advanced airway obstruction, and the severity of dyspnea negatively impacts HRQoL.
2.	Chee-Shee Chai, 2019	Research purposes This compare quality of life health related (HRQoL) specific patient's illness with phenotype clinically different.	D: cross-sectional study S: 189 respondents V: COPD clinical phenotype, Quality of life I: George Respiratory Questionnaire for COPD (SGRQ-c), HRQoL Disease specificity was assessed using COPD Assessment Test (CAT) and St. A: software packages, SPSS for Windows version 23.0 (SPSS Inc)	AE CB patients had significantly worse HRQoL in comparison other clinical phenotypes and recorded the worst scores on each CAT item and SGRQ-c component. By therefore, AE CB patients may require treatment approach different focus on components exacerbations and chronic bronchitis

3.	Noonil et al., 2019	aims to describe quality of life which are related with health (HRQL) and factors related to the patient southern Thailand with COPD stable	D: cross-sectional descriptive study S: 126 patients V: quality of life, factors related to COPD I: Questionnaire (SGRQ), HRQOL A: multiple regression analysis.	Stable COPD patients should be assessed and motivated to carry out rehabilitation lungs for promote results clinical and also improve HRQL they.
4.	Yulanda, N. A., & Mita M, 2019	aims to analyze influence of the module supportive educative to knowledge self care (self care), self efficacy and behavior self care	D: quasi experimental pre-post test control design group. S: 34 COPD patients V: Modulesupportive educational, knowledge and care behavior yourself, to self-efficacy. I: Questionnaire knowledge self-care, Self-care questionnaire behaviour, COPD self efficacy (CSES) A: t-test. Results of the paired t test	The results of the paired t test in the intervention group were significantly different significant in the variables of self-care knowledge (p=0.000), self-efficacy (p=0.000) and self-care behavior (p=0.000), whereas there were none in the control group significant difference in the self-care knowledge variable (p=0.633), self efficacy (p=0.164) and self-care behavior (p=0.216)
5.	Suardana, 2020	Aims to determine the relationship between self-efficacy and quality of life in patients with chronic obstructive pulmonary disease	D: cross-sectional S: 31 patients V: Self-Efficacy, Quality of Life in Chronic Obstructive Pulmonary Disease Patients I: The COPD Self Efficacy Scale (CSES) questionnaire from Wigal (1991) and the quality of	The quality of life of COPD patients can be improved by increasing self-efficacy

			life questionnaire from WHOQOL (2004). A: univariate and bivariate	
6.	Esquinas, C., 2020	This research aim know health utility in COPD patients And identify variable that have an impact biggest	D: Observational studies S: 6198 respondents V:Correlation between disease severity factors, utility of EQ-5D in chronic obstructive pulmonary disease I: EuroQoL Questionnaire 5 Dimensions (EQ-5D) version, HRQoL A: Multivariate analysis	HRQoL measures such as the EQ-5D can help clinicians understand the impact of respiratory disease in COPD patients
7.	Horner et al., 2020	This study explain disease burden in COPD outpatient tend to below estimates in patients with obstruction light airway and exacerbations light and overestimation on patients with road obstruction breathing heavier and exacerbations often.	D: Cross sectional study S: 1,175 patients V:Quality of Life, Internal limitations Everyday life, Stable COPD outpatient I: St. John's Respiratory Questionnaire George for COPD patients (SGRQ-C) A:The R Project for Statistical Computing	In Austria, the disease burden in COPD outpatients is trending underestimated in patients with road obstruction light breath and the exacerbation is more a little, and more give more to the patient with road obstruction breathing is worse and exacerbations occur frequently. Our findings show that validated global health status assessments may reduce this difference in perception.



8.	Nina Obabarius, 2021	This research aim evaluate empirical evidence Stress Model Transactional The proposed by Lazarus and Folkman on patients with health condition psychosomatics.	D: Structural equations model S: 2216 respondents V: Concept modification transactional stress according to Lazarus and Folkman, psychosomatic inpatient sample I: Electronic via personal digital assistant (PDA) A: confirmatory.	Partial empirical data big confirm Model's theoretical assumptions Transactional Stress, which was first proposed by Lazarus and Folkman, in patients with various conditions psychosomatic.
9.	Tri Antika Rizki Kusuma Putri, 2021	The aim of this study to determine the factors that influence the quality of life of COPD patients	D: cross-sectional study S: 71 patients V: Factors, Quality of Life, Patients With Chronic Obstructive Pulmonary Disease I: WHOQOL-BREF Questionnaire A: univariate and bivariate analysis.	Quality of life can be improved by increasing client activity. Nurses and other health workers need to pay attention to interventions that can be done to increase patient activity to prevent exacerbations, especially during the rehabilitation phase.
10.	Ahmad Asyrof, 2021	This research aim describe characteristics and quality of life disease patients pulmonary obstruction chronic (COPD).	D: discriminatory analysis S: 51 patients V: Characteristics, quality of life, disease patients Conic Pulmonary Obstruction (COPD) I: COPD Assessment Test (CAT). A: Data analysis includes univariate analysis and bivariate analysis using correlation Pearson and or	No difference quality of life in gender, age, duration suffering, and smoking in COPD patients.



			the alternative is Kendall-you know	
11.	Rizka Yunita, 2021	This research aim analyze self-efficacy with student coping bachelor nursing face covid 19 pandemic	D: correlation analysis with a cross sectional study approach S: 125 people. V: self-efficacy, coping of undergraduate nursing students facing the pandemic covid 19. I: general questionnaire self efficacy scale (GSE), coping using the coping strategies inventory questionnaire. A: Data analysis was tested using Spearman rank.	There is a relationship between self-efficacy and coping in undergraduate nursing students facing the pandemic covid 19 shown with a $p$ value of 0.000 with a correlation value of $r$ of 0.775, so it shows very strong correlation properties.
12.	Kharbanda & Anand, 2021	This research aims to measure quality related life health (HRQOL) on COPD patients and connect severity level disease and other factors with decline rate HRQOL	D: Cross sectional study S: 100 patients V: -Quality of life , health in patients with lung disease chronic obstructive, home based study I: St. John's Respiratory Questionnaire George (SGRQ) A: -multivariable linear regression analysis.	This research shows HRQOL disturbed the patient COPD, and getting worse with increasing disease severity. Onset of COPD in younger ages have a decrease Much more significant HRQOL, because onset of symptoms and early complications. This finding requires better early care and integrationpulmonary rehabilitation program into policy current health.
13.	Sharifi et	The main goal of	D: Cross sectional	Findings of this

	al., 2021	this research is for assess quality related life health (HRQL) on a large sample participants with and without COPD	study S: 1152 patients V: COPD Quality of Life I: Survey Questionnaire Form Health Short 12 (SF-12), a shortened version of SF 36 A:-SPSS 21 software. The statistics significance level was considered as $P < 0.05$ .	research show that COPD, female gender, and age over 40 years affect HRQL especially physical dimensions, such as those shown by SF-12 instrument.
14.	D'Amore et al., 2022	This research aims to secondary analysis This, grouping factors use component International Classification of Functioning, Disabilities and Health (ICF)	D: Cross-sectional study S: 96 respondents V: Factors that associated with participation in life situation on COPD sufferers I: Late Life Disability Questionnaire (LLDI) A: linear regression multiple	Participation in life situations in COPD sufferers is associated with various ICF components. Psychological pressure (i.e. symptoms of anxiety and depression) and mobility are important determinants of frequency and limitations participation.
15.	Taskin Yilmaz, 2019	Research purposes this is for know influence road program regular feet to parameter breathing, quality of life and frequency emergency service emergency on COPD patients.	D: Sstudy spring experimental S: 46 patients V: Patient disease-related characteristics, walking duration, parameters breathing I: Patient identification form, monitoring, respiratory evaluation, Disease Questionnaire (SGRQ)	In research that performed with nursing assistance, a regular walking program improves quality life of COPD patients in the long term without influence on respiratory parameters.

			A: SPSS test Paired sample t test
16.	Ying, 2022	This research aims to assessing the level of good quality of life and knowing the factors associated with good quality of life in COPD patients living in Zhejiang Province, China	D: Cross sectional study S: 420 patients V: Influencing factors, quality of life, chronic obstructive living lung disease patients I: St. John's Respiratory Questionnaire George (SGRQ) standard used to assess quality of life A: Logistic regression
17.	Chunyu Wang, 2023	This study aims. Therefore, this study aims to describe the level of psychological distress in COPD patients and explore factors associated with psychological distress.	D: Cross-sectional study observational and retrospective. S: 351 COPD patients V: Psychological pressure , Associated factors among patients with chronic obstructive pulmonary disease disease I: Socio-demographic questionnaire self-designed, Kessler Psychological Distress Scale (K10), COPD Knowledge Questions A: Multivariate linear regression.

The selected articles are summarized and presented in table 1. Based on the results of the review of the 18 articles that meet the predetermined inclusion criteria, five articles discuss self-care (self-efficacy), where self-efficacy is a person's belief about their ability to change their life.

and do the things they want. High self-efficacy can help improve self-care behavior and so that patients can initiate and maintain health behaviors. Five articles discuss stress coupling, where stress coupling according to Lazarus and Folkman (1984) Stress coping is a method used by people to control

their behavior to solve the simplest and most realistic problems, as well as to free themselves from real and unreal problems. Stress is a person's reaction to changes in circumstances or threatening circumstances. Ten articles discuss

quality of life, where quality of life is defined as an individual's satisfaction or happiness with aspects of their life that are influenced by their personal health in terms of physical, mental, emotional and social health.

## DISCUSSION

The results of a literature review show that COPD patients usually experience a decrease in quality of life due to COPD symptoms such as coughing, shortness of breath, acute exacerbations of the disease, and comorbidities found in COPD patients, causing limitations in daily activities. As a result of the symptoms they experience, COPD sufferers tend to reducing the level of self-care, such as avoiding activities, will cause immobilization, decrease the patient's relationship with society and will ultimately affect the patient's quality of life. According to the stress coping theory from Lazarus & Folkman (1984), there are two factors that can influence stress coping, namely personal factors and situational factors. Personal factors are internal or individual factors which include the patient's values, commitment, goals and beliefs. From literature studies, personal factors that can influence stress coping include data on age, gender, education level, religion, income, employment, smoking habits and marital status. Situational factors are external factors such as environmental and social factors that can influence the patient's stress coping. From literature studies, situational factors that can influence stress coping are family support, residence status, number of family members, support from health workers, distance to health

facilities and health insurance (Wang, 2021); (Woo, 2021).

Another finding in this literature review states that stress coping is related to self-efficacy. Self-efficacy is a person's belief about their ability to change their life and do the things they want. According to Bandura, there are four sources of self-efficacy, namely successful experiences (performance accomplishment), events that are experienced as if they were experienced by oneself (vicarious learning), verbal persuasion and physiological and emotional states (physiological and emotional arousal). Meanwhile, the dimension of self-efficacy is strength (strength), generalization (generality) and level dimensions (magnitude). High self-efficacy can help improve self-care behavior and so that patients can initiate and maintain health behaviors. Orem's theory called "Self-Care Theory" describes how and why people care for themselves and believes that nursing is a process that is accepted because of problems or limitations in caring for oneself (Zhu, 2021); (Bolton, 2022).

Self-care theory according to Dorothe Orem (2001) is generally divided into 3 interrelated theories, namely self-care theory, self-care deficit theory, and nursing systems theory. Self-care is an action initiated and carried out by an individual based on the benefits of maintaining life, normal body function, development and well-

being. There are three concepts in self-care theory including self-care requirements, self-care demands and self-care agency. Meanwhile, the theory of self-care in chronic diseases includes self-care maintenance, self-care monitoring, self-care management. Dimensions of self-care in COPD patients using Orem's theory according to Jiang (1999) include medication adherence, breathing exercises, diet, physical activity, environmental control, smoking cessation and stress management (Zanolari, 2023).

A review of the literature also shows that sociodemographic factors still have various controversies in influencing patients' quality of life COPD. Smoking status had a negative relationship; Non-smokers have a better quality of life than smokers or ex-smokers. Smokers and former smokers trigger a low quality of life which leads to exacerbation of COPD symptoms. A positive association was also found with high body mass index or obesity having better quality of life. However, on the other hand, those with a high body mass index have low energy levels. Meanwhile, old age improves the quality of life because the younger generation feels less able to deal with the disease, and the elderly who have suffered from COPD for a long time feel able to adapt to life. Low socioeconomic status also has an impact on low quality of life. However, the contrasting side of gender differences does not affect the quality of life of COPD patients. Stable COPD patients are also susceptible to heart failure, a comorbid disease caused by inflammation (Rozenberg, 2020); (O'Connell, 2023).

Decreased quality of life can occur due to functional capacity

which is influenced by muscle and fat body composition or low social support and high challenges resulting in lack of exercise. Increasing physical activity has a positive relationship with high quality of life so it has an important role in daily life. Psychological factors consisting of depression and anxiety are closely related to the quality of life in COPD patients. Psychology in the form of high anxiety and depression reduces the quality of life. This psychological side has the potential to result in a decrease in lung function, the perception of the patient's experience of the disease they are suffering from psychological involvement in respiratory disease disorders so health workers must be able to assess the psychology of COPD patients (Helvac, 2020); (Mathar, 2020); (Pottera, 2023).

The results of a literature review also show that COPD patients usually experience a decrease in quality of life due to COPD symptoms such as coughing, shortness of breath, acute exacerbations of the disease, and comorbidities found in COPD patients, causing limitations in daily activities. As a result of the symptoms they experience, COPD sufferers tend to reduce their level of self-care, such as avoiding activities, which will cause immobilization, decrease the patient's social relations and ultimately affect the sufferer's quality of life.

## CONCLUSION

The limitations of this article are that various types of previous research have not specifically discussed self-care behavior models based on the stress coping framework, so the team experienced difficulty in

summarizing behavioral models to improve the quality of life of COPD patients. Conclusion Personal factors (age, gender, education level, religion, income, employment, smoking habits, and marital status) and situational factors (residence status, number of family members, distance to health facilities and health insurance) can influence the choice of stress coping strategies (Problem Focused Coping (PFC) and Emotional Focused Coping (EFC). Choosing stress coping strategies can strengthen COPD patients' self-care behavior, which consists of medication compliance, breathing exercises, diet, physical activity, environmental control, smoking cessation and stress management and whether COPD patients' self-care behavior can also influence the quality of life of COPD patients, which consists of physical health, psychological health, social relationships and the environment.

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