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**SMOKING CESSATION AND COPD: WHY PATIENTS
STILL CONTINUE TO SMOKE AFTER COPD DIAGNOSIS
AND ADVICE TO QUIT SMOKING**

A Systematic Literature Review

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Thesis abstract

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Chronic Obstructive Pulmonary Disease (COPD) is a major cause of chronic morbidity and mortality worldwide, smoking being the primary risk factor. Even though smoking cessation has been proven to significantly increase prognosis, a substantial number of COPD patients continue to smoke. This review was aimed at enriching and extending professional understanding of the various reasons why smokers diagnosed with COPD find it difficult to quit smoking even after being advised that smoking cessation will significantly improve their situation.

The research method used in this study is Systematic Literature review, and data was analyzed using Inductive content analysis. Data was extracted and analyzed to answer the following research question: Why do patients with COPD still continue smoking irrespective of their diagnosis and advice to quit smoking?

Findings showed that participants had either made one or more failed attempts to quit smoking, or no attempt at all. Even though Participants were aware of the harmful effects of smoking, their lives were ruled by lifelong habits that were difficult to break. Protracted planning, failed quit attempts, negative attitudes towards their smoking from healthcare professionals, family and friends, and lack of support all contributed significantly to these participants not finding the right time to stop smoking.

In conclusion, a better understanding of the difficulties COPD patients encounter during quit attempts can go a long way to assist Health Care professionals offer better smoking cessation support and individualized care.

Keywords: Chronic Obstructive Pulmonary Disease; COPD; Chronic Obstructive Airways Disease; Chronic Airways Obstruction; smoking; smoking cessation; Cessation barriers. Quit/stop smoking

SEINÄJOEN AMMATTIKORKEAKOULU

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Työn nimi: COPD-potilaiden tupakoinnin lopettaminen: Miksi potilaat yhä jatkavat tupakointia COPD-diagnoosin ja tupakoinnin lopettamista koskevan ohjauksen jälkeen ?

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Tiivistelmän tulee mahtua yhdelle sivulle.

Keuhkohtaumatauti (KAT) on maailmanlaajuisesti merkittävä syy krooniseen sairastuvuuteen ja kuolleisuuteen, ensisijaisena riskitekijänä sairastumiselle on tupakointi. Vaikka tupakoinnin lopettaminen vähentää todistetusti todennäköisyyttä sairastua keuhkohtaumatautiin, niin huomattava määrä potilaista jatkaa silti tupakointia. Tämän opinnäytetyön tarkoitus on lisätä ja laajentaa hoitohenkilökunnan ymmärrystä sekä tietoa siitä, miksi KAT-potilas kokee tupakoinnin lopettamisen vaikeaksi, vaikka hoitohenkilökunta on ohjannut ja tuonut esiin, että lopettaminen parantaisi heidän terveydentilaansa merkittävästi.

Tutkimusmenetelmänä tässä opinnäytetyössä on käytetty systemaattista kirjallisuuskatsausta ja aineiston analyysi tehtiin käyttämällä induktiivista sisällönanalyysia. Aineisto analysoitiin vastaamaan seuraavaan kysymykseen: Miksi KAT-potilaat jatkavat tupakointia välittämättä diagnoosistaan tai lopettamisen ohjauksesta?

Tutkimustulokset osoittivat, että tutkimukseen osallistuvilla oli taustalla joko yksi tai useampi epäonnistunut yritys lopettaa tupakointi tai ei yritystä ollenkaan. Vaikkakin osallistujat olivat tietoisia tupakoinnin haitoista, heitä silti ohjasi tottumus tupakointiin ja tätä tottumusta oli vaikea lopettaa. Pitkällinen suunnittelu, epäonnistuneet lopettamisyrittäykset, kielteiset asenteet heidän tupakointiaan kohtaan hoitohenkilökunnalta, perheenjäseniltä ja ystäviltä sekä tuen puuttuminen vaikuttivat merkittävästi siihen, etteivät osallistuneet löytäneet oikeaa aikaa tupakoinnin lopettamiselle.

Yhteenvetona voidaan sanoa, että hoitohenkilökunnan ymmärtäessä laajemmin KAT-potilaiden tupakoinnin lopettamisvaikeuksia he voivat paremmin tukea potilasta ja antaa yksilöllisempää hoitoa.

Asiasanat: Keuhkohtaumatauti; KAT; krooninen keuhkohtaumatauti; Krooninen hengitysteiden ahtauma; tupakointi; tupakoinnin lopettamista; Lopettaminen esteitä; tupakoinnin lopettamiselle

TABLE OF CONTENTS

Thesis abstract.....	2
Opinnäytetyön tiivistelmä.....	3
TABLE OF CONTENTS	4
Abbreviations	7
Tables, Figures and Pictures.....	8
1 INTRODUCTION	9
2 CHRONIC OBSTRUCTIVE PULMONARY DISEASE	10
2.1 Pathophysiology of COPD	10
2.2 Causes of COPD.....	12
2.3 Signs and Symptoms of COPD.....	13
2.4 Diagnosis of COPD.....	13
2.5 Management of COPD.....	14
3 ROLE OF THE NURSE IN COPD MANAGEMENT.....	16
4 SMOKING CESSATION	18
4.1 Smoking Cessation Interventions.....	18
4.2 Non Pharmacological interventions.....	20
4.3 Role of the Nurse in Smoking Cessation.....	21
5 RESEARCH AIMS AND OBJECTIVES.....	24
6 SYSTEMATIC LITERATURE REVIEW AS A RESEARCH METHOD	25
7 DATA COLLECTION AND ANALYSIS IN THIS REVIEW	29
7.1 Databases considered for data collection	29
7.2 Key Words	30
7.3 The Systematic data search process	30
7.4 Inclusion and Exclusion Criteria	31
7.5 Assessment of Methodology Quality	33
7.6 Data found from Search Process	34
8 INDUCTIVE CONTENT ANALYSIS	39

9	DATA EXTRACTION AND ANALYSIS.....	41
10	RESULTS AND FINDINGS	49
10.1	Participants who made no attempts at all to quit.....	49
10.1.1	Difficulty to stop	49
10.1.2	External Support	51
10.1.3	Lack of Motivation to Quit	51
10.1.4	It is never the right time in life to stop	52
10.1.5	Smoking related health beliefs.....	53
10.1.6	Communication with Health Professionals.....	53
10.1.7	Belief about the cause of the disease	54
10.1.8	Self-Blame	55
10.1.9	Making Excuses.....	55
10.1.10	Percieved benefits and security	56
10.1.11	Use of Destructive pressure relief strategies	57
10.2	Uncussessful attempts to quit	58
10.2.1	Ambivalence	58
10.2.2	Smoker's motivation.....	58
10.2.3	Lack of support from family members and friends	60
10.2.4	Irritation.....	60
10.2.5	Nicotine withdrawal symptoms.....	60
10.2.6	Disease Exacerbation	61
10.2.7	Alcohol use	61
10.2.8	Self-Deception	61
10.2.9	Life's Difficulties	62
10.2.10	Developing Pressure Filled Mental States	62
10.2.11	Giving up trying.....	64
11	DISCUSSION AND CONCLUTION.....	66
11.1	DISCUSSION.....	66
11.2	CONCLUSION	71
11.3	Implication for practice	72
11.4	Strengths and limitations.....	73
11.5	Ethical considerations	73
11.6	Validity and Reliability	74

11.7	Recommendation for future research.....	74
11.8	Aknowledgement	75
BIBLIOGRAPHY.....		76
APPENDICES		82

Abbreviations

COPD	Chronic Obstructive Pulmonary Disease
E & P	Experience and pleasure
FVC	Forced Vital Capacity
FEV	Forced expiratory volume
F & F	Family and Friends
GOLD	Global Initiative for Chronic Obstructive Lung Disease
HP	Health Professionals
INFORS	Information
NICE	National Institute for Health and Care Excellence
NRT	Nicotine Replacement Therapy
NH₃	Ammonia
NH₄	Ammonium
NH₄S₂	Ammonium Sulphide
PFMS	Pressure filled mental state
RS	Relief Strategies
SO₂	Sulphur dioxide
WHO	World Health Organisation

Tables and Figures

Table 1 Inclusion and Exclusion Criteria for the review.....	33
Figure 1: the General Inclusion and exclusion process of Data Search.....	34
Figure 2 : EBSCO Host Inclusion and Exclusion Data Search Process.....	35
Figure 3: Medline Inclusion and Exclusion Data Search Process	36
Figure 4: Pubmed Inclusion and Exclusion Data Search Process	37
Figure 5: Sage Journal Inclusion and Exclusion Data Search Process.....	38
Figure 6: Flow diagram of identified themes	43
Figure 7: No attempt to quit- illustration of subcategories under this main category	44
Figure 8: subcategories under Difficulty to stop smoking.....	45
Figure 9: Use of destructive pressure relief strategies subcategories.....	46
Figure 10: Unsuccessful attempts to quit smoking subcategories.....	47
Figure 11: Developing pressure filled mental states and giving up trying subcategories.....	48

1 INTRODUCTION

Chronic Obstructive Pulmonary Disease (COPD) is a major cause of chronic morbidity and mortality worldwide, and smoking is the primary risk factor. Even though there is substantial evidence that smoking cessation slows the rate of disease progression and prevent further deterioration in lung function, a significant number of COPD patients continue to smoke.

This review was aimed at enriching and extending professional understanding of the various reasons why smokers diagnosed with COPD find it difficult to quit smoking even after being advised that smoking cessation will significantly improve their situation. The objectives were to identify the relationship between smoking and COPD, to discuss the benefits of smoking cessation for COPD patients, to discuss available smoking cessation interventions and to identify barriers to smoke cessation in COPD patients.

The research question this review aimed at answering was: Why do patients with COPD still continue smoking irrespective of their diagnosis and advice to quit smoking?

2 CHRONIC OBSTRUCTIVE PULMONARY DISEASE

Chronic Obstructive Pulmonary Disease (COPD), according to the Global Initiative for Chronic Obstructive Lung Disease (GOLD, 2015), is a major cause of chronic morbidity and mortality worldwide, and represents a vital public health challenge that is both preventable and treatable. In the United States, COPD is the third leading cause of death, contributing to more than 95% of deaths resulting from chronic lower respiratory diseases. An estimated 6.4% (approximately 15.7 million) adults have been told by their Doctors or other health professionals that they have COPD (Morbidity and Mortality Weekly Report, 2015). In the United Kingdom, it is the fifth leading cause of death with 835,000 diagnosed cases and an estimated 2,200,000 people with COPD who remain undiagnosed (Department of health, 2011).

The World Health Organization has classified COPD as one of the major causes of global mortality and according to their prediction, COPD will become the fourth leading cause of death worldwide by 2030 (WHO, 2015). Mannino and Braman (2007) suggest that this increase in cases may be due to an improvement in the diagnosis of the disease or because of an increase in behaviours associated with health risks for example cigarette smoking. GOLD (2015) further explained that this global increase in COPD burden will not only result from increased exposure to risk factors, but also from aging of the population.

2.1 Pathophysiology of COPD

COPD is a long term condition that is associated with impaired lung function and lung damage which does not change significantly over a short period of time. It is characterised by the development of progressive airflow obstruction that is partially reversible. The disease itself is irreversible but its progression can be slowed with correct treatment and management of symptoms (Lin and Yuan, 2012).

Nature has efficiently developed our system in order to keep us feeling alive and well. This is largely by making sure all organs are supplied with oxygen and waste products are removed. When things start going wrong in any of the organ, we start

developing signs and symptoms. In COPD, the lungs are predominantly affected and the system will react in such a way to make you know something is going wrong.

According to Parker et al (2012), COPD generally refers to bronchitis and emphysema which both exist together. Chronic bronchitis is the inflammation and obstruction of small airways which is characterized by the presence of recurrent episodes of productive cough within a minimum period of two years, each episode lasting for more than three months. Emphysema is the enlargement of air spaces with the destruction of lung parenchyma and loss of lung elasticity.

Airflow obstruction in COPD results from chronic inflammation which stems from a combination of airway obstruction and damage to tissues in the central airways that take part in gaseous exchange - bronchi, bronchioles alveoli and pulmonary blood vessels (NICE, 2010). These changes, as explained by Decrama et al (2012), lead to narrowing and remodelling of the airways, increase in the production of goblet cells (mucus secreting cells) and subsequently changes in vasculature (blood supply) of the lungs may lead to pulmonary hypertension. Consequently, there will be loss of lung elastic tissue, and hence a progressive decline in FEV1 (force expiratory volume in one second)

In a nutshell, the following changes take place in the respiratory tree of a COPD patient according to Vestbo et al (2013):

- **Bronchoconstriction:** There is limitation of airflow caused by increase mucus secretion and inflammation, this is evidenced by noisy sound (wheezes) occurring mainly on expiration in COPD. Wheezes occur as a result of turbulence airflow through narrow bronchioles and high pitch sound can be heard on chest auscultations.
- **Hyper mucus secretion:** Present in the respiratory tree are hair like projections called Cilia which functions in trapping and expectorating foreign debris during inhalation Cigarette smoking causes damage to these cells making the mucosa, submucosa and glandular tissues to be infiltrated with inflammatory cells thus causing increase mucus production.
- **Cough.** It is an essential defence mechanism to protect the airways initiated by irritants receptors in response to dust, chemical and inflammatory

response and mechanical stimuli such as foreign body in the lungs. In COPD, productive cough is recurrent and usually prolonged caused by increased activity of inflammatory cells (goblet cells) in the bronchial wall.

- **Dyspnoea:** It is one of the characteristic of COPD and most patients are thought to go for medical check-up due to breathlessness. Difficulties in breathing leads to decrease oxygen to the lungs and thus affecting tissue perfusion(hypoxemia) and increase carbon dioxide concentrations in the lungs (hypercarpnia)

2.2 Causes of COPD

Smoking

Although there are other risk factors associated with COPD such as Genetic makeup and environmental conditions, Cigarette smoking is the primary risk factor in the development of COPD. People who smoke pipe and cigar are at risk of developing COPD though the risk is less than for cigarettes. It has been estimated that 12.5% of current smokers and 9.4% of former smokers have COPD. Additionally, it has been estimated that 20% of smokers will develop progressive COPD (Parker et al, 2012)

Air Pollution

It is thought that Air pollution is to a certain degree involved in the development of COPD. It is shown that atmospheric pollution plays a role in sputum production, breathlessness, and reduced lung functions. Indoor air pollution from fuel used in cooking especially in the developing countries is identified as risk factors of COPD (Parker et al, 2012).

Occupation

Parker et al (2012) explain that occupations that expose the individual to inhaling agents such as coal, dust, grains, mineral dust and chemicals cause COPD. However, cigarette smoking increases the risk of lung damage caused by some of the agents.

2.3 Signs and Symptoms of COPD

The following signs and symptoms according to Han et al (2016) have been associated with COPD:

Difficulties breathing

Chest tightness

Wheezing

Productive cough especially in the mornings

Impaired exercise tolerance

Frequent winter chest infections.

2.4 Diagnosis of COPD

History Taking: Diagnosis of COPD is based on signs and symptom, past medical history, family history, and test results. The Doctor may ask questions related to life style, smoking habits (a patient with long history of cigarette smoking is prone to developing COPD), contacts with lung irritants, air pollution, chemical fumes or dust (Sethi et al, 2006).

The following tests are important in the diagnosis of COPD:

Chest X-ray: should always be done because many other medical conditions have features similar to COPD and so need to be excluded (Sethi et al, 2006).

Lung Function Test: This measures how much air a patient can breathe out and how fast he or she can do that. How well your lungs deliver oxygen to your blood (Sethi et al, 2006)

Spirometry: According to Sethi et al (2006), spirometry is the best diagnostic measure for COPD. It is an office test used to monitor how well the lungs work. It is done by measuring how much air an individual can inhale, exhale and how quickly he or

she can exhale. It is also a diagnostic tool for asthma and may also be used periodically to monitor the progress of a specific treatment. If the measurement is abnormal, a bronchodilator is administered through an inhaler and the test repeated. In people with asthma, the test measurements usually return to normal, but the case is different in people with COPD where test measurements may improve only partially. The key measurements in spirometry include:

- **Forced Vital Capacity (FVC):** This is the largest amount of air one can forcefully exhale after taking a deep breath. Normal values depend on the age, height and gender.
- **Forced Expiratory Volume (FEV-1):** This is how much air one can forcefully exhale from his or her lungs in one second. It helps doctor to assess the severity of breathing problems. Lower FEV-1 readings indicate more significant obstruction (Han et al, 2016).

2.5 Management of COPD

According to NICE (2010), the principal goal of a patient care with COPD is to improve quality of life, reduce exacerbations, and improve functional status. Quality care plans are centred toward identification of patient's needs, and preferences, giving the opportunity for informed decisions regarding care options and their treatment.

The ultimate aim of COPD management incorporates ideas that include:

- Reducing symptoms
- Improving exercise tolerance
- Improving quality of life
- Preventing exacerbations
- Satisfying individual patients needs through a standard care
- A steady provision of drugs
- Reducing the progression of the disease

COPD management involves a multi-professional team which include Doctors, nurses, Dieticians, physiotherapists, social workers, occupational therapists, pharmacists

Doctors help in diagnosing and in overall treatment management like transplantation, surgical removal of inefficient part of the lungs leaving the efficient ones. Nurses provide nursing care to the patients, educate patients about the disease condition. Dieticians help draw up dietary plan and ensure patients have a balanced diet. Mental health workers deal with patient's anxiety and depression as a result of the disease. They may provide relaxation techniques and coping strategies. Physiotherapists help in exercises for example using the stairs, short range exercises and pulmonary rehabilitation (Vestbo et al, 2013).

Although COPD is not curable, both Pharmacological and Non pharmacological therapies have been shown to improve survival.

Non Pharmacotherapy

The non-pharmacologic approach to COPD includes a broad range of options for example long term oxygen therapy, strong encouragement for physical activity, suitable referral to pulmonary rehabilitation, dealing with anxiety and depression, nutritional support, Counselling and surgical procedures like lung volume reduction surgery- LVRS (Vestbo et al, 2013; NICE, 2010; Eisenberg et al, 2008)

Pharmacotherapy

Different drugs used in COPD are initiated in a stepwise manner.

All patients with COPD should have a reliever inhaler which acts as a bronchodilator (short acting bronchodilator).

Individuals with persistent COPD should have a preventer inhaler on a daily basis (long acting bronchodilators).

In frequent exacerbations and more advanced diseases, patients are provided with inhaler steroids (NICE, 2010; Eisenberg et al, 2008).

3 ROLE OF THE NURSE IN COPD MANAGEMENT

Due to the increasing morbidity and mortality rate of COPD worldwide, there is a pressing need to develop innovative COPD management models. In this context, nurses are uniquely positioned to make a substantial contribution as they are often the first point of contact for patients and are actively engaged throughout the disease management process, frequently providing palliative care (Reid et al, 2012).

The nursing role in COPD, and essentially in all chronic diseases, is becoming increasingly important and is characterized by continuity of care. Nurses are involved in the management of COPD at all stages, from prevention to provision of end-of-life care within a variety of settings, both in the community (including patients' own homes and family practice) and hospitals. Nurses, according to Wright et al (2004), often play a key role in new care models based on different types of telemedicine support. Nurse-led consultations and disease management interventions are important interventions which enable nurses to provide, complement, or extend the care delivered by doctors.

Traditionally, nursing care has been characterized by a holistic approach towards disease management. In COPD, nurses have been involved in delivering non-pharmacological interventions aimed at reducing symptoms and improving the quality of life of patients - such as smoking cessation, increased physical activity, and pulmonary rehabilitation. The increase in the prevalence of chronic diseases has led to the development of more comprehensive and multimodal approaches, combining some or all of these areas of traditional nursing care with patient education and mentoring interventions aimed at improving patient self-efficacy and enhancing long-term health status (Reid, 2012).

It has been suggested that comprehensive nursing practice addressing the needs of patients with COPD could be beneficial for patients and their families. As COPD has a profound impact on both patients and their families, is complex and characterized by fluctuating symptoms, the education of families is extremely important for the effective management of this condition (Wright et al, 2004).

Nurses have consistently shown a positive contribution in delivering the hospital-at-home and early discharge schemes for COPD. Under these schemes, patients with acute exacerbations are cared for at home by a specialist respiratory nurse with the support of a hospital-based multidisciplinary team. According to Reid et al (2012), these interventions are particularly important considering that COPD exacerbations are one of the most common causes of hospital admission and are responsible for an increased demand of hospital beds. Two systematic reviews evaluating the efficacy of hospital-at-home care in patients with acute COPD exacerbations have shown that treatment of these patients at home resulted in a numerically reduced or unchanged mortality rate when compared with hospital inpatient care (Nyberg et al, 2012; Reid et al, 2012). This suggests that patients with acute exacerbations can be safely and successfully treated at home with support from respiratory nurses. In addition, discharge support and follow-up interventions, based on visits by nurses aimed at reinforcing education and promoting compliance with therapy, have been shown to be useful in shortening hospital stay.

Nyberg et al (2012) explained that good patient preparation is needed for accurate spirometry and, as it becomes a more routine test in both primary and secondary care, nurses working with COPD patients need to understand why and how it is carried out. Patients tend to dislike spirometry as it is very hard work and often induces coughing. A sympathetic approach is needed while ensuring that the patient blows to his/her maximum ability.

4 SMOKING CESSATION

Smoking represents a significant public health burden to individuals, communities and healthcare systems across the world. Even though the burden of disease resulting from smoking, including mortality, is most prominent in low and middle-income countries, it is also a problem of great concern in developed countries. According to the World Health Organization's estimate (2013), six million people die from smoking related causes yearly. Smoking is associated with increased risk of a number of diseases such as lung, oral pharyngeal and breast cancer.

The major risk factor for developing COPD is cigarette smoking. About 90% of deaths for COPD are being attributed to cigarette smoking. Therefore, smoking cessation is the ultimate treatment for slowing down the progression of the disease (Qureshi, 2014).

Smoking cessation is the most important intervention and the one with the greatest capacity to influence the natural history of COPD in those sufferers who smoke (GOLD, 2014). Smoking cessation has been proven to slow progression of COPD (even in severe COPD) and improves survival (Qureshi, 2014). According to a study carried out by Parker (2011), smoking cessation reduces the accelerated rate of lung function decline, maximises symptoms of cough and sputum, and thus reduces COPD exacerbations. It is associated with a modest increase in FEV1 (Parker, 2011).

4.1 Smoking Cessation Interventions

Both pharmacological and non-pharmacological interventions exist to help people stop smoking (Qureshi, 2014).

Pharmacological Interventions

This can be divided into two broad groups: Nicotine Replacement Therapy (NRT) and Non Nicotine Replacement Therapy (non-NRT). These are therapies that help patients quit smoking. It is important to note that the first-line medications with an

established record of efficacy in smoking cessation include both NRT and Non-NRT, and not just one of these.

Nicotine Replacement Therapy (NRT)

NRT involve methods used to deliver Nicotine to the body other than smoking, so as to minimise withdrawal symptoms that come about as a result of smoking cessation. According to Qureshi (2014), NRT include:

- **Nicotine transdermal patches:** these are patches that are applied on the skin, and release nicotine to the body through the skin.
- **Nicotine gum:** this is a gum that when chewed delivers nicotine to the body.
- **Nicotine nasal spray**
- **Nicotine inhalers**
- **Nicotine lozenges:** these release oral doses of fast acting Nicotine to minimise cravings.

Nicotine replacement therapy (NRT) is available over the counter and delivers a fixed dose of the drug over 16 to 24 hours. It has been reported that NRT almost doubles the likelihood of smoking cessation as compared to no therapy at all (Masefield et al, 2016)

Non Nicotine Replacement Therapy

- **Bupropion SR.:** this is an antidepressant that reduces nicotine withdrawal symptoms and cravings. It blocks the reuptake of dopamine and nor epinephrine, which is believed to be the mechanism behind its effect on smoking cessation. In combination with Nicotine Patch, Bupropion significantly increases long term cessation rates as compared to the patch alone. However, patients with history of seizures and uncontrolled hypertension are not allowed to take Bupropion SR (Qureshi, 2014).
- **Varenicline:** this is a partial nicotinic acetylcholine receptor agonist. Its smoking cessation effect is achieved by relieving nicotine craving and

withdrawal symptoms as well as blocking the nicotine receptors, hence preventing the dopamine release which is associated with nicotine withdrawal. Varenicline has been reported to be the most effective of the available pharmacological treatments for smoking cessation (Parker et al, 2012). Patient's preference, previous experience, side effects and level of scientific evidence should be considered when prescribing a smoking cessation pharmacotherapy.

It has been proven in a systematic review and meta-analysis carried out by Wu et al (2006) that NTR, Bupropion, nortriptyline and Varenicline all provide therapeutic effects that assist in smoking cessation

4.2 Non Pharmacological interventions

The National Institute for Health and Care Excellence in 2013 listed the following pharmacological interventions:

Individual Behavioural Counselling: Individual behavioural counselling involves scheduled face-to-face meetings between someone who smokes and a counsellor trained in smoking cessation. Typically, it involves weekly sessions over a period of at least 4 weeks after the quit date and is normally combined with pharmacotherapy.

Group Behaviour Therapy: Group behaviour therapy involves scheduled meetings where people who smoke receive information, advice and encouragement and some form of behavioural intervention (for example, cognitive behavioural therapy). This therapy is offered weekly for at least the first 4 weeks of a quit attempt (that is, for 4 weeks following the quit date). It is normally combined with pharmacotherapy.

Self-help Materials: Self-help materials comprise any manual or structured programme, in written or electronic format, that can be used by individuals in a quit attempt without the help of health professionals, counsellors or group support. Materials can be aimed at anyone who smokes, particular populations (for example, determined by age or ethnic group) or may be interactively tailored to individual need.

Telephone Counselling and Quit Lines: Telephone counselling and quit lines provide encouragement and support over the telephone to anyone who smokes who wants to quit, or who has recently quit. Counsellors can call the client (a proactive service) or the client can call the service (a reactive service).

Mass Media: Mass-media campaigns combine multiple types of media, such as TV, radio and national newspaper advertising. They can be used alone to encourage and support quit attempts or combined with other activities at local, regional and national levels.

The National Institute for Health and Care Excellence (NICE, 2010) guidelines confirm that a combination of both Pharmacological and non-pharmacological therapies is more effective than just one of these.

4.3 Role of the Nurse in Smoking Cessation

Nurses remain key to providing individuals with the help and support necessary to quit smoking and minimise the possibility of relapse. Nurses in the primary care and/or outpatient settings have a special opportunity to address smoking cessation since only about 39% of smokers ever receive counselling regarding smoking cessation from their doctors, according to Malucky (2010). A Nurse's intervention to help a patient quit smoking may be the most important influence on their health. In a study carried out in 2009, Mitchell, Brown, and Smith found out that when a patient is educated by a nurse, he or she is more likely to attempt quitting as compared to patients not counselled by a nurse (Chaney & Sheriff, 2012). Nurses will not only come across clients who are motivated, but also individuals who are ambivalent or not interested in cessation. Therefore, a detailed understanding of the process of smoking cessation is required to guide interventions, and refer patients to appropriate services. (Masefield et al, 2016).

The nurse can counsel the patient on using cigarette substitutes, such as chewing gum, hard candy, or bite-size snacks, nicotine replacement therapy. The patient can also be prepared adequately for nicotine withdrawal symptoms, such as irritability

and headache. The Nurse should also remember to inform the patient of weight gain after smoking cessation because nicotine is an appetite suppressant (Malucky, 2010)

The nurse can help identify stressful events before they occur if the patient smokes mostly as a stress or anxiety reliever, and can recommend a substitute way of relieving anxiety such as yoga or bicycling. It is important to set up a precise follow-up system with regular telephone contact to discuss progress and any difficulties encountered by the patient (Han et al, 2016).

Mitchell et al (2009) have explained that follow-up appointments with the Nurse should consist of verification and encouragement regarding improvements in the patient's blood pressure, serum cholesterol, and peripheral oxygen saturation. It will also be very helpful to set up a network of patients who have been successful at smoking cessation and are willing to be peer counsellors for patients who currently are attempting to quit (Han et al, 2016).

Nurses assist the patient in identifying an accessible social support system. The nurse has to understand the difficulty of smoking cessation, and therefore, no patient should be judged for past failed attempts (Mitchell et al, 2009).

Smoking cessation needs should be discussed consistently at every visit because the nurse understands that a smoker will require multiple recommendations to quit smoking and multiple quit attempts before becoming smoke-free; therefore, the nurse listens and is compassionate to patients and is also able to discuss with the patient the obstacles and fears that he or she has in quitting. The nurse can appeal to a patient's desire to save money, develop his or her self-esteem/mental health, enhance his/her appearance, or be an example for any children (Malucky, 2010).

Outlined below are ways the Nurse can promote smoking cessation according to Han et al (2016).

The 5 R'S

Relevance: Encourage the patient to consider the benefits of quitting, that is social, health and economic risks of tobacco use

Risk: Identify the negative consequences of continued use, personal, family, health risks and the financial cost

Rewards: Discuss the benefits of stopping tobacco use

Roadblocks: Identify barriers to quitting and possible solutions. That is reviewing past quit attempts and coping skills

Repetition: Repeat the motivational intervention at each visit to help individuals commit to partial or complete cessation.

5 RESEARCH AIMS AND OBJECTIVES

Smoking in COPD patients is a major healthcare challenge today. Irrespective of the significant advances in knowledge about the negative effect smoking has on COPD, current interventions to support smoking cessation in patients with COPD have not been as successful as expected. These cessation interventions therefore have to be enhanced, and better strategies put in place for improved effectiveness. For this to be achieved, it is important to take into consideration and have a clear understanding of the patients' perspective regarding smoking and smoking cessation in relation to this disease.

This review is therefore **aimed** at enriching and extending professional understanding of the various reasons why smokers diagnosed with COPD find it difficult to quit smoking even after being advised that smoking cessation will significantly improve their situation.

Objectives

To identify the relationship between smoking and COPD

To discuss the benefits of smoking cessation for COPD patients

To discuss available smoking cessation interventions

To identify barriers to smoke cessation in COPD patients

Research question

Why do patients with COPD still continue smoking irrespective of their diagnosis and advice to quit smoking?

6 SYSTEMATIC LITERATURE REVIEW AS A RESEARCH METHOD

Systematic literature review is a research method that involves the collection and critical analysis of multiple research studies. It uses systematic and explicit methods to identify, select, critically appraised and analyze data from multiple papers in order to answer a clearly formulated question. A systematic literature review can either be used to search background information for an original study, or it can be used to form a study of its own. Through a systematic literature review, information can be drawn together from several sources, and summarized. This way, it becomes possible and easier to compare pieces of information collected from several sources, and seen in a new context as a whole, rather than looking at a small piece of a bigger picture (Aveyard, 2010).

Cronin, Ryan & Coughlan in 2008 described the method as a process that builds up cumulatively. In other words, each phase of the process is carefully documented based on the previous one. According to Cronin, Ryan & Coughlan (2008), using a systematic literature review has three goals; minimizing bias caused by cherry-picking the data; ensuring equal weight for each separate piece of literature; and to combine information so as to effectively make it useful in practice. Cronin, Ryan & Coughlan (2008) went further to advocate that evidence based practice in health care can be encouraged if systematic literature review is used and results implemented.

Phases of a systematic review of literature

Elo and Kyngäs (2008) described six phases of systematic literature review research process; planning, developing a research question, searching for literature, choosing literature, evaluating the quality of literature and analyzing presented data.

Planning: This phase involves the planning and description of the research process. It is essential for all the phases to be thoroughly explained because the process has to be transparent and possible replicable (Elo and Kyngäs, 2008). The target population and the justification of the study should be identified by the re-

searcher. It is also important to verify if a literature review has previously been carried out on the same or related topic. It is easier to move to the next phase when all these are clear to the researcher. The plan for this bachelor's thesis was done in November to December 2015 and the research was carried out following this plan. During the search for data, relevant studies were found about the subject of the research but no literature review was identified that directly matched the research topic. A few literature reviews were identified with subject areas relating to but not directly about the topic. In this case, only qualitative data directly relevant to the research topic was considered for this review.

Developing a research question. This phase involves limiting the subject of the study by formulating a clear and focused research question. Limiting the topic can be based on for example target population, type of intervention, types of outcomes that are of interest (Cronin, Ryan & Coughlan, 2008). More than one question can be formulated for a research. It is very important to carefully plan the research questions because they cannot be changed during the research process. Changing a research question in the middle of a research process will mean starting the research from the beginning (Elo and Kyngäs, 2008). One research question was formulated for this review.

Search for literature: Databases can be used to search for literature, but because these databases may not cover all the relevant literature, the search can be enhanced by using other search like reference search, manual search and grey literature search. In **Reference search**, references are selected from bibliographies of the papers selected in the search process, and then the title of the article is browsed. The result of the search is then screened and relevant studies used for the review. **Manual search** means that articles relevant to the research topic are hand searched or manually looked for. These can be from reading Journals and books, Library visits, contacting institutions and authorities etc. Unpublished studies, officials' reports and other material which do not meet the criteria for being an original, published study, are all components of **grey literature**. It may contain valuable information, but is a lot more difficult to access than original study (Cronin, Ryan & Coughlan, 2008). In order to avoid publication bias, it is important to search for literature from different sources, including reference lists, grey literature and conducting a manual

search as well. (Easterbrook, et al, 1991). Language bias can also be avoided by carefully selecting search words, and conducting the search in as many languages as possible, (Elo and Kyngäs, 2008).

Choosing literature: It is important for two researchers to do the search and then choose literature independently to avoid bias that result from researcher's subjective opinions and thoughts (Elo and Kyngäs, 2008). The selection should be systematic and it should be based on a set of previously selected exclusion and inclusion criteria. They should be a documentation of items chosen and those left out, and this should be presented in a table outlining the reason why the items were included or excluded (Cronin, Ryan & Coughlan, 2008).

The inclusion and exclusion criteria for this literature review were clearly outlined and adhered to. As each search in the various databases was conducted, the number of items found was documented and an explanation for inclusion and exclusion given on a general level, not individually for each excluded or included item.

Evaluating quality of literature: Critically reading literature and assessing its quality can be a very complex process. However, there are a number of guidelines that help with the process. One important stage in the process of publication is **peer-review**. This act as a filtering stage where by only works of sufficient quality are published. Critically evaluating a research article involves asking a series of questions: Is the purpose of the study clear and well defined? And have the methods been clearly and appropriately described? Have the results been presented in the format that is clear and understandable? Is the interpretation of the results consistent with the results presented? (Khan et al, 2003). The research should be valid not only by its content, but also by the reliability of the method in which the research was done, and the results (Cronin, Ryan & Coughlan, 2008).

Analyzing Data: this is a process that aims at reducing and making sense of an enormous amount of information from various sources, so that ideas that shed light on a research question can surface. When carrying out a literature review in order to conduct a preliminary research for a bigger study, data analysis helps to limit and specify the subject. (Cronin, Ryan & Coughlan, 2008). There are a number of methods that can be used to analyze data. The method used in this review is Inductive

content analysis, and this involves the categorization of data for the purpose of classifying, summarizing and tabulating. This method has been described in more details in chapter 8.

Presenting results: according to Elo and Kyngäs (2008), the final size, or extend of the data is seen only after literature has been chosen and the quality of the chosen items evaluated. The data is then analyzed and presented in a way that will systematically expose all the results to the reader of the study, in concurrence with explaining all the various phases of the search process (Egger, Dickersin & Smith, 2001).

7 DATA COLLECTION AND ANALYSIS IN THIS REVIEW

This study was a Systematic review of available literature to answer the research question. The principal research question sought to identify the factors that COPD patients perceive as barriers to smoking cessation. For the purpose of this review, smoking was limited to Tobacco products. Studies that were selected for this review were identified through computerized search of databases.

7.1 Databases considered for data collection

A search for relevant literature for this review was performed from November 2015 to April 2016. The initial search was performed in November 2015, and then repeated in April 2016 for new references. The databases considered for collecting material used in this review were those databases that contained articles related to nursing science and practice. These databases had to contain all possible material related to the topic of this review. Due to limited resources, only those databases that had free access were used.

The databases that were helpful in the collection of data for this review were PUB-MED, Sage Journals, CINAHL, and CINAHL with full text, Academic Search Elite, Ovid Medline, Ovid with full text and Joanna Briggs Institute EBP Database. EBSCO Host database was used to simultaneously search the following Databases: Academic Search Elite, CINAHL and CINAHL with full text. Medline database was also used to simultaneously search through Ovid full text, Joanna Briggs Institute EBP database and Ovid Medline. Pub Med and Sage databases were searched individually.

The mentioned databases were accessed through the Seinäjoki University of Applied Sciences' remote access to electronic sources by the use of student identification number and password. The login details were entered on the school's website in order to access the Seinäjoki Academic Library website. Through the "Finding Information" and "e-resources" links, databases for nursing students could be accessed and the above databases were then searched by the use of keywords. Other

databases that were searched but no relevant materials found were Cochrane Library, Sumsearch and REHABDATA.

7.2 Key Words

Search terms were entered in the search box of selected databases to identify relevant materials. These terms were entered both individually and as a combination of words: Chronic Obstructive Pulmonary Disease; COPD; Chronic Obstructive Airways Disease; Emphysema; Chronic Bronchitis; Chronic Airways Obstruction; smoking; smoking cessation; Cessation barriers. Quit/give-up/stop smoking was also used as an alternative for smoking cessation to get more materials.

7.3 The Systematic data search process

The search strategy used for this review aimed to find published original studies. The Search was performed by two reviewers, first independently and then together. Selection of papers for detailed review was based on keywords, titles, abstracts and scanning full text of selected papers.

A three-step search strategy was used to search for relevant material from the selected databases.

First, key words were entered in the selected data bases individually and as a combination of words, for example "COPD", then "COPD and Smoking Cessation. Next filters were applied in order to limit the search and the number of results returned. The Filters applied were: Free full text, language (English only), Publication year (2006-2016), Age (all adults, and the customized age was 30years and above), Publication, Scholarly/Peer reviewed. The results of the search were then scanned through and papers selected based on an analysis of text words contained in the titles and of the index terms used to describe article.

Secondly, careful screening of the abstract of selected papers from the initial search resulted to more elimination of papers not directly relevant to this review based on a number of preset inclusion and exclusion criteria.

The third step of the search strategy involved careful and detailed reading of the full text of the selected papers from the second step for their relevance in answering the research question. These papers were **critically appraised** using a critical appraisal tool generated with the help of the Joanna Briggs Institute tool for critically appraising Qualitative research. This tool can be found in the appendix of this review

In order to enhance the database search for relevant literature, a **Reference** search was also performed. This was done by scanning through the reference list of all identified papers for additional studies. The titles of the studies were then entered in the search box of the databases, and these studies identified from the returned results.

7.4 Inclusion and Exclusion Criteria

Inclusion Criteria

Quality: this review considered published studies that are original and peer reviewed.

Publication date: This review considered studies published within the last ten years (2006-2016).

Language: this review included only studies published in English for better understanding and interpretation of data.

Types of studies: this review included qualitative studies related to the research topic.

Types of participants: this review considered studies whose participants were confirmed COPD patients.

Phenomena/intervention of interest: this review included studies whose objective was to investigate the reasons why COPD patients continue smoking even after a COPD diagnosis and Smoke cessation advice. For studies that had an objective different from the above but contained material relevant to the research topic, the

material considered for this review was that which had information about barriers to smoking cessation among COPD patients.

Publication: only original published studies were considered for this review.

Availability: Due to limited resources, this review considered only studies that were available in full text and free of charge.

Exclusion Criteria

Studies excluded were those that did not meet the above inclusion criteria. Table 1 illustrates the inclusion and exclusion criteria used to select data.

Inclusion Criteria	Exclusion criteria
Studies published within the last ten years (2006 onward)	Studies published before 2006
Studies published in English	Studies published in any other language except English.
Peer reviewed	Studies that are not peer reviewed.
Original Research	Non academic articles
Available in full text	Not available in full text
Available free of charge	All studies requiring payment.
Studies whose participants are COPD patients who smoke	Studies related to smoking cessation whose participants smoke but are not COPD patients
Qualitative studies related to the research topic	Non qualitative studies (for example Randomized controlled trials, etc)
Relevant to Nursing practice	Not relevant to nursing practice

Table 1 Inclusion and Exclusion Criteria for the review

7.5 Assessment of Methodology Quality

Qualitative papers selected for retrieval were assessed by two independent reviewers for methodological validity prior to inclusion in the review using a critical appraisal form developed using a standardized critical appraisal instrument from the Joanna Briggs Institute Qualitative Assessment and Review Instrument (JBI-QARI). Disagreements that arose between the reviewers were sorted through discussion.

7.6 Data found from Search Process

After entering the keywords on the selected databases without applying any filters, a total of 9035 citations were returned. When the filters were applied to limit the search, a total of 8504 citations were excluded, resulting to a total of 531 citations to be scanned. After screening through the titles and abstracts of the citations and applying all the inclusion and exclusion criteria, a further 495 citations were excluded leaving 36 articles to be critically appraised. A further 24 articles were excluded after the full text of these 36 articles were scanned. So finally at the end of the inclusion and exclusion process, 12 papers were found to be relevant in answering the research question as illustrated on Figure 1.

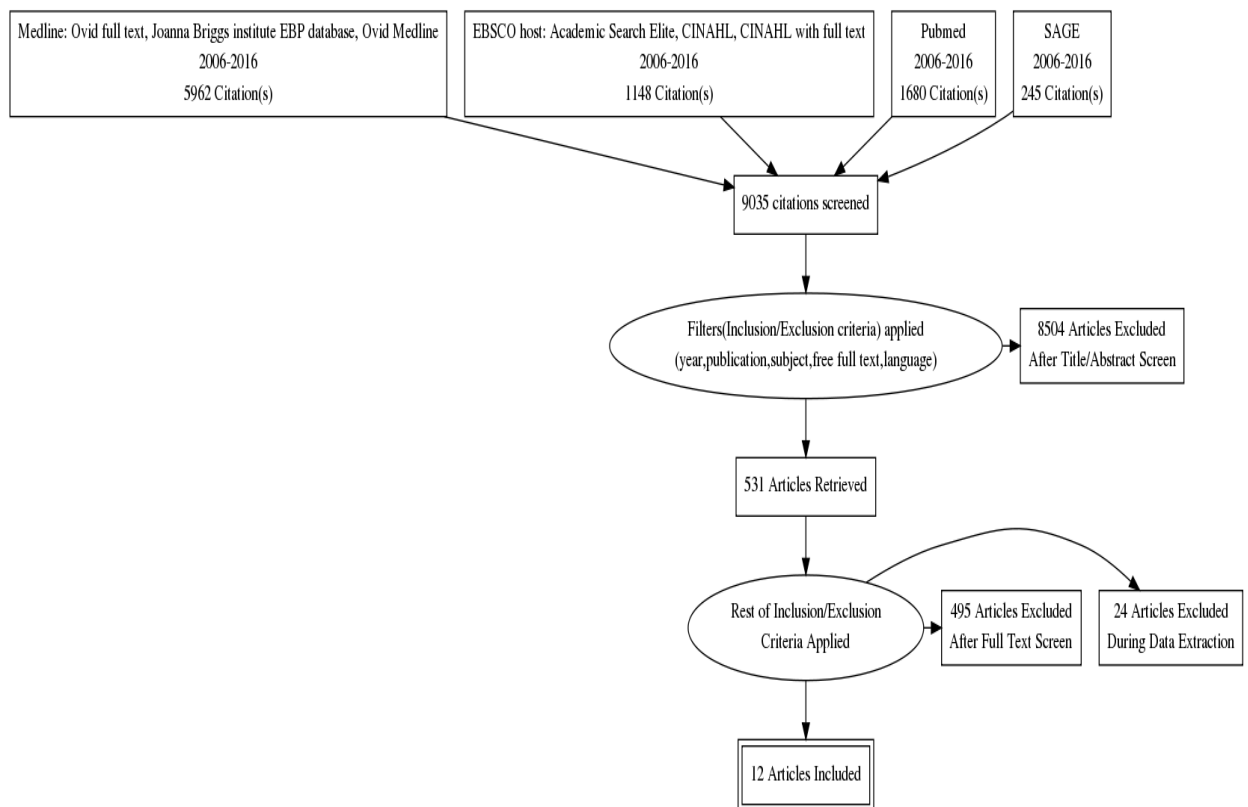


Figure 1: the General Inclusion and exclusion process of Data Search

EBSCO Host: This database was used to simultaneously search Academic Search Elite, CINAHL and CINAHL with full text. Keywords were entered as a combination of words linked by the word “AND”, for example Chronic Obstructive Pulmonary Disease AND Chronic Bronchitis AND Smoking AND Smoking Cessation. The preliminary search without the use of filters returned 1148 citations. When filters were applied (free full text, publication year, language, peer reviewed, publication, age, and subject), this returned 153 citations, excluding 995. After screening the titles of the citations, and their abstract, a further 143 citations were excluded, returning 10 citations.

The full texts of these papers were read, and all inclusion and exclusion criteria applied. A further 6 citations were excluded, leaving 4 papers which were included for this review. The reference lists of these papers were scanned, and one study was found which was relevant in answering the research question. This therefore led to a total of 5 studies included in this review from EBSCO host database search as shown on Figure 2.

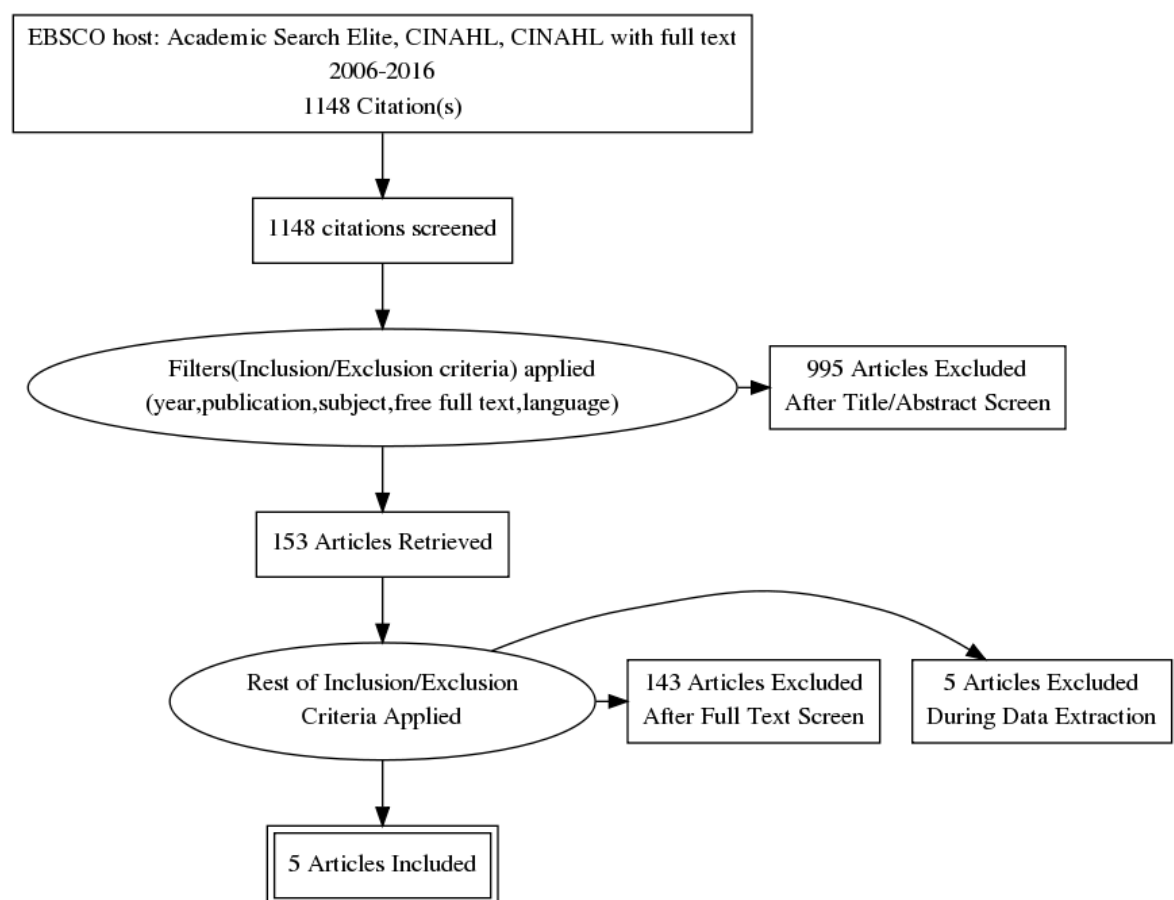


Figure 2 : EBSCO Host Inclusion and Exclusion Data Search Process

Medline: This database was used to simultaneously search Ovid Medline, Ovid with full text and Joanna Briggs Institute EBP databases. Keywords were entered as a combination of words linked by the word “AND”, for example COPD AND Smoking Cessation.

An initial search without filters returned 5962 citations. When filters (Original articles, publication year, humans only, English language, reviewed articles, full text, and subject area) were applied, this returned 100 citations, excluding 5862 citations. After screening the titles of the citations, and their abstract, a further 90 citations were excluded, returning 10 citations.

The full texts of these papers were read, and all inclusion and exclusion criteria applied. A further 7 citations were excluded, leaving 3 papers which were included for this review. The reference lists of these papers were scanned and one study was found which was relevant in answering the research question. So a total of 4 studies were included for analysis in this review as shown on Figure 3.

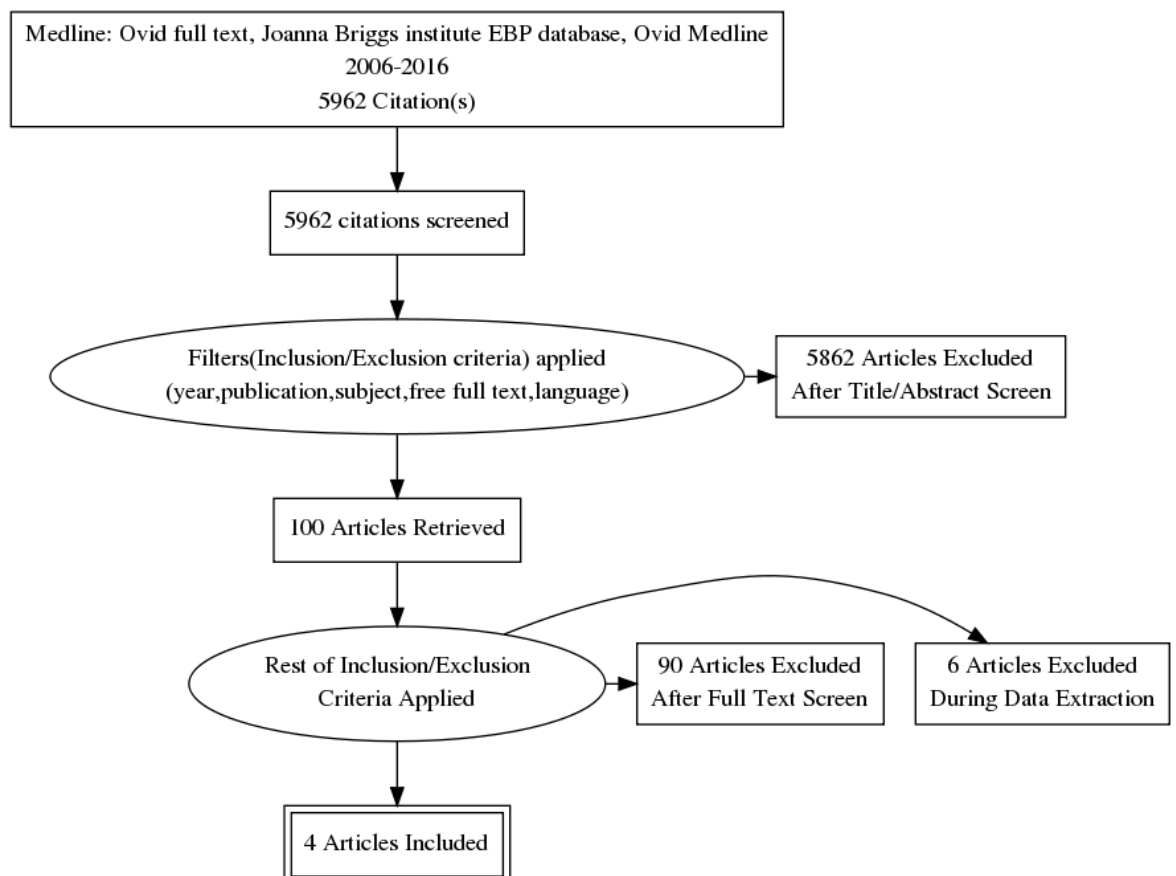


Figure 3: Medline Inclusion and Exclusion Data Search Process

Pubmed: Keywords were entered in this database as a combination of words linked by the word “AND” or “IN”, for example COPD AND Smoking Cessation, Quit Smoking in Chronic Obstructive Pulmonary Disease. An initial search without filters returned 1680 citations. When filters (Original articles, publication year, humans only, English language, reviewed articles, text availability, subject area) were applied, this excluded 1480, returning 200 citations. After screening the titles of the citations, and their abstract, a further 190 citations were excluded, returning 10 citations. The full texts of these papers were read, and all inclusion and exclusion criteria applied. A further 9 citations were excluded, leaving 1 paper which was included for analysis in this review. The reference list of this paper was scanned and no study found relevant in answering the research question. This is illustrated on figure 4.

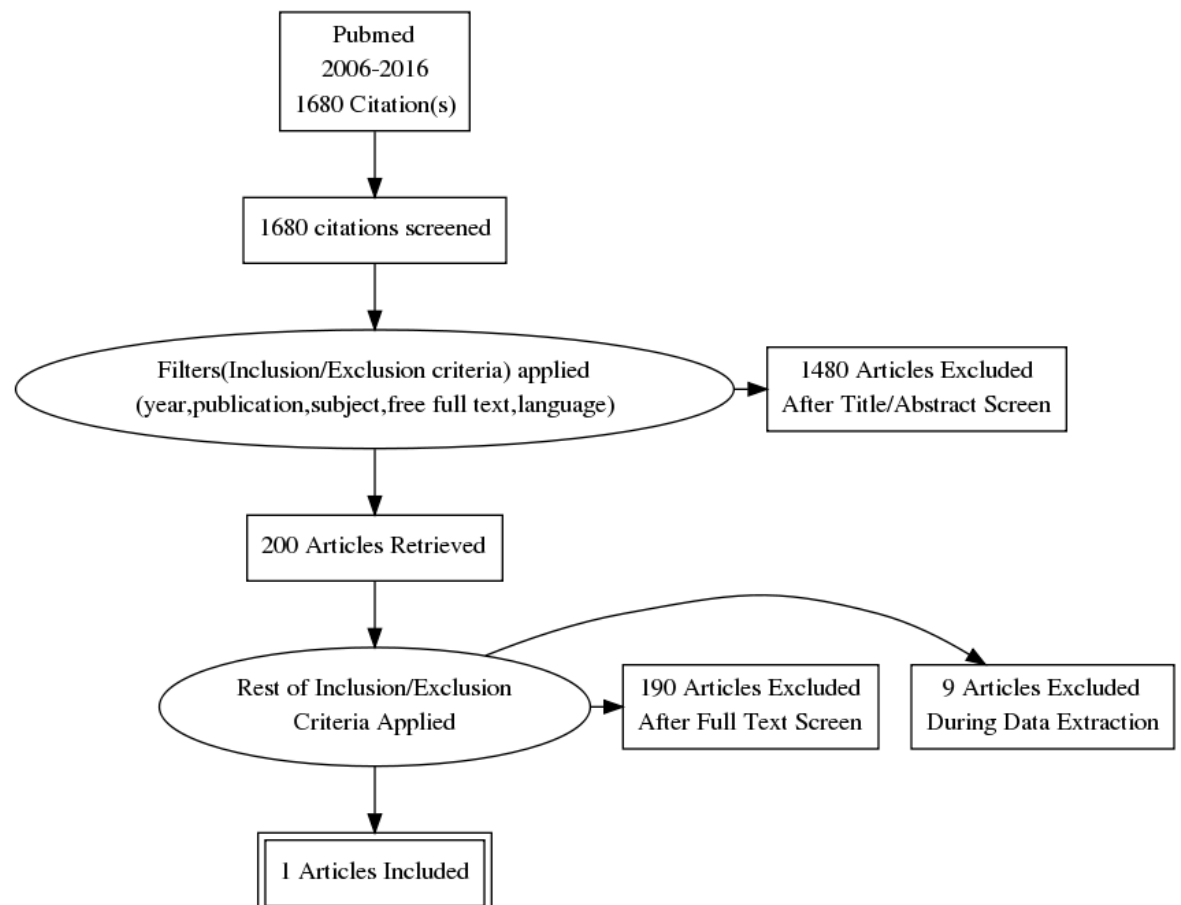


Figure 4: Pubmed Inclusion and Exclusion Data Search Process

Sage Journal: This database was searched using Keywords that were entered as a combination of words. The search phrase used was “Barriers to smoking cessation in Chronic Obstructive Pulmonary Disease”. A preliminary search of this database yielded 245 citations. After screening the titles of the citations, and their abstract 167 citations were excluded, returning 78 Citations, and after screening the abstracts, a further 72 citations were excluded, returning 6 citations. The full texts of these papers were read, and all inclusion and exclusion criteria applied. A further 4 citations were excluded, leaving 2 paper which was included for analysis in this review. The reference list of this paper was scanned and no study found relevant in answering the research question. This is illustrated on Figure 5

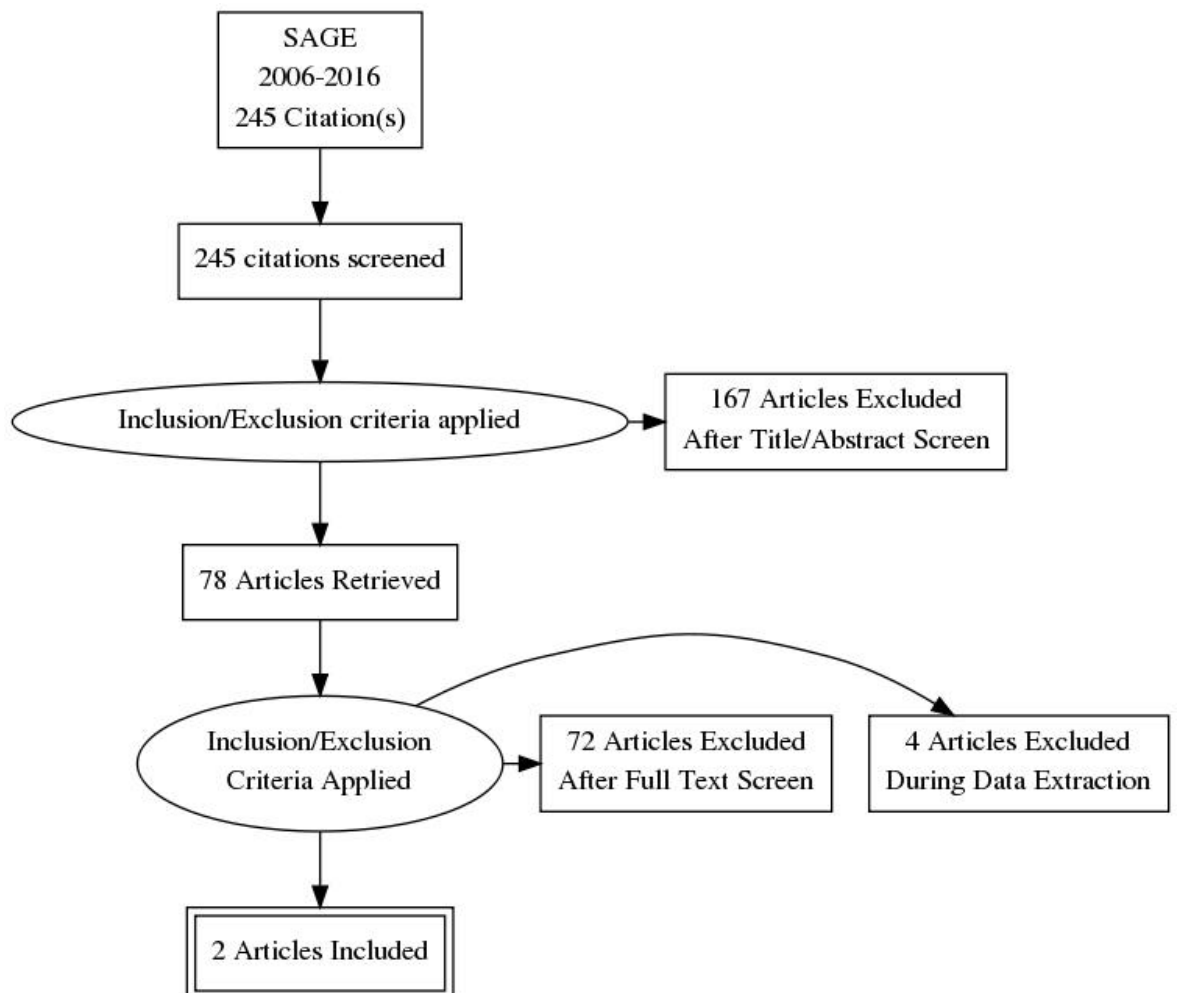


Figure 5: Sage Journal Inclusion and Exclusion Data Search Process

8 INDUCTIVE CONTENT ANALYSIS

Content analysis is a research method of data analysis used to make replicable and valid inferences from data to their context, with the aim of providing new insights, knowledge, a representation of facts and a practical guide to action (Cavanagh 1997). Content analysis can either be done in an inductive or deductive manner.

Inductive content analysis was the method of data analysis used in this thesis. It is one of the currently available qualitative methods used for data analysis and interpretation. According to Elo and Kyngäs (2008), the aim of content analysis is to make simpler, to summarize, as well as to conceptualize a phenomenon. When using an inductive approach to analyze data, the researcher starts by collecting data that is relevant to his research topic. Once this is done, he looks for patterns in the data and then works to develop a theory that will explain the patterns. So the researcher moves from a specific level of focus to a more general level of focus, he starts with a set of observations and then moves from these particular experiences to a more general set of propositions about the experiences (ie. moving from data to theory, or from specific to general).

Through content analysis documents can be analyzed in a systematic and objective way and this is done by grouping information with similar meaning under same category which is then useful for understanding communication (Cavanagh, 1997). Communication in content analysis, according to Kyngäs et al (1998), stems from asking the following questions; who is saying, to whom, what, how and with what consequences (Polit et al Hungler 1995; Kyngäs et al, 1998). The first step in the inductive approach of content analysis is to pick a unit of analysis, and this can be for example a number, a word, a sentence or an idea, based on the data and research question (Kyngäs et al, 1998).

This is followed by a thorough reading of the text, during which the researcher asks questions like what is happening here, why is it happening, and to who is it happening (Dey, 1993). He then writes in the margin what he finds in the text that answers these questions (this is known as open coding) these units, which are simplified ways to convey the original expressions, are then collected into a list to form sub-

categories. The ones with similar ideas or concepts are placed under same subcategories Kyngäs et al (1998). According to Dey (1993), this phase is based mainly on the researcher's subjective interpretation. In the next phase data is abstracted by combining categories into generic categories, and according to Elo and Kyngäs (2008), this phase can be continued and new generic categories formed as far as required.

Finally, a main category results which describes the phenomena under study. The data analysis in this thesis involved reading material extracted from databases based on a set of preselected inclusion and exclusion criteria. EBSCO Host database was used to simultaneously search the following Databases: Academic Search Elite, CINAHL and CINAHL with full text. Medline database was also used to simultaneously search through Ovid full text, Joanna Briggs Institute EBP database and Ovid Medline. Pub Med and Sage databases were also searched for relevant data. The units of analysis used were sentence and part of a sentence. More details of the data analysis process can be found in chapter 9.

9 DATA EXTRACTION AND ANALYSIS

The total number of qualitative research retrieved for analysis in this review was 12. These studies were conducted in the following countries: North Ireland, Sweden, Canada, The Netherlands, Iceland and the United Kingdom (England). Themes and supporting evidence (direct quotes from participants) were extracted from these studies by two reviewers who worked first independently, and then together later to compare and contrast identified emerging themes. The two reviewers carefully read through the full text of the selected studies, examining the descriptive themes and their associated data In order to to determine the emerging themes across the studies.

The unit of analysis used was a sentence “Barriers to smoking cessation” They focused on the exploration of values, meanings, beliefs, thoughts, experiences, and feelings characteristic of the phenomenon under investigation. As they read through, relevant sentences, parts of sentences, and direct quote from participants (supporting evidence) were highlighted. Key words that were used to simplify the message in these highlighted phrases were written down in the margin (coding), and were later used to form subcategories in the data reduction process. These subcategories were then later grouped to form main categories. This then composed the results of the data analysis process.

The plan in this review was to extract and synthesize study findings according to the review question regarding why COPD patients still continued to smoke after diagnosis and advice to quit smoking. It soon became apparent, however, that among the 12 studies selected for analysis, only few study findings addressed the research question directly. The reviewers therefore started from the study findings themselves to conduct a thematic analysis. As they read through the findings, relevant lines were coded and codes created inductively to capture the meaning and content of these lines.

The reviewers then later looked for similarities and differences between the codes in order to group them under respective categories to form a hierarchical tree structure. New codes were created to capture the meaning of groups of initial codes. This

process resulted in a tree structure with several layers to organize a total of 22 descriptive themes. These themes were classified under two main categories: COPD patients who had not made any attempts to quit smoking at all, and COPD patients who had made one or more unsuccessful attempts to quit smoking. Each of these two main categories had 11 themes classified as generic categories. This is demonstrated on figure 6 below.

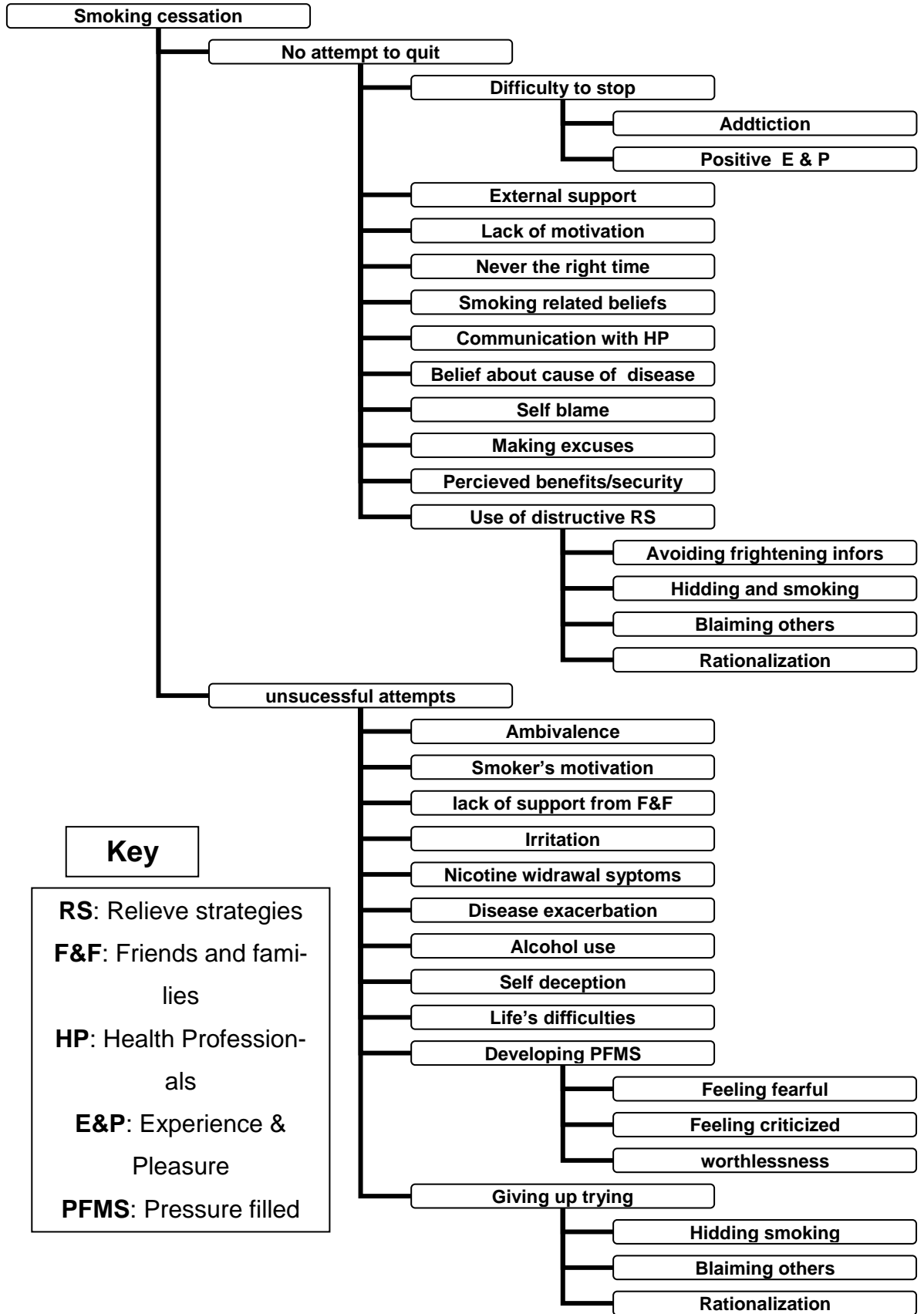


Figure 6: Flow diagram of identified themes

Under the main category of COPD patients who had not made any attempt at all to quit smoking, 11 themes emerged and were classified as subcategories as seen on the figure 7 below

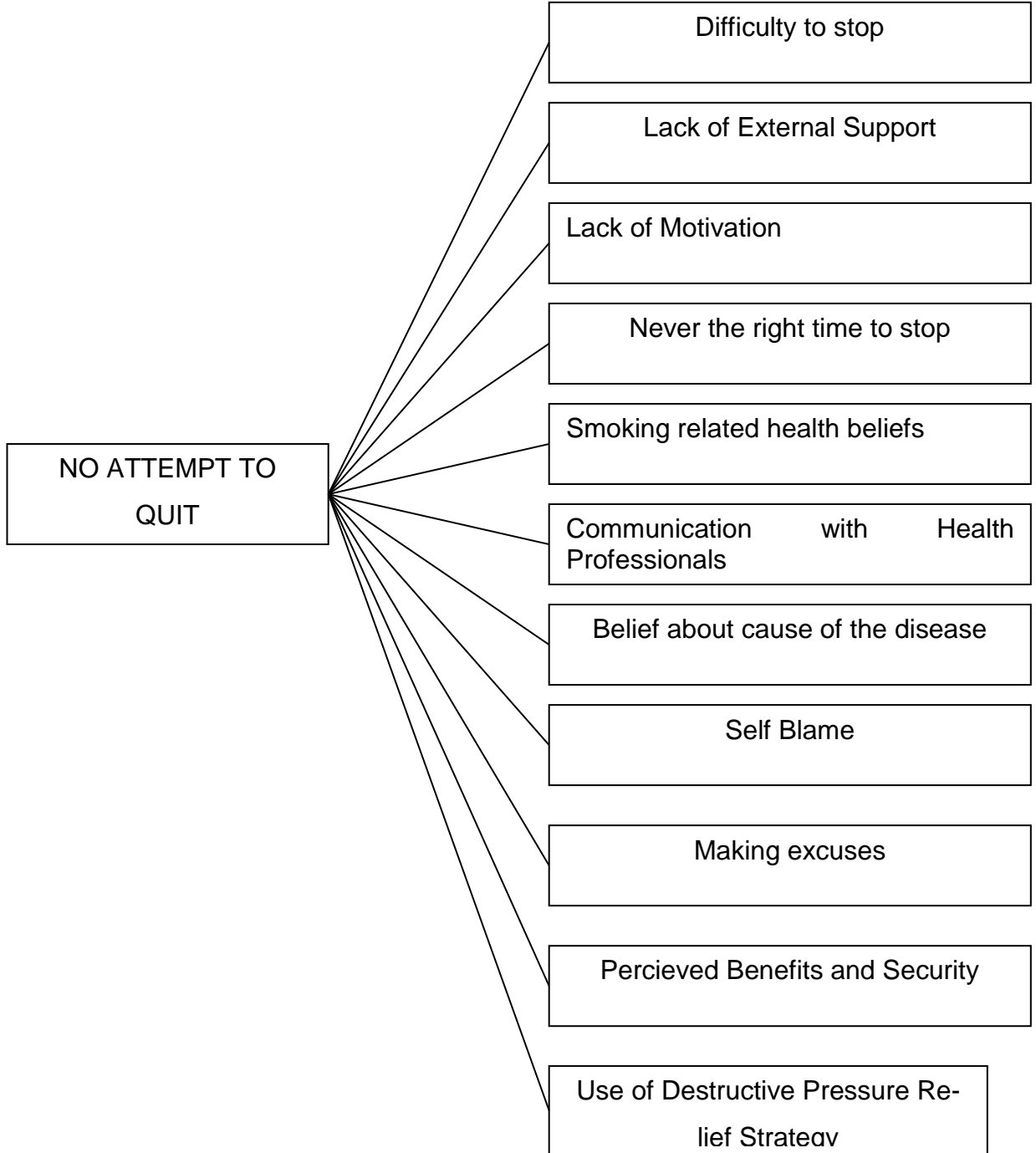


Figure 7: No attempt to quit- illustration of subcategories under this main category

New codes were identified among some already coded themes, and classified under these subcategories as further subcategories. For example, Difficulty to stop smoking was a subcategory under the main category “No attempts to quit smoking” and the participants described what they perceived were the reasons why they found it difficult to stop smoking, so these reasons were classified under the theme “Difficulty to stop” as illustrated by the figure below.

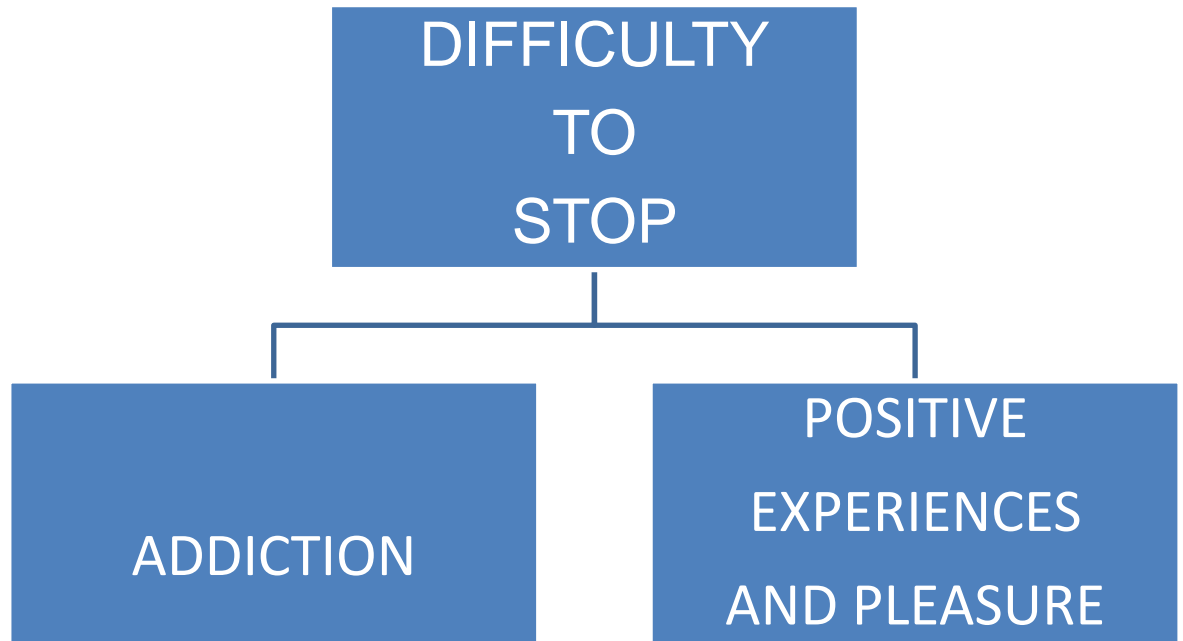


Figure 8: subcategories under Difficulty to stop smoking

COPD patients who had not made any attempts to stop smoking were found to use destructive pressure relief strategies and this emerged as a subcategory theme under this group of participants. These strategies were classified under this subcategory as further subcategories, as illustrated in figure 9 below.

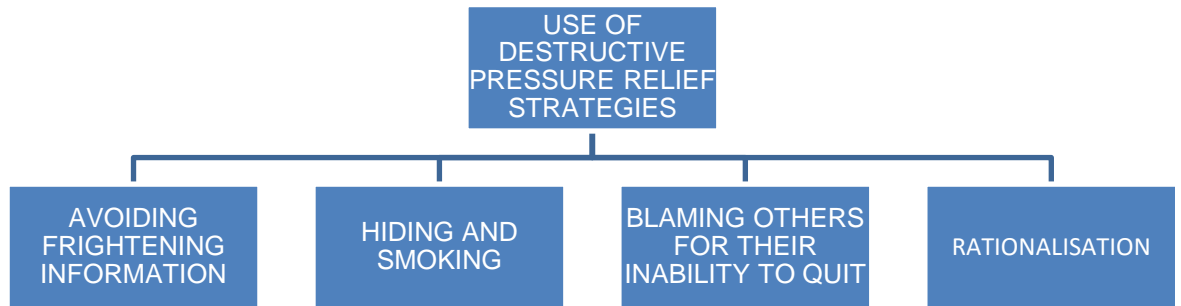


Figure 9: Use of destructive pressure relief strategies subcategories

The second main category comprised those COPD patients who had made one or more unsuccessful attempts to stop smoking. Eleven themes emerged under this category and were classified as subcategories as illustrated on figure 10 below.

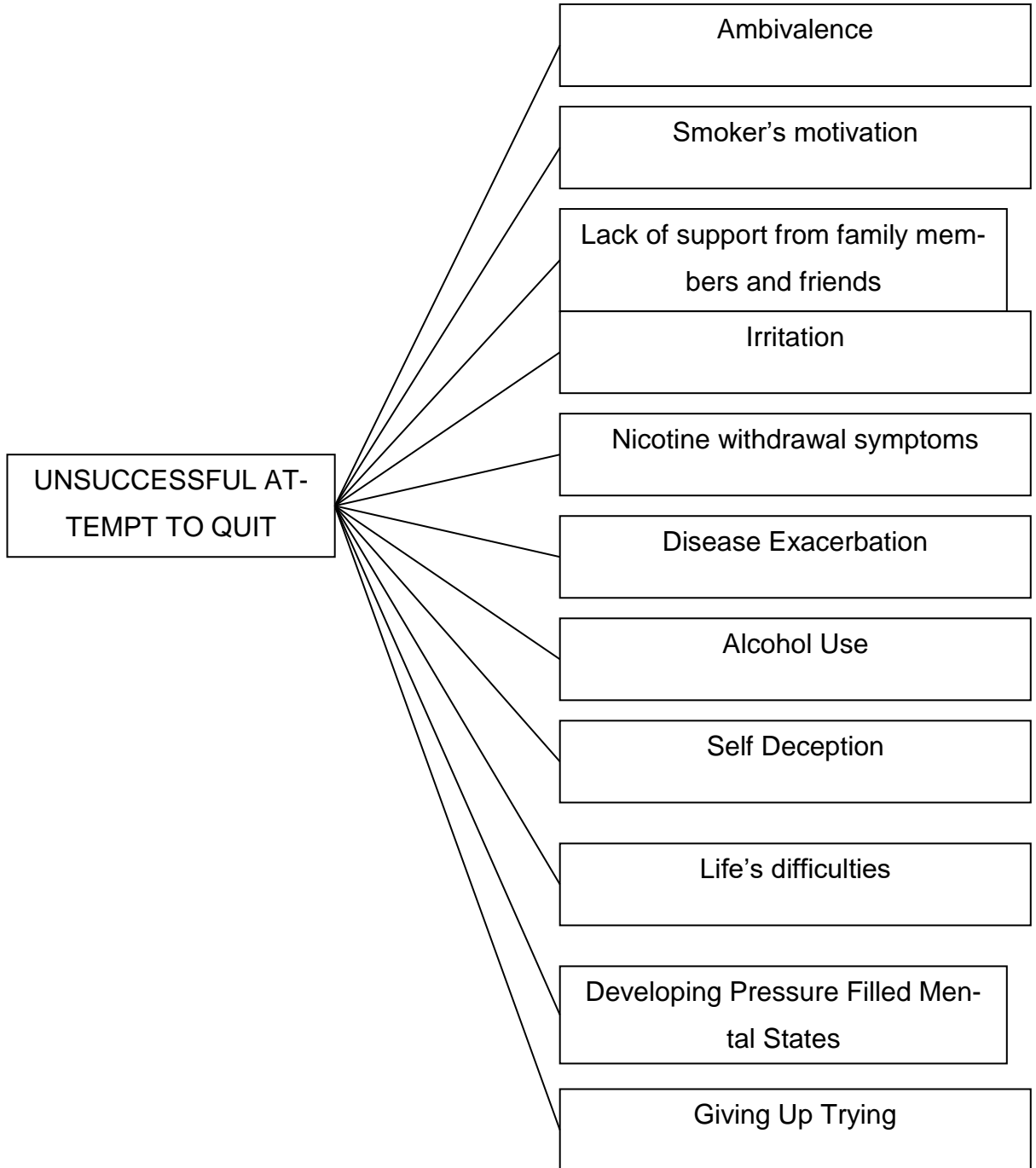


Figure 10: Unsuccessful attempts to quit smoking subcategories

Just as in the first main category, new codes were found under subcategories and these themes were classified under these subcategories as further subcategories, as demonstrated on the figures below

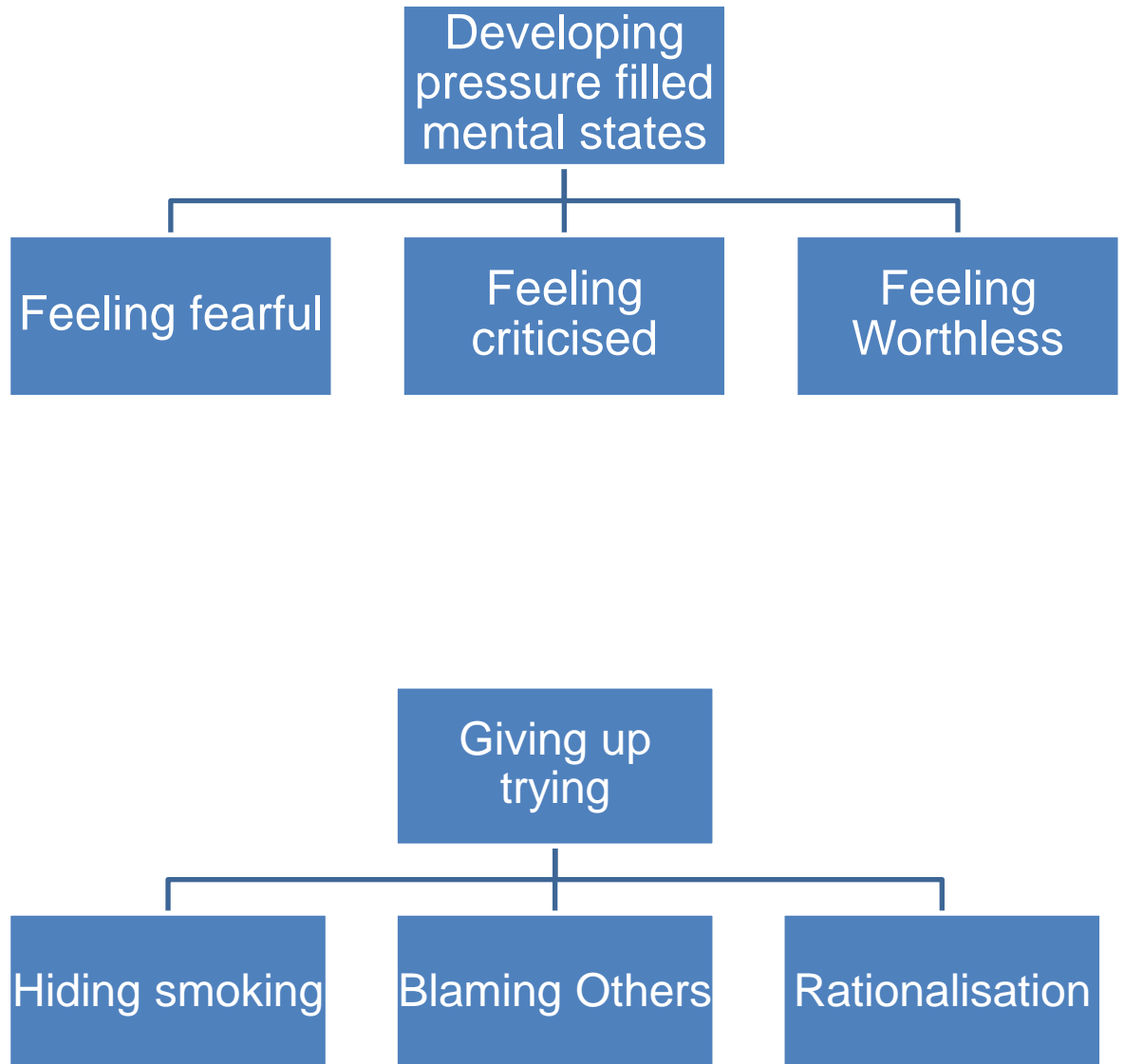


Figure 11: Developing pressure filled mental states and giving up trying subcategories

10 RESULTS AND FINDINGS

Following the data extraction and analysis process, themes emerged that were grouped to form subcategories, and then these subcategories grouped to form generic categories and main categories. The participants in the selected studies were COPD patients who still smoked. During the data reduction process, it was noticed that these participants could be classified under two major groups that made up the two main categories: COPD patients who had not made any attempts to quit smoking at all, and COPD patients who had made one or more unsuccessful attempts to quit smoking.

The total number of themes that emerged was 22, and each main category had 11 generic themes classified under it as generic categories. More themes were found to emerge from some of these generic themes and were further classified under them as subcategories.

10.1 Participants who made no attempts at all to quit

This category composed mainly of participants who still smoke after diagnosis, and had not made any attempt at all to stop smoking.

10.1.1 Difficulty to stop

This theme describes the difficulty of breaking a habitual behaviour. It highlights the diverse circumstances and habits that affect the participants' ability to stop smoking. Difficulty to stop smoking was associated with specific events and feelings that gave positive as well as negative experiences.

Addiction: This is all about nicotine dependence. The most prominent justification for continuing to smoke was addiction. Some smokers reported that the reason it was difficult for them to quit was in their brains, a biological process which explains the urge for smoking that is similar to alcohol use.

“I am giving up on everything that I like, everything I enjoy, just to slouch with the cigarette out here on the balcony, freezing. This is so stupid, but I still do not put it out... I am so addicted”, one smoker said.

The smokers went further to explain that they have control over everything except quitting cigarette smoking. According to what other smokers believed, their bodies needed nicotine because they have smoked for so many years and they were simply addicted to it:

“I cannot quit because I am addicted but I can cut down when I want to”, one smoker said.

Many smokers considered their addiction to cigarette as being a curse, which made quitting even more difficult (Eklund et al 2012).

Because smoking had become a habit, some smokers believed that something terrible will happen to them if they stop smoking.

“I think that if I stop smoking my world would simply collapse” (Masefield et al, 2016).

Some smokers stated that they are controlled by cigarettes, and they expressed anger that smoking had such an effect on them. They went further to explain that they experience an inner voice that urges them to smoke.

“One voice really does not want me to smoke, but the other somehow gains the upper hand” (Nykvist et al, 2013).

Positive experiences and pleasure: Smoking was described as positive experience in the lives of smokers. Some of the studies showed that people often smoke after taking a coffee, when drinking alcohol, after meals and when socializing with friends or co-workers. Stress and pressure at work were also listed as reasons why people would not stop smoking because they find pleasure in it. Some smokers reported that smoking helps them to relax, and also in reducing COPD-related anxiety and stress (Kouvonen et al, 2011, Eklund et al, 2012).

10.1.2 External Support

Smoking cessation should be considered a process where several approaches can be used to enable smokers quit permanently. Most people knew about the availability of support to help them quit but many failed to access because they did not perceive these external supports as beneficiary to them personally. (Lader, 2007). According to Wilson et al 2010, continuous smoking was a barrier for people to access health care. Most smokers described not interested in health care appointments because they thought they were wasting health care professional's time and resources because they felt that they can never stop smoking

10.1.3 Lack of Motivation to Quit

Lack of motivation was also one factor expressed by smokers. Quitting smoking was a personal choice, and therefore it was the person who decided when or if smoking cessation would happen. Internal motivation was stated by some participants as a way of stopping smoking. They needed will power but there was no way they could obtain or maintain the will power. Smokers gave various reasons why they could not find the motivation to quit smoking. Some smokers stated that, despite being fully aware of the health-related risks attributed to smoking, they felt very reluctant to quit because they thought it was too late and their disease was well advanced, so it will make no difference whether they smoke or not.

“The time already passed by - It's hard to change my habit because I'm already old and have the disease” (Poureslami et al, 2015).

Some thought that it was pointless quitting since their disease was incurable and they would still die anyway. Other smokers stated that it was difficult to quit they believed it was impossible to improve their health status by quitting. Some patients who continue to smoke indicated that quitting was futile as they had seen friends give up and then die and they had also seen people who smoked all their lives but never developed the disease (COPD). In fact, they weighed up the barriers to smoking and the cost of quitting.

In one study, one participant described friends who had stopped smoking and their condition became worse as a result of quitting, and who had passed away. He disagreed with the idea that there was a benefit to be obtained from quitting and he went further to argue that quitting would be harmful because it will cause him to be anxious, have more difficulty with breathing and expectoration.

“Friends that smoked the same as me, everyone that I know that stopped, they are all dead and the few that’s left have worse breathing problems than I’ve got so every now and again I’ll have a cigarette because I think it’s in my system all these years and taking it right out your system, you’re doing yourself more harm than good so if you take one, not all the time but if you need it. So when that urge comes on me, I’ll have that one cigarette and you know after I have it, my breathing’s even better” (Kerr et al 2007).

His comment ‘not all the time but if you need it’ showed that he was completely conscious of the harmful effect smoking has. Also, he used the fact that he had reached older age regardless of his disease and life’s hardships to justify why he continued to smoke his, as he further stated.

“That I don’t know if that’s psychological or if it’s just because my system was that used to it. I’m 78 now and I think I’ve done well for 78 for considering all what I’ve come through” (Kerr et al 2007).

According to some smokers, the rewards they get from smoking outweigh the benefit of quitting. So they chose to continue smoking (Wilson et al, 2011; Van-Eerd et al, 2015). Other smokers stated that quitting was difficult as they are unable to find an alternative diversion as a substitute for smoking. “I really want to quit... but It is difficult when there is nothing else to do” (Nykvist et al 2013). Others had practically given up, and experienced their situation as hopeless. (Poureslami et al, 2015; Eklund et al 2012, Coronini-Cronberg et al, 2011).

10.1.4 It is never the right time in life to stop

Incidents in smoker’s lives were seen as reasons why they would never find the right time to stop smoking. Some people reported hectic daily schedules which led them

to continued smoking though they have never longed to smoke. Some people thought smoking was a source of comforter that suppresses their worries. The stress linked with the illness or death of loved ones gave enough reasons why some people couldn't stop smoking. Although some smokers knew the benefits of smoking cessation, they expected life to be frugal without smoking. They have always thought of giving up in future but the future never comes. (Eklund et al 2012).

10.1.5 Smoking related health beliefs

Evidence was found in some of the studies which showed that some patients with COPD continue to smoke based on their smoking related health beliefs. An understanding of these health beliefs will assist professionals in providing appropriate smoking cessation support. These health beliefs include: Smoking helps with disinfection; smoking helps with digestion; smoking prevents weight gain; smoking helps during weather change; smoking gives energy/recharge/revitalization; smoking helps with better concentration; smoking helps with breathing; smoking helps fight diseases like cancer, lung diseases, and heart problems (Kerr et al, 2007). Some smokers believed that a certain tobacco consumption level is save and it was ok to take four or five sticks of cigarette a day and not more (Poureslami et al, 2015).

10.1.6 Communication with Health Professionals

In a qualitative study of nurses carrying out first counselling sessions with confirmed COPD patients that were current smokers, it was found that these nurses hardly tailored the consultation sessions to the patient's individual needs. It was also found that a majority of self-management education and support programs for smoking cessation was given through information that did not involve motivational dialogue and open ended questions focusing on the patients' self-management abilities.

In another study where COPD patients were asked when doctors or nurses had talked to them about smoking, most of the patients reported that doctors/nurses had talked to them about smoking both before and after their diagnosis; some had a conversation following their diagnosis, while a significant number of patients stated

that they had never had any conversation about smoking with a health care professional.

In response to a question about their expectations and feelings regarding their interaction with health care professionals, the most common statements were “I was hoping they could help me stop smoking”, “I felt they were nagging/lecturing”, “I felt they are being helpful”, “I did not think they could do much about it” (Masefield et al, 2016; Van-Eerd et al, 2015).

10.1.7 Belief about the cause of the disease

It was apparent from several studies that some COPD patients continue to smoke because they strongly believe that their disease is not smoking related. Several participants in some studies believed that the cause of chronic lung disease was more complex than simply being a smoker.

In one study, the participants demonstrated an understanding and belief in the impact that social and occupational risk factors have on the health of their lungs (Hill et al 2008). They illustrated this understanding by giving detailed accounts of their personal experiences, using detailed generic phrases to highlight the significant role played by occupational or environmental pollution as major contributing factors in the development of their chronic illness. The factors listed include: air pollution (fumes, dust, SO₂, NH₃, and NH₄), Legionnaire’s disease, the presence of white fuzzy stuff in an air-conditioner, the toners in the Xerox, very bad cement dust, very bad Diesel smoke underground, working as a blacksmith, and the dust off electric welder.

One COPD patient, when asked what he thought was the cause of his disease, said: “Well, if you ask every doctor he’ll say smoking. Sure, I’ve smoked all my life, but I also put in 37 years at the MINE. And ah...all of those years I was exposed to SO₂, NH₃, NH₄, NH₄S₂, and I could go on with the chemicals...”

Their assessment of complex causation was backed by the current mandatory use of protective face masks or ventilation systems in their work settings: “in them days, it was truly unsafe”, stated one participant (Hill et al 2008).

10.1.8 Self-Blame

In a narrative analysis of female smokers with COPD and their relationship to smoking, all the women in the study undoubtedly expressed their own silliness in continuing to smoke. They did so by using phrases such as; I am stupid, I am an idiot, I am not quite right in the head. They were very much aware of the dangers of smoking and the impact it has on their health, yet they could not stop smoking and this led to self-reproach.

One participant narrated that after her COPD diagnosis, she experienced anxiety whenever she was smoking. This anxiety led her to smoke even more, resulting to more anxiety. Not being able to control the craving for cigarettes resulted to self-hate and low self-esteem. These women never trusted in their own ability and capability to quit smoking. "I know exactly what I should do but I don't do it...I curse myself every time I smoke", one woman complained.

There was awareness about the importance of smoking cessation but the women were not ready to put this knowledge into practice, as they could not find the required inner balance to be able to quit smoking.

"There is something in the body that resists... I feel that now is not the right time...".

One woman stated. After worrying about being able to cope with the personal strain that refraining from smoking would imply, some of the women decided that it was better to continue smoking, (Nykvist et al 2013).

10.1.9 Making Excuses

This theme elaborates the excuses for continuing to smoke made by COPD patients who were fully aware of the relationship between smoking and their disease. Smokers found it quite overwhelming to admit that their disease had resulted from decades of smoking. "I am really good at finding excuses... You see, "it is not the cigarettes which started this. It is because of me painting. I always find an excuse. But

deep down I know that the cigarettes are the main reason for this sickness, at least 80%”, one patient said.

The patients had someone or something to blame for continuing to smoke, making excuses for their lung symptoms, and praising the positive effects of cigarettes. Breathlessness and lack of energy was associated with back pain and age. Some smokers attributed their symptoms to genetic defects and sickness in childhood that contributed to the bad conditions of the lungs; others attributed their symptoms to emotional instability, stress, and unaccomplished businesses. While some smokers used the side effects of nicotine dependent medication as justification for not quitting, others stated that these medications were expensive and they could not afford. (Jonsdottir and Jonsdottir, 2007).

Some smokers recounted that habits and daily routines had an influence on their attitude to smoking, stating that it was more difficult to stop smoking when friends, colleagues or a partner smoked. As a justification for continuing to smoke, some patients explained that they do not experience any symptoms or other effects due to their disease. “You have a fine pair of lungs, the doctor said... oh thank you very much I said... then I can continue to smoke” (Nykvist et al 2013, Scofield et al, 2007).

10.1.10 Percieved benefits and security

This theme describes the benefits that smokers believe they obtain from smoking. They stated that whenever they needed inner tranquillity, cigarette gave it to them. They said cigarettes represented a form of security, provided companionship, peace, consolation, and was always available regardless of whether they were happy, sad, alone or angry. A pertinent reason stated for continuing to smoke was the fact that the cigarette was a friend who was forever there like a treat in everyday life, and many of them looked forward to the first cigarette of the day. “When you are in a rage, smoking feels really good as it calms you down a little”, stated one patient (Nykvist et al 2013). According to a study carried out by Poureslami et al (2015), some smokers used cigarettes as an opportunity for a break or rest.

10.1.11 Use of Destructive pressure relief strategies

Identified destructive pressure-relief strategies were risk factors for loss of motivation and hope of success in quitting, therefore hindering quitting success. They included the following:

Avoidance of frightening information: Patients avoided taking part in assessment of their health status since this could possibly generate stress, for example measurement of lung function (spirometry). By so doing, they could avoid feelings of fear, worries or compulsion to quit. “I just say that I don’t want to know about my lung function”, (Lundh et al 2011).

Hiding smoking: Patients failed to reveal that they still smoked in an attempt to avoid criticism from care providers, relatives, and/or friends. ‘I lied to my mother and told her that I had quit, because it was so important to her. I used lot of white lies and said when she smelled smoke that it was the neighbour’ (Lundh et al, 2011). Some of the patients mentioned that they had people in their environment who were unaware of their situation. Because they felt that telling someone about their situation could lead to them being pressured to quit, so they preferred not to inform anyone about quitting smoking. (Eklund et al, 2012)

Blaming others for their inability: patients used the fact that their friends and/or relatives still smoke, as an excuse for not being able to quit themselves.

“My wife smokes. I’ve tried to get her to quit but... If she won’t, I don’t see why I should” (Lundh et al, 2011).

Rationalization: Patients thought they could rationalize their smoking, believing that less harm will be done if they cut back on their level of cigarette consumption especially when their symptoms were severe. This was because they thought it was meaningless to completely quit smoking. “Really it doesn’t pay to quit smoking. Is there anyone who can say that I would feel better?” (Lundh et al 2011).

10.2 Uncussessful attempts to quit

This theme describes patients who had made attempts to quit smoking. They stopped smoking at least once but, for one reason or the other, relapsed. The circumstances that characterized the relapses were multifaceted.

10.2.1 Ambivalence

Contemplating between wanting and not wanting to give up smoking was another reason that resulted to multiple relapse among some smokers. They highlighted the necessity of quitting and the huge pressure they felt to do so, both within themselves and from others. They had not made the decision to completely be rid of the tobacco. One patient, when interviewed, said that she did not really want to quit because she liked the company and the support the cigarette brought, but was compelled to do so because of the disease. So smoking was put on hold when the disease was severe, and they went back to smoking when the symptoms improved and they felt good. This was evident by smokers, who had stopped smoking, keeping a cigarette packet in the closet for rainy days. When the disease was worse and symptoms very severe, particularly when they were admitted to hospital, quitting was an obligation (Jonsdottir and Jonsdottir 2007, Lundh and Lena, 2015).

10.2.2 Smoker's motivation

In a study carried out by Poureslami et al (2015), smokers reported struggling to quit, complaining that they had difficulty in maintaining their non-smoking status: "I

quit once, and then I started to smoke again because smoking helps me build close relationships with my friends when we play cards”.

They went further to state that when they stop smoking, a positive atmosphere, support from the nurse and an enormous amount of praise and positive feedback were vital to help them maintain their non-smoking status. They described that their confidence was boosted by encounters during which they were allowed to sit and talk in peace and quiet, with no warnings or being lectured and nagged about the necessity to quit smoking. These smokers considered nagging to be degrading, therefore having the opposite effect: “it’s so tiresome when everybody is nagging. It makes me behave like a small stubborn brat”, one participant reported (Nykvist et al 2013).

Some smokers declared that scare tactics did not work as a motivation to refrain from smoking. “I’m aware of the dangers, but it’s as if nothing has an effect on me” said one participant (Nykvist et al 2013).

In one study, some smokers reported that time was never right to quit. They explained that they had tried quitting before, but it was done in a rush. Instead of making conscious preparations or planning ahead, they had been pushed or threatened. This resulted to them figuring that they had to do something right away, hence they tried to quit but had not taken the decision to become nicotine free. They only tried to do what they had been told, mostly after a visit to the physician. Many smokers attempted to quit through personal initiatives, without seeking professional support. They purchased nicotine-dependence medications from the pharmacy seeking neither information nor advice. “I am always buying something to help me quit. I buy nicotine gum. I buy pills, something to try. I am always on my way to quit, because I know I have to. But this is so difficult”. They will stop smoking, but relapse will be caused by the slightest temptation resulting to failed attempts to quit. One patient said: “I really want to quit smoking. Each time I really think of it, the thought of cigarettes emerges and makes me think of them constantly” (Jonsdottir and Jonsdottir, 2007).

10.2.3 Lack of support from family members and friends

In one study, patients reported that smoking cessation was difficult because they had no support from family members or friends who themselves were smokers: “My sister-in-law came up, they all smoke and the state I’m in, I don’t know how they don’t stop it and they’ll say to me ‘Do you want one?’ ”, one patient reported (Kerr et al 2007).

In another study, one patient told a story of a friend who came to visit and got her to start smoking again after she had quit. The friend had convinced her that she and the cigarette were one and united, saying it was nonsense for her to try to change that (Jonsdottir and Jonsdottir 2007).

10.2.4 Irritation

This was attributed to bad feelings, loneliness and boredom as the women spent long hours alone. Being alone was related to disease-induced disability and evasion of company of other people besides close relatives. To them, inhaling the cigarette smoke brought a really good feeling, fading away irritation: “it is just so extremely good to smoke”, said one smoker. The feeling lasted for only a couple of minutes and then the bad feelings re-emerged, resulting to feelings of depression, anger and loss of self-confidence (Jonsdottir and Jonsdottir 2007).

10.2.5 Nicotine withdrawal symptoms

After quitting smoking, some smokers experienced severe withdrawal symptoms like Anxiety, anger, frustration, irritability, weight gain and depression which were unbearable, hence pushing them to start smoking again. (Jonsdottir and Jonsdottir 2007)

10.2.6 Disease Exacerbation

Increase in severity of the disease led to use of high doses of steroid medication with side effects including increased tension, particularly irritation, agitation and insomnia. This resulted to relapse since smoking is thought to help minimise medication side effects. One patient who was very sick demonstrated her unreasonable thinking when she felt an unbearable urge to smoke in the hospital. She entered the smoking cabin with an oxygen cylinder, even though she was fully aware how risky it was to smoke near an oxygen cylinder: “Still, I knew about the danger of smoking close to an oxygen cylinder. What mindlessness! I could have put the hospital on fire. But, at that time it did not occur to me” (Jonsdottir and Jonsdottir 2007).

10.2.7 Alcohol use

The use of alcohol also emerged as a risk factor for relapse. One patient said: “When I relapse to alcohol, without exception, I relapse to smoking at the same time. On the way to the liquor store, I buy cigarettes.” (Jonsdottir and Jonsdottir 2007).

10.2.8 Self-Deception

One study revealed that some smokers attempted to trick themselves by thinking that they could smoke without it affecting their lungs, that they could stop after taking just one cigarette or that they could smoke for one night only and then stop, even though deep down they knew this was not right. “I am just so naive. I thought that this time it would be OK – that I would not become sick this time. It is maybe OK to smoke for a few days. But then everything goes wrong. I get these stupid ideas, even though I have more than 10 years’ experience of things going wrong” (Jonsdottir and Jonsdottir 2007).

10.2.9 Life's Difficulties

Various life changes and life events, contributed to patients relapsing to smoking. These life changes and events include; stress, loss and bereavement, financial hardship, unemployment, emotional problems. One patient said "Of course stress played a major role in my starting to smoke again. The smoking increased dramatically. It was a long period, at least ten years, and every day was very stressful. It was disgusting. I just sat there, chain-smoking. There was nothing else" (Jonsdottir and Jonsdottir, 2007). Another one said "I used to smoke but eh I've stopped smoking for a long, long while and then eh I lost my husband 8 year ago and that day eh after he got cremated somebody handed me a cigarette, that was me, I started again and then I stopped again but eh every now and again if I get kind of upset or uppity I take a cigarette" one patient said. (Kerr et al 2007).

Smoking, according to some patients, calms difficult feelings: "Smoking calms me down. It gives me support that I don't get elsewhere. That is when I'm alone with my thoughts, sleepless at night, and difficulties in families come to mind." (Jonsdottir and Jonsdottir, 2007).

10.2.10 Developing Pressure Filled Mental States

Some patients had made conscious attempts to quit and in the process of making these quit attempts, they developed pressure filled mental states. These states were developed for a variety of reasons, and to varying degrees. It was identified from studies that these patients mostly developed such mental states due to negative experiences they had encountered. The following are examples of these pressure relief states and also possible reasons why the state was developed:

Feeling fearful: The patients had worries and thoughts about what would happen to their body and their health if they were unable to completely quit smoking. These worries were at their peak during periods of disease exacerbation. They worried about whether they had to be hospitalized, whether their lives would be shorter and they also worried what would happen to them if they suddenly were unable to breathe.

One patient expressed her worries by saying: “I’m afraid of what will happen if I don’t quit. I don’t want to be hooked to oxygen tubes – I’d rather jump off the balcony”, and another one also said “My two sisters have COPD, my older sister passed away last year, she was depended on oxygen and I am worried that I will end up like her. The doctor said to me ‘if you don’t stop smoking now your life is going to be shorter’”. (Lundh et al 2012). These patients also had worries about how their bodies would react if they quit after such a long period of smoking and severe addiction. “I’ve heard that people climb the walls when they try to quit smoking” and the last time I stopped smoking I felt like being in I big black hole” one patient said.

Being fearful could therefore work as a pressure-filled mental state either because patients worry about the effects of quitting or the consequences of not quitting.

Feeling criticized: The patients felt that they were criticised by friends and families for not being capable to quit smoking. “My husband is after me all the time, telling me I should quit” one patient reported. They also sensed criticism coming from health care professionals, receiving negative comments and attitude from these professionals regarding their likelihood of quit success. This was evident in one patient’s statement “I feel like a Villain when I meet the doctor, I feel ashamed because I keep on smoking”. Another Patient also said “The nurse talked and talked, said that I had to stop smoking. When she finished, I asked her if she could put a cork in my ear so the information would stay” (Lundh et al 2012).

Feeling pressured: This meant that the patients perceived the need to quit smoking as imperative. “I have to stop smoking. These thoughts are on my mind from when I wake up until I go to sleep. I feel pressure in some way; I have to quit and I don’t want to smoke”. (Lundh et al 2012).

Worthlessness: Patients reported that because of low self confidence, they felt weak and nervous with no will power to quit as was evident in one patient’s statement: “I’m weak and flighty and I’ll never manage to quit smoking. I have tried so many times and I always fail after a while. I begin to believe that I will never manage this” (Lundh et al 2012).

The feeling of worthlessness also came about as a result of numerous plans to quit but never really getting to quit, there was practically no progress made from all the

plans. “I’ve bought a lot of nicotine patches, but they just lie there and when the expiry date arrives I throw them away and buy new ones”, one patient complained (Lundh et al 2012). Patients also developed this pressure filled state because they felt somehow stuck after so many failed attempts to quit. This actually were patients who had made conscious attempts of quitting by trying to reduce the number of cigarettes they smoke daily, with the hope that one day they will eventually stop. But after reaching a certain level, they feel that they cannot reduce the number of cigarettes anymore. “Something has happened because I cannot get any further. I have decreased the number of cigarettes to ten. My goal is seven cigarettes per day and now I smoke ten. I think that is good because before I smoked thirty cigarettes per day. But something has happened, some sort of stagnation. I feel stuck” one patient reported (Lundh et al 2012).

10.2.11 Giving up trying

Some patients who had made several failed attempts to quit smoking eventually gave up. Giving up meant that they had lost all hope of success and saw no reason why they should continue trying. They seemed to admit that they are smokers and will remain smokers for the rest of their lives. It was also obvious that giving up implied that it was hard to go back to a new stage of trying. (Lundh et al 2012)

After giving up all attempts to quit, these patients then pursued destructive pressure relief strategies as a coping mechanism to deal with the guilt of still continuing smoking. These strategies include:

Hiding smoking: because these patients wanted to avoid criticism from friends, family and even health professionals about the fact that they still smoked, they lied that they had stopped and then they would hide to smoke whenever they felt the urge to.

Blaming others for their lack of success: patients tried to justify their inability to successfully quit by attributing blames to others. For example, they said friends and relatives who still smoke made it difficult for them to quit.

Rationalisation: Patients also tried to console themselves that the fact that they were able to cut back on their consumption level was good enough. Some used their old age to rationalize the fact that it was ok to smoke in small quantities rather than completely quitting because their body will react badly if they quit (Lundh et al 2012).

11 DISCUSSION AND CONCLUSION

11.1 DISCUSSION

Smoking cessation is the most important intervention to reduce the risk for cardiovascular and respiratory diseases especially COPD. While most individuals understand the benefits of smoking cessation and some patients who are diagnosed with COPD quit smoking, many continue to smoke. This research reviewed qualitative studies with the purpose of understanding why individuals diagnosed with COPD continue to smoke. The findings of this review shed more light on the complexity of the difficulties that COPD patients face regarding smoking cessation.

According to Eklund et al (2012), dissimilar situations and habits affect smoker's ability to find suitable time to stop smoking. Smoking is connected to specific events and feelings that give a positive and negative experience. This in turn makes it difficult for the smoker to quit. The findings in this review have revealed addiction as the most prominent justification for the inability to quit smoking. The patients' lives were governed by lifelong habit of smoking which was difficult to break from despite the fact that they were aware of the risks of continuing to smoke. They had become nicotine dependent. As a smoker craves for nicotine, there is the reorganization of temporal dimensions which is characterized by an impulsive "act now" in order to achieve immediate satisfaction of his or her needs. This impulsive urge to smoke supersedes any reflection on the future that looks beyond the immediate craved effects of smoking.

Because nicotine dependence is a strong addiction and smoking is related to a feeling of pleasure, smoking often becomes a lifelong habit. It has been reported that already at a young age, smokers experience a strong urge to smoke. Similar to the experiences described by the participants in the present study, smoking initiation at a young age has been shown to be related to a lifelong dependence on nicotine

The participants described incidents in their lives as reasons for never finding the time to focus on smoking cessation. They described a reliance on cigarettes to provide structure throughout the day. Through smoking, these participants were able

to socialize or deal with difficult situation and stress. An enormous effort is therefore needed to reverse daily routines and habits to create a decent life without smoking. It is important for health care professional to note that during counseling for smoking cessation, these participants should be taught alternative helpful behaviors such as stress management, physical exercise and relaxation techniques.

Ambivalence illustrates how patients oscillated between wanting and not wanting to stop smoking, characterized by several failed quit attempts. Findings from these studies have highlighted the importance of the support needed by those participants who hesitated to make a decision to quit, and those who are trying to quit smoking. Patients trying to quit can develop pressure-filled mental states such as feeling fearful, worthless, criticized, and pressured as a result of negative comments, information and attitudes from healthcare professionals, family and friends in relation to their chances of success. Consequently, they seek relief through destructive strategies which are risk factors for unsuccessful quit attempts. Therefore, the attitudes of and support from Health care professionals, friends and family should be considered very vital for the patient's success when they are trying to quit smoking.

Health care professionals must examine their expectations for cessation, as many assume that older smokers are unable to stop smoking and such attitude may contribute to a smoker's sense of fatalism and indecisiveness. To achieve a successful lasting smoking cessation, it is important to understand the difficulties smokers are experiencing that influence their efforts to quit smoking. It might be more effective to first ensure that the smoker has the right internal motivation to make the decision to quit, and then appropriate cessation support can be provided. It is therefore vital for the participants to maintain their autonomy, as no one else can make the decision to quit smoking for them. The patients' autonomy must be ensured, respect for their sovereignty must be given, and support should be given after the individual has made his or her own decision to quit.

Findings from the studies indicate that the participants' decisions about their smoking were related to feelings of hope of succeeding, feelings of the importance of trying to quit and to the acceptance of the COPD diagnosis. If COPD patients felt that it was important to quit smoking, and they had hope of succeeding to quit, it would be easier for them to take a decision to quit immediately or to try quitting in

the near future. If opposite feelings like hopelessness and meaninglessness prevailed, Patients could make a decision to postpone or even evade any quit attempt. It is therefore important that health care professionals understand this information about patients' feelings so that they can offer the best possible support.

It is evidenced in the results that both the reasons for not quitting, and the reasons leading up to the decision to quit smoking, differ among individuals. Therefore, when providing smoking cessation support, it is important for Health care professionals to be aware of and to take these individualities, as well as the smokers' motivation to quit, into account. Also, healthcare professionals need to have an understanding of the fact that smoking cessation is not a single problem to be solved. In order to achieve successful smoking cessation, it is essential to include support regarding other situations in the smoker's life, for example, loneliness, stress, depression and weight gain.

Another reason why some participants lacked motivation to stop smoking was because they believed their lung disease had already established so they put enormous effort into making excuses by finding other factors other than smoking that contribute to the development of their symptoms. They had either someone or something to blame for continuing to smoke. On one hand, they were making excuses for their lung symptoms, and on the other hand, they were praising the positive effects of cigarettes. Breathlessness and lack of energy was associated with back pain and old age. Some smokers blamed their symptoms on genetic defects and sickness in childhood which they believe contributed to the bad conditions of their lungs. Others attributed their symptoms to unaccomplished businesses, emotional instability, and stress. These excuses rallied by participants to assist in relieving unbearable feelings can be considered as having self-protective properties

While some participants were aware that smoking was the cause of their disease and looking for excuses to continue smoking, others refused to believe that smoking had anything at all to do with their lung disease. They had beliefs about the cause of their disease that were not related to smoking. For example, they stated that their symptoms were as a result of genetic, occupational and environmental factors. Be-

belief about the cause of their disease can affect patients' motivation to quit. The likelihood of smoking cessation is very low if the individual does not believe in the relationship between smoking and COPD.

On many occasions, smokers who have COPD are faced with negative attitudes because they believe their disease is self-inflicted. As a result, they tend to isolate themselves from people who show little understanding regarding the power of nicotine addiction. This may in turn result to further withdrawal even from people who show the understanding, leading these patients into a sphere where they perceive cigarette as a "dear friend." Smoking hence acquires value, resulting to feelings of security and well-being, relief from anxiety and reduced sense of loneliness.

The effects of smoking, even though short-lived, provide immediate satisfaction and a weird but stable axis in life. When this happens, opening up to the outside world and trying to seek help may seem dangerous as it augments the risk of stigma and increases demands that these patients may not have the energy or capacity to deal with. These participants who regard their symptoms and disability as self-inflicted tend to feel alienated and unworthy of support or intervention, so they tend to avoid healthcare appointments and even avoid seeking support. This is particularly challenging for health care professionals who have to balance the requirement to offer smoking cessation advice at every opportunity against the need to develop supportive and therapeutic relationship with their patients where they do not attribute their poor health to their smoking behavior.

These findings still emphasize the fact that healthcare professionals need to focus on how motivated patients feel. Health care professionals must promote access to health care and engage smokers in available services. They should assist the patients in identifying accessible social support systems. Stages of change models could help to modify some belief during individual counseling services (Coronini-Cronberg et al 2011). Previous studies that have applied the stages of change model amongst smokers who did not have COPD have shown that participants significantly cut down smoking and eventually quit compared to those who only receive verbal education from their care providers. (De Vries and Mudde, 1998; Christenhusz et al 2007). This group can be targeted with strategies to increase self-efficacy and also to help develop planning skills.

Results from these studies confirm that experiencing unpleasant symptoms does not provide sufficient reasons to stop smoking e.g. many participants believe it was too late for them to quit. Despite sound evidences that smoking cessation is beneficial to health generally and specifically to COPD, participants complained that there is no guarantee that they will perceive any tangible relieve from distressing symptoms such as dyspnea. Rather, they believe that smoking will help their breathing.

According to the health belief model (Becker 1974), an individual must first perceive themselves susceptible to harm, and behavior change is dependent on weighing up the benefit against the costs involved. These smokers seem to have decided that the personal advantages of smoking outweigh the advantages of quitting. It is also difficult for participants to change their behavior if they regard cigarette as a friend and source of comfort in a milieu of poor quality of life, disability and social isolation. Patients must understand the need for behavior change and they must take responsibility for their health before change will occur. Health professionals must appreciate patient's behavior in the context of their culture and previous experience.

Unsuccessful attempts to quit draws attention to how these patients thought about themselves and their smoking. Taking into consideration the severity of their disease, the patients admitted that quitting was an absolute necessity. However, they were battling against various barriers to smoking cessation for example. Nicotine withdrawal symptoms, lack of support from family and friends, alcohol use, and life's difficulties to name a few. In the middle of trying to quit, they lost control, started smoking and felt seriously sick afterwards. Many participants who stopped smoking in the past had looked upon their relapse with deep remorse. These participants were conscious of the fact that smoking was the main cause of their disease. Yet, they were unable to avoid smoking. Despite the inability to stop smoking, they valued good health and admitted that it was of utmost importance to have healthy lungs. These participants had made numerous attempts to quit and for years, their lives had centered on trying to stop smoking, their lung disease exacerbation being a constant reminder (Jonsdottir and Jonsdottir 2007). It is important to note that previous quit attempts should be regarded as a positive event that will help smokers to prepare for a future quit attempt, rather than a failure. Smoking cessation should

be considered a process and several attempts may be necessary before permanent cessation is achieved.

Healthcare professionals have to understand the difficulty of smoking cessation, and for this reason no patient should be judged for past failed attempts. Health care professionals need to understand that a smoker will require multiple recommendations to quit smoking and, and they will make multiple quit attempts before becoming smoke-free. Therefore, smoking cessation should be discussed consistently at every visit. Health professionals should listen to the patients, be compassionate, and discuss with the patients about the barriers and fears they have in quitting. Healthcare professionals can appeal to patients' desire to save money, develop their self-esteem/mental health, enhance their appearance, or be an example for others.

Findings from this research also highlight the complexity of beliefs and motivations of COPD patients who continue to smoke and this also demonstrate the barriers that need to be overcome in order to achieve successful cessation. Some participants believed that a certain daily level of cigarette consumption was safe. This emphasizes the need for health care professionals to correct the misunderstanding about the unpleasant effect of continues smoking in chronic lung diseases regardless of the number of cigarettes smoked. There were other compelling smoking related health beliefs for example, patients believed that smoking helps with disinfection, digestion, breathing prevents weight gain etc. Ideas like this need to be explained in other to prevent misunderstanding that can hinder quit attempts. An understanding of the health beliefs of COPD patients who continue to smoke raises professional awareness of patients' motivation, and suggests avenues through which motivational change can be approached.

11.2 CONCLUSION

In conclusion, even though Participants were aware of the harmful effects of smoking, their lives were ruled by lifelong habits that were difficult to break. Protracted planning, failed quit attempts, negative attitudes towards their smoking from

healthcare professionals, family and friends, and lack of support all contributed significantly to these participants not finding the right time to stop smoking. Successful smoking cessation and prevention of relapse can be achieved by first ensuring that the smoker has the right internal motivation to make the decision to quit. Health care professionals should adopt a patient-oriented approach and provide individualized care, rather than being task-oriented and focusing only on clinical examinations. This will motivate patients to talk about their worries and seek necessary support.

11.3 Implication for practice

Nurses remain a key to providing individuals with the help and support necessary to quit smoking and minimise the possibility of relapse. Considering that smoking cessation is the most effective way to stop the progress of COPD, a better understanding of the difficulties patients encounter during quit attempts, and the destructive relief strategies they use can go a long way to assist nurses offer better smoking cessation support and individualized care. It can also help the nurses feel less frustrated and powerless when they encounter these patients and try to support them.

When healthcare professionals understand the various barriers surrounding successful smoking cessation, they will have a better understanding of the fact that smoking cessation is not a single problem to be solved. In order to achieve successful smoking cessation, it is essential to include support regarding other situations in the smoker's life, for example, loneliness, stress, depression and weight gain.

Findings from this review have thrown light on some smoking related health beliefs that explain why COPD patients continue to smoke. An understanding of these health beliefs raises professional awareness of patients' motivation, hence suggesting avenues through which motivational change can be approached.

A better understanding of the difficulties of smoking cessation will also enable nurses refrain from judging patients' past failed attempts or making them feel responsible for their disease, and rather assist them in identifying accessible social support systems. Nurses will not only come across clients who are motivated, but

also individuals who are ambivalent or not interested in cessation. Therefore, a detailed understanding of barriers of smoking cessation is required to guide interventions, and refer patients to appropriate services.

11.4 Strengths and limitations

The strength of this study design is the possibility of gathering data from a vast number of sources to give a vivid and extensive understanding of why individuals with COPD continue to smoke. Only original studies were considered for this review hence ensuring quality, and the collected material was regarded as rich. There is a precision of the search strategy and systematic appraisal of the papers.

There were a number of limitations that were encountered during this review. Only studies that had free full text access were considered. This means that valuable studies containing key information could probably have been left out due to limited access. Also, there is the possibility of language Bias. Since only studies published in English language were considered for this review, there is the possibility that key studies could have been left out because there were published in a different language. Another limitation to this review was time factor. Due to limited time, a more detailed and extensive search for data could not be performed.

11.5 Ethical considerations

Systematic Literature reviews are governed by clear ethical rules, and it is the ethical responsibility of the reviewer(s) to maintain these rules. This review was conducted in accordance with the basic ethical principles of research. During the selection of studies for this review, the reviewers ensured that participants in these studies had received sufficient information regarding the study, their consent had been sought, and confidentiality maintained at all times. Plagiarism was avoided by referencing

every material used. Accuracy was ensured in that data was extracted independently by two reviewers, discrepancies were resolved, and the decision on which data to include was agreed by both reviewers.

11.6 Validity and Reliability

This review is valid and reliable. There was a clearly stated aim, and a carefully formulated research question and data was collected to answer this research question. The research question matched the research method, the data collection and data analysis procedures. The sample consisted of participants who best represent the research topic so as to ensure efficient and effective saturation of categories with optimal quality data. Trusted databases were used for data collection. Data collection, extraction and analysis were performed by two reviewers minimising the chances of valuable data being left out. A list of the studies used for this research can be found in the appendix, meaning this research can be easily replicated.

Since these two reviewers are not formally trained researchers, the possibility of errors cannot be erased.

11.7 Recommendation for future research

While this review provides evidence about barrier to smoking cessation for patients with COPD, more work is needed in this subject area. During the process of data search, very little data was found that answer the research question directly. It would be important for extensive research to be carried out to gather more evidence about the perceived barriers to smoking cessation from the patient's perspective. Understanding the role of family in smoking cessation for COPD patients could also be another important area for future research.

11.8 Acknowledgement

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APPENDICES

APPENDIX 1. Critical Appraisal Form

APPENDIX 2. Table of studies considered for this review

APPENDIX 1. How to add appendices

			Guiding Notes
1	Was there a clear statement of the aims of the research?	<input type="checkbox"/> Yes <input type="checkbox"/> Can't tell <input type="checkbox"/> No	<p>What was the goal of the research?</p> <p>Why it was thought important? Its relevance</p>
2	Is a qualitative methodology appropriate?	<input type="checkbox"/> Yes <input type="checkbox"/> Can't tell <input type="checkbox"/> No	<p>If the research seeks to interpret or illuminate the actions and/or subjective experiences of research participants . Is qualitative research the right methodology for addressing the research goal</p>
3	Was the research design appropriate to address the aims of the research?	<input type="checkbox"/> Yes <input type="checkbox"/> Can't tell <input type="checkbox"/> No	<p>If the researcher has justified the research design (e.g. have they discussed how they decided which method to use)?</p>
4	Was the recruitment strategy appropriate to the	<input type="checkbox"/> Yes <input type="checkbox"/> Can't tell <input type="checkbox"/> No	<p>If the researcher has explained how the participants were selected</p> <p>If they explained why the participants they selected were the most appropriate to provide access to the type of</p>

	aims of the research?		<p>knowledge sought by the study</p> <p>If there are any discussions around recruitment (e.g. why some people chose not to take part)</p>
5	Was the data collected in a way that addressed the research issue?	<input type="checkbox"/> Yes <input type="checkbox"/> Can't tell <input type="checkbox"/> No	<p>If the setting for data collection was justified</p> <p>If it is clear how data were collected (e.g. focus group, semi-structured interview etc.)</p> <p>If the researcher has justified the methods chosen</p> <p>If the researcher has made the methods explicit (e.g. for interview method, is there an indication of how interviews were conducted, or did they use a topic guide)?</p> <p>If the form of data is clear (e.g. tape recordings, video material, notes etc)</p>
6	Has the relationship between researcher and participants been adequately considered	<input type="checkbox"/> Yes <input type="checkbox"/> Can't tell <input type="checkbox"/> No	<p>If the researcher critically examined their own role, potential bias and influence during</p> <p>(a) Formulation of the research questions</p> <p>(b) Data collection, including sample recruitment and choice of location</p> <p>How the researcher responded to events during the study and whether they considered the implications of any changes in the research design</p>

7	Have ethical issues been taken into consideration?	<input type="checkbox"/> Yes <input type="checkbox"/> Can't tell <input type="checkbox"/> No	<p>If there are sufficient details of how the research was explained to participants for the reader to assess whether ethical standards were maintained</p> <p>If the researcher has discussed issues raised by the study (e.g. issues around informed consent or confidentiality or how they have handled the effects of the study on the participants during and after the study)</p> <p>If approval has been sought from the ethics committee</p>
8	Was the data analysis sufficiently rigorous?	<input type="checkbox"/> Yes <input type="checkbox"/> Can't tell <input type="checkbox"/> No	<p>If there is an in-depth description of the analysis process</p> <p>If thematic analysis is used. If so, is it clear how the categories/themes were derived from the data?</p> <p>Whether the researcher explains how the data presented were selected from the original sample ,If sufficient data are presented to support the findings potential bias and influence during analysis and selection of data for presentation</p>
9	Is there a clear statement of findings?	<input type="checkbox"/> Yes <input type="checkbox"/> Can't tell <input type="checkbox"/> No	<p>Are the findings explicit</p> <p>is there adequate discussion of the evidence both for and against the researchers arguments</p> <p>has the researcher discussed the credibility of their findings (e.g. triangulation, respondent validation, more than one analyst)</p>

			Are the findings discussed in relation to the original research question
10	How valuable is the research?	<input type="checkbox"/> Yes <input type="checkbox"/> Can't tell <input type="checkbox"/> No	<p>If the researcher discusses the contribution the study makes to existing knowledge or understanding e.g. do they consider the findings in relation to current practice or policy? or relevant research-based literature?</p> <p>If they identify new areas where research is necessary</p> <p>If the researchers have discussed whether or how the findings can be transferred to other populations or considered other ways the research may be used</p>

Critical Appraisal Form

APPENDIX 2. Table of studies used in this review

Author(s) and year	Title	Setting (place)	Aim	Publisher
Wilson et al, 2010	'It's not worth stopping now': why do smokers with chronic obstructive pulmonary disease continue to smoke? A qualitative study	Northern Ireland	This study aims to explore the experience of cigarette smokers with Chronic obstructive pulmonary disease (COPD) who have received smoking cessation support and describe their personal decision-making processes regarding their smoking behavior	Blackwell Publishing Ltd
Poureslami et al, 2015	Why do Chinese people with COPD continue smoking: the attitudes and beliefs of Chinese residents of Vancouver, Canada	Canada	The aim of the study was to compare and contrast the smoking habits and associated beliefs among two groups of Chinese people after receiving a diagnosis of COPD: those who successfully stopped smoking and those who continued to smoking.	Insight Medical Publishing Group
Lundh et al, 2011	The process of trying to quit smoking from the perspective of patients with chronic obstructive pulmonary disease	Sweden	To investigate why some patients with chronic obstructive pulmonary disease (COPD) have difficulty quitting smoking and to develop a theoretical model that describes their perspectives on these difficulties	Nordic College of Caring Science

Nykvist et al, 2013	'It's about me' – a narrative analysis of female smokers with chronic obstructive pulmonary disease (COPD) and their relationship to smoking	Sweden	The aim of this study was to describe how a group of smoking women with chronic obstructive lung disease (COPD) experienced their everyday life and their relationship to smoking.	Nordic College of Caring Science
Hill et al, 2008	COPD stories of complex causal 'truths' 'Sure I've smoked all my life/but I also put in 37 years at the mine'	Canada	Secondary analysis was conducted to interpret the causes of illness stories told by patients living with chronic obstructive pulmonary disease	Blackwell Publishing Ltd
Kerr et al, 2007	An exploration of the smoking-related health beliefs of older people with chronic obstructive pulmonary disease	United Kingdom	To explore the smoking-related health beliefs of older people with chronic obstructive pulmonary disease	Blackwell Publishing Ltd
Jonsdottir and Jonsdottir, 2007	The experience of women with advanced chronic obstructive pulmonary disease of repeatedly relapsing to smoking	Iceland	The purpose of this study is to illuminate the experience of women with COPD of repeatedly relapsing to smoking	Nordic College of Caring Science
Jonsdottir and Jonsdottir, 2011	"This is your own doing" – An addiction narrative of smoking relapse in women with COPD	Iceland	This paper presents a qualitative study on the experience of women with chronic obstructive pulmonary disease (COPD) who have repeatedly relapsed to smoking	Nordic College of Caring Science

Eklund et al, 2012	Why do smokers diagnosed with COPD not quit smoking? - a qualitative study	Sweden	The aim of the study was to describe difficulties of smoking cessation experienced by individuals with COPD who are unable to stop smoking.	licensee BioMed Central Ltd.
Lundh Lena, 2015	I have to quit! Factors that influence quit attempts in smokers with copd	Sweden	The general aims of the doctoral project presented in this thesis were to describe the care of patients with COPD from the perspective of district nurses and to describe factors that can negatively influence COPD patients' smoking cessation efforts. A further aim was to develop a valid and reliable instrument to assess difficulties smokers with COPD deal with, and that would be useful in dialogues about smoking that are held in a clinical setting	Karolinska Institutet
Van-Eerd et al, 2015	Experiences of tobacco smoking and quitting in smokers with and without chronic obstructive pulmonary disease-a qualitative analysis	The Netherlands	This study aimed to explore which justifications for tobacco smoking and experiences of quitting were commonly shared in smokers with and without COPD, and which, if any, were specific to smokers with COPD	BioMed Central (BMC)

Bethea, Murtagh and Wallace, 2015	I don't mind damaging my own body" A qualitative study of the factors that motivate smokers to quit	United Kingdom	This study aimed to explore issues relating to smoking behaviour and intention to quit that might be used to inform the development of cessation interventions. Issues explored included knowledge of smoking related disease, with a particular emphasis on Chronic Obstructive Pulmonary Disease (COPD)	BioMed Central
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Table of studies considered for this review