

# The Experiences of Patients with Schizophrenia on Smoking and Cessation: A Qualitative Study

## Şizofreni Tanılı Hastaların Sigara İçme ve Sigara Bırakmaya İlişkin Deneyimleri: Nitel Bir Analiz

Hilal Seki Öz <sup>1</sup> , Şafak Taktak <sup>1</sup> ,

1. Kırşehir Ahi Evran University

### Abstract

**Objective:** Compared to the general population, patients with schizophrenia have high smoking rates and low smoking cessation rates. The aim of this study was to explore the experiences of patients with schizophrenia regarding smoking and quitting.

**Method:** The study was carried out based on the phenomenological design, one of the qualitative research methods. Purposeful sampling method was used in the research, and in-depth interviews were conducted with 15 smokers using a semi-structured interview form.

**Results:** In the thematic analysis, 4 themes, "Effects of schizophrenia", "Coping with smoking", "Factors affecting smoking", "Barriers to quitting smoking" and 13 sub-themes were determined. With the research, it has been seen that those with schizophrenia tend to smoke to cope with the problems caused by the disease, drug treatments, boredom, loneliness and emotional intensity. Some patients are reluctant for smoking cessation, some do not have sufficient motivation and medical support.

**Conclusion:** In order to prevent the multidimensional problems caused by smoking, it is recommended to conduct intervention studies that enable to manage the factors that increase smoking, strengthen the factors that reduce smoking and encourage smoking cessation.

**Keywords:** Schizophrenia, smoking, smoking cessation, qualitative study

### Öz

**Amaç:** Şizofreni tanılı hastaların genel nüfusla kıyasladığında sigara içme oranlarının yüksek, sigarayı bırakma oranlarının ise düşük olduğu görülmektedir. Bu çalışma ile şizofreni tanılı hastaların sigara içme ve sigara bırakmaya yönelik deneyimlerini keşfetmek amaçlanmıştır.

**Yöntem:** Çalışma nitel araştırma yöntemlerinden fenomenolojik desene dayalı olarak gerçekleştirilmiştir. Araştırmada amaçlı örnekleme yöntemi kullanılmış, 15 sigara içen birey ile yarı yapılandırılmış görüşme formu kullanılarak derinlemesine görüşmeler yapılmıştır.

**Bulgular:** Yapılan tematik analizde 4 tema; "Şizofrenin etkileri", "Sigara ile baş etme", "Sigara içmeyi etkileyen faktörler", "Sigara bırakmaya engeller" ve 13 alt tema belirlenmiştir. Araştırma ile şizofreni tanılı hastaların hastalığın getirdiği sorunlar, ilaç tedavileri, can sıkıntısı, yalnızlık ve duygusal yoğunlukla baş etmek için sigara içmeye yöneldikleri görülmüştür. Bazı hastalar sigarayı bırakmada isteksiz, bazıları yeterli motivasyon ve tıbbi desteğe sahip değildir.

**Sonuç:** Sigara içmenin getirdiği çok boyutlu sorunları önlemek için sigara içmeyi artıran faktörleri yönetmeyi sağlayan, sigara içmeyi azaltan faktörleri güçlendiren ve sigara bırakmayı teşvik eden müdahale çalışmalarının yapılması önerilir.

**Anahtar kelimeler:** Şizofreni, sigara içme, sigara bırakma, nitel araştırma

## Introduction

Life expectancy in patients with mental disorders is, on average, 10 to 25 years lower than in the general population, and tobacco use is one of the main causes of these early deaths (1). While smoking rates are 15-24% in the general adult population, it is estimated that approximately 60-90% of patients with schizophrenia are smokers (2,3). It has been reported that smoking schizophrenic individuals breathe more frequently, wait less time between puffs, inhale more nicotine, inhale more carbon monoxide per cigarette smoked because of these, and are more dependent on tobacco compared to individuals in the general population (4). High prevalence of smoking and more severe tobacco addiction increase the risks of disease and death, and it is seen that nearly half of the deaths in this population are due to tobacco-related cancers, respiratory diseases and cardiovascular problems (1).

There are many hypotheses to explain the increased smoking rates in schizophrenia. It has been reported that patients with schizophrenia tend to smoke more in order to reduce disease-related symptoms, alleviate the side effects of neuroleptic therapy, and/or treat cognitive deficits (self-treatment hypothesis) (2,5,6). In addition, it has been reported that smoking can be a means of coping with the feeling of boredom and loneliness caused by the loss of social and occupational functionality caused by the disease (7) and it can also help to get rid of the emotional burden and tension encountered in daily life with the stimulating or calming effect of smoking (8), also, it is emphasized that schizophrenic individuals who move away from society or do not know what they can do to establish a relationship when they enter the society can reduce this behavioral gap with smoking and that smoking is an addiction that is a socialization tool (8,9). Patients with schizophrenia, on the other hand, stated that they tended to smoke because of its anti-anxiety and pleasurable effects (10).

During the treatment process of schizophrenia, it is a necessity to reduce the increasing smoking tendency of patients and to support them to quit smoking, to prevent additional health problems that smoking will bring (11). However, the prevalence of smoking cessation in patients with schizophrenia seems to be lower compared to healthy controls or individuals with other psychiatric disorders (12). The primary reason for this is that patients with schizophrenia are reluctant to seek professional help for smoking cessation (5). It has been reported that the reasons for patients' difficulty in quitting smoking are avoidance or lack of support and structured medical help in quitting smoking, lack of knowledge about withdrawal treatments, and the fear of health professionals intensifying the aggressive behavior of patients or intensifying their psychotic symptoms (5,6,11). Another reason is that even in psychiatric treatment centers where patients are treated, smoking is generally considered an accepted social activity, smoking is allowed even in areas where smoking is prohibited, and patients with schizophrenia are rarely encouraged to quit smoking (2).

It is recommended that patients with schizophrenia should quit smoking, since the risk of serious illness decreases rapidly after quitting smoking and life-long abstinence is known to reduce the risk of lung cancer, heart disease, stroke, chronic lung disease and other cancers (2,11,13). Here, in addition to the willingness of patients to quit smoking, healthcare professionals should provide adequate medical support and motivation to patients. In this respect, it is important to better understand the reasons for smoking of individuals struggling with a difficult disease such as schizophrenia from their perspective and to clarify their views on smoking cessation. In this way, more effective strategies will be developed to encourage smoking cessation with the information obtained.

With this study, it was aimed to understand the reasons for smoking, the factors affecting smoking and the situations that prevent smoking cessation by explaining the experiences of patients with schizophrenia regarding smoking and cessation.

## Method

In the study, a qualitative research method was used to explain the experiences of smokers from patients with schizophrenia and their smoking experiences were evaluated with a phenomenological research design.

In line with the phenomenological research model, it is aimed to reveal the common experiences of smokers with schizophrenia about the phenomena of "smoking" and "smoking cessation".

## Sample

The population of the research consisted of patients with schizophrenia registered in Kırşehir Training and Research Hospital Community Mental Health Center (CMHC). There were 450 patients diagnosed with schizophrenia registered in this center. In addition to the patients who come to the center regularly, there were also patients who come to receive outpatient services. The study sample consisted of smokers with schizophrenia who met the inclusion criteria and volunteered to participate in the study.

The criteria for inclusion in the study were to be older than 18 years of age, to be diagnosed with schizophrenia, to smoke, to speak and understand Turkish, and to agree to participate in the study. Due to the inclusion criteria determined in the study, the purposeful sampling method was used in the determination of the research sampling. The researcher went to the CMHC for two days in February and March 2022 and performed the research with patients who met the research criteria. During this period, 66 patients came to the center, and 23 of these patients were excluded from the study because they did not want to participate in the study, 15 patients did not smoke, 10 patients were diagnosed with different psychiatric disorder and 3 patients were under the age of 18.

After collecting the research data from each participant, it was evaluated whether the data obtained reached saturation or not, and when the data obtained, expressions and themes began to repeat, it was thought that the research data reached saturation. Therefore, the data obtained as a result of the interviews with each participant were analyzed by the researchers and important statements were determined. The sample of the study consisted of 15 participants.

## Procedure

Ethical approval of the study was obtained from the Ethical Committee of Non-Interventional Clinical Researches of Kırşehir Ahi Evran University (Decision no:2022-02/08; Date: 25.01.2022), and then the necessary permission was obtained from the institution where the study would be conducted. All participants who participated in the study were informed about the study, and both written and verbal consents were obtained.

The Consolidated Criteria for Reporting Qualitative Research (COREQ) checklist was used during the planning of the study, collection, analysis and reporting of research data (14). The participants were selected by purposeful sampling method, among the patients with schizophrenia registered in CMHC, who met the inclusion criteria of the study. The research was carried out in February and March 2022. Participants who met the criteria for inclusion in the study were informed about the study and the purpose of the study was explained. After the participants read the informed consent forms, in which they declared that they participated in the study voluntarily, their consent was requested and interviews were conducted with the participants at the CMHC.

The interviews were held in a meeting room where there were no third parties in order for the participant to feel comfortable and able to express herself/himself, as well as to ensure privacy. In-depth interviews lasted approximately 20-30 minutes and mask, distance and hygiene measures were observed by considering the pandemic conditions, and care was taken not to remove the masks during the interviews, to ventilate the room and to sit while observing the social distance. The interviews were conducted by the same researcher, and the information about the purpose of the research and how the data would be used was given to the participants, and the interviews were recorded using a voice recorder. Within the scope of the research, the names of the participants were not taken and the numbers were given to the participants according to the order of the interview. After the interviews, in the evening of the same day, the interview records were converted into written documents by the researchers and prepared for analysis.

## Measures

In the study, "Descriptive Characteristics Questionnaire" and "Semi-structured In-depth Individual Interview Form" prepared by the researchers were used to collect data.

### Descriptive Characteristics Questionnaire

In the study, a questionnaire was created by the researchers to evaluate the socio-demographic, disease and smoking characteristics of patients with schizophrenia. In this form, there are 13 questions such as age, economic status, education level, employment status, disease duration, daily smoking duration and amount of the patient.

### Semi-structured In-depth Individual Interview Form

A semi-structured in-depth individual interview form was created by the researchers to evaluate the schizophrenia patient's smoking and cessation experiences. The research questions in the questionnaire were asked to the patients with schizophrenia in turn, and then they were asked to convey express their opinions. The research questions consist of seven questions to evaluate the impact of schizophrenia on life, opinions and experiences about smoking, how it is affected by smoking, situations that increase or decrease smoking, opinions and experiences about quitting smoking, and what professional support is received in smoking cessation. In each question, it was avoided to be directive and questions such as "Can you please explain more?, What did you mean?, What else? etc." were asked to deepen the participants' experiences

## Statistical Analysis

During the analysis of the research data, no software program was used, and it was carried out manually by the researchers in line with the COREQ checklist (14). In the first step of the analysis of the research data, the audio recordings obtained after each interview were transcribed and analyzed by the authors word for word. In order to prevent possible errors and mistakes in the written data, the voice recordings were listened repeatedly and the written expressions were compared. Then, the thematic analysis of the data was started. The thematic analysis process consists of six steps: classifying data, identifying important statements, searching for themes, evaluating themes, defining themes, and reporting research findings (15). In the analysis phase of the data in the research, each researcher analyzed the data independently and in a way that would not affect each other. All the audio recordings that were written down were read repeatedly by the researchers to ensure that they had a good command of the data, important statements were determined and codes were defined for the determined important statements. The important statements obtained were read over and over by the researchers and the themes were identified, the themes were defined, and then participant statements were added under the determined theme and sub-theme. After all the researchers carried out this process independently, they came together and discussed the appropriateness of the important expressions, themes, sub-themes and participant expressions they found. Then, the researchers decided on the compatibility of the theme, sub-theme and participant statements among themselves and completed the data analysis step by giving the final version of the research data.

There are various approaches to ensure the reliability of research data in qualitative research. These are credibility, reliability, confirmability, transferability, and transparency, and in this study, the reliability of the research data was checked with these steps (15). First, researchers have specialization degrees in mental health nursing and psychiatric medicine. The researcher, who is a psychiatrist, works at CMHC and provides expert support to patients with schizophrenia and their relatives. The researcher, who is in the field of mental health and diseases nursing, has a doctorate degree in this field and has conducted research on patients with schizophrenia and their caregivers. These specializations of the researchers planned this research in line with their theoretical knowledge and observations about schizophrenia. In order to ensure the reliability of the research data, the participants from whom the research data were collected were determined on a voluntary basis, semi-structured interview questions were asked to the participants in an open-ended form while the research data were collected, and the answers of the participants were listened to objectively by the researchers without any confirmation or rejection. Thus, the participants were able to freely express

themselves, their experiences and feelings. After each individual interview was completed, the researchers checked the audio recordings and the transcribed versions of the audio recordings repeatedly to prevent possible mistakes. Finally, in order to ensure the reliability of the research, each researcher carried out the analysis process independently of each other in the analysis of the data. After each researcher completed the analysis of the data, they came together to form themes and sub-themes.

## Results

Within the scope of the research, 15 individuals with schizophrenia were interviewed. The mean age of the participants was  $41.98 \pm 10.53$  (26-64), and they stated that they had been diagnosed with the disease for  $19.93 \pm 9.05$  (5-40) years and had been smoking for  $23.00 \pm 7.91$  (9-35) years. Participants stated that they smoked  $28.33 \pm 15.43$  (10-60) cigarettes per a day.

**Table 1. Descriptive characteristics of the participants**

#	Age	Gender	Marital status	Educational status	Employment status	Income status	Disease years	Smoking years	Cigarettes per day	Smoking cessation experience	Use of anti psychotic
P1	37	Male	Married	University	I am working	Good	5	17	25	Yes	No
P2	52	Female	Married	Primary school	Housewife	Mod.	40	25	10	Yes	Yes
P3	42	Male	Single	Primary school	I am not working	Mod.	30	30	20	Yes	Yes
P4	46	Male	Married	High school	Retire on disability	Good	26	30	30	Yes	Yes
P5	41	Female	Married	Illiterate	Retire on disability	Poor	20	24	20	No	Yes
P6	64	Male	Single	Middle School	Retired	Mod.	21	25	25	No	Yes
P7	47	Male	Single	Middle School	Retired	Good	30	31	40	No	Yes
P8	47	Male	Married	High school	I am not working	Mod.	20	28	60	No	Yes
P9	42	Male	Single	High school	I am working	Mod.	20	24	60	Yes	Yes
P10	33	Male	Single	High school	I am not working	Mod.	15	14	10	No	Yes
P11	27	Male	Single	Primary school	I am not working	Poor	17	15	25	No	Yes
P12	26	Female	Married	Middle School	I am not working	Poor	8	9	20	No	Yes
P13	27	Male	Married	Middle School	I am working	Mod.	10	11	20	Yes	Yes
P14	47	Male	Single	Middle School	I am working	Mod.	20	27	40	Yes	Yes
P15	51	Male	Single	Middle School	I am not working	Mod.	17	35	20	Yes	Yes

It is seen that the majority of the participants are male, primary and secondary school graduate, they do not work in a job, they have a nuclear family structure and they have a medium income. The majority of the participants reported that they tried to quit smoking at least once but were unsuccessful, and almost all of them use antipsychotic treatment (Table 1).

## Theme 1. Effects of Schizophrenia

The participants' evaluations of experiencing schizophrenia symptoms and then being diagnosed with the disease and the effects of the disease on their lives are included in this theme. This theme is divided into four sub-themes: (a) Bad/difficult illness (b) Obligation to medication (c) Disappearing dreams (d) Problems in marriage/work/social life

**Table 2. Themes, sub-themes identified in interviews with schizophrenic individuals.**

Theme	Sub-theme
Theme 1. Effects of schizophrenia	Bad/difficult illness Obligation to drugs Disappearing dreams Problems in marriage/work/social life
Theme 2. Coping with smoking	Dealing with boredom Quelling the negative emotions Getting rid of loneliness
Theme 3. Factors affecting smoking	Increased factors Decreased factors
Theme 4. Barriers to quit smoking	Pleasure cigarette/not wanting Restart ritual/feeling inadequate Difficulty coping/ being nervous/ irritable Lack of professional support

### Sub-theme I: Bad/difficult Illness

In this sub-theme, opinions about the individual perception of the disease are included. Some participants mentioned that the disease affects their lives negatively and that the symptoms of the disease make life difficult. P2; *"... I think it is a bad, serious illness. There are some fearful or suspicious thoughts. There were times when I even doubted my family, there was fear and panic inside me. It badly affected my relationship with my family..."*

Another patient stated the problems brought on by the symptoms of the disease as follows: P4; *"...it is a very difficult disease. I can't get into the crowd. It feels like they're talking about me. It feels like they're following. I'm watching TV but it feels like they're talking about me. That's why this disease negatively affects my life."*

### Sub-theme II: Obligation to Drugs

In this sub-theme, the participants' perceptions and feelings of obligation to use treatment were included. The patients expressed their views and feelings about using drugs as follows. P14; *"... This disease forces people to take drugs. I can't work without taking my meds. I am afraid of my illness. Medicines don't help you recover, but it doesn't work without them."*

Some participants described their feelings about using drugs as follows. P2; *"... How is it going to be? This disease never goes away. Everything gets worse when you don't use medicine, but it doesn't happen with medicine. The effects of the drug challenge me as much as the disease."*

### Sub-theme III: Disappearing Dreams

It is seen that some of the participants experienced the symptoms of post-adolescent disease, which negatively affected their dreams about education, career or choice of spouse.

P6; *"I had dreams. I loved someone in school. I got sick. First I couldn't go to school. Then I couldn't reach that person, I married someone else, but that person always remained with me."*

Some individuals stated that this situation negatively affected their choice of profession.

P8; *"... I used to dream since I was a kid. Being a soldier, being a military officer was my biggest dream. I barely finished high school because of this illness, that dream remained inside me. Now I don't even have a decent job."*

#### **Sub-theme IV: Problems in Marriage/Work/Social Life**

The participants stated that the symptoms of the disease and the difficulties experienced caused many problems in their marriage, work and social lives, and expressed their views on this issue as follows.

P1; *"... When my parents said something to me, I saw them as enemies. It was out of skepticism. I saw them as foreigners, and I couldn't work. Then I used violence to my spouse. My spouse divorced me."*

Another participant, P12: *"...I see things that are not there. I hear voices. And I believe them. My family says they are dreams. They slur over. I was married, we got in bad. They thought I was going to harm my child, so they took my child away me."*

Some participants expressed the effect of the disease on their work life as follows: P7; *"...I can get along well with my family, but my co-workers seemed like enemies to me. Then, I quit my job. I got unemployment pay. I would like to advance in my career."*

One participant expressed the views on the impact of the disease on social life. P13; *"...People are prejudiced against me. I'm not working, I can't participate friend circles. That's why my social life is very limited."*

## **Theme 2: Coping with Smoking**

Most of the participants who participated in the study defined smoking factors as a maladaptive coping process and stated that they tried to relax by smoking when they were coping with emotional load. Therefore, this theme consists of three sub-themes: (a) Dealing with boredom (b) Quelling negative emotions (c) Getting rid of loneliness.

### **Sub-theme I: Dealing with Boredom**

Boredom was one of the most important problems for the participants. Patients who cannot work, cannot adapt to social life and do not have a job to do, said that they experience boredom and fill this gap by smoking.

P9; *"It is difficult for me to work after this disease. I always have a feeling of tiredness and boredom. I smoke out of boredom. It gives some relief."*

P3; *"I couldn't work, then I got divorced, I can't see my child either. I don't have much to do. I smoke out of boredom. It calms me down a bit"*

### **Sub-theme II: Quelling the Negative Emotions**

Participants stated that they smoke to get rid of their negative emotions and they turn to cigarettes to calm their negative emotions.

P2; *"Smoking is good for me when I'm angry. Cigarette is like my friend. I smoke it, I am relieved."*

P11; *"Smoking is a form of relief for me. When I smoke, my nerves are calmed. I calm down. It takes away my fatigue."*

### **Sub-theme III: Getting Rid of Loneliness**

Some participants, who had problems in adapting to social life, stated that they turned to smoking to get rid of the discomfort caused by this situation.

P15; *"I feel like people are prejudiced against me. They are afraid of me. I talk to myself sometimes. I don't have a girlfriend. Loneliness is pushing me. Cigarettes fill my life in."*

### Theme 3: Factors Affecting Smoking

It was observed that the desire of the participants to smoke increases due to the inability to cope with the losses and negativities brought by the disease, and their desire to smoke decreases when they experience the negativities of the environment, the negative effects of smoking on health and social support. Therefore, this theme consists of two sub-themes. (a) Increased factors (b) Decreased factors.

#### Sub-theme I: Increased factors

Factors that increased participants' smoking were offering to friends, worrying about annoying things, loneliness, low mood/sadness, increased thoughts, medications. Some participants reported that the influence of friends, problems experienced, negative affect, increased thoughts and the effects of the drugs they used increased their desire to smoke.

P4; *"...I also give it to my friends, sometimes we get together and just have a cigarette in the garden."*

P13; *"I think of cigarettes. I smoke it. When I'm alone, I think of it more..."*

P7; *"Thoughts are rising, I can't stop them. It causes trouble. Everyone is fine, but I am not well, drugs do not relieve me, so I smoke."*

P5; *"Without this treatment, I would not smoke, this drug makes me smoke, sometimes I try. When you stop taking the drugs, there is less craving for smoking."*

Another person stated that the participant smoked more when negative emotions increased as follows: P15; *"It increases in stressful situations, when I worry about something or when I get very angry. When I am alone, my desire to smoke increases."*

#### Sub-theme II: Decreased Factors

Factors that decreased participants' smoking were closed environments, hospitalization, increased social support, respiratory system complaints. Participants reported that they reduce smoking especially when they are in places where smoking is prohibited due to the environment, when their social relationships are strengthened or when they are socially supported, and when they experience health complaints due to smoking.

P6; *"There are times when I smoke less. I smoke more in summer. I smoke less in the winter. It is not allowed to smoke indoors because of the ban."*

P12; *"I have a girlfriend named İ., she takes me away from cigarettes. She makes me laugh and says nice things. When good things happen, I don't need a cigarette."*

P4; *"I smoke less when I feel good. When I have sputum, I reduce it a little more."*

Some participants reported that the increase in the economic burden of smoking caused the decrease. P10; *"I never thought of quitting smoking, but the increase in cigarette prices is pushing me. Even if I have a disability pension, I have to smoke less, the money is not enough."*

### Theme 4: Barriers to Quit Smoking

Some of the participants stated that they never wanted to quit smoking, while others stated that they had difficulty in quitting even if they wanted to or never tried for this reason. This theme consists of four sub-themes: a) Pleasure smoking/not wanting b) Restart ritual/feeling inadequate c) Difficulty coping/ Being nervous/irritable (d) Not getting professional support with stigma

### Sub-theme I: Pleasure Smoking/Not Wanting

Although some of the participants know that smoking is harmful, they stated that it is their entertainment, they smoke for pleasure and they do not want to quit.

P4; *"I smoke for pleasure, for fun. I can't get into the crowd. I think they're talking about me, it's my only fun, so I can smoke more."*

P6; *"...It gives me pleasure. If I don't smoke for a day, I get bored. I get nervous when I don't smoke."*

### Sub-theme II: Restart Ritual/Feeling Inadequate

Some participants stated that they wanted to quit smoking, but did not try to quit because they had tried in the past and failed, or because they thought they were not strong enough to quit.

P5; *"...I smoke it even in the morning on an empty stomach. I tried to quit, but I wanted to smoke right away, I couldn't stand it, I started back right away."*

P14; *"I was only able to quit for three weeks. I'm thinking of quitting, but when there are stressful situations, I immediately think of it, without it, I can't relax."*

### Sub-theme III: Difficulty Coping/ Being Nervous/ Irritable

Participants who want to quit smoking but turn to cigarettes in order to get rid of the effects of negative emotions stated that they do not have any relaxation methods other than smoking to cope with situations in which they are nervous and angry.

P7; *I said, "Maybe I'll relax when I quit smoking. I thought I could be healthy. But I could not. My troubles, insomnia and thoughts overwhelm me, I immediately smoke one. That's why I can't quit smoking."*

P9; *"... actually I want to quit smoking, it has a bad effect on my health, but when I am obsessed with something, I can smoke more, there is nothing I can do."*

### Sub-theme IV: Lack of Professional Support

Some participants stated that they sought professional help to quit smoking, they used auxiliary materials such as nicotine gum and nicotine patch, but they could not get enough support from healthcare team members due to their illness and they had experiences that discouraged them.

P4; *"...I went to a smoking cessation center because they gave pills to quit smoking. As soon as the doctor saw me, said that << you are schizophrenic, it is impossible for you to quit smoking because of your illness. You can't quit smoking.>> I never went there again."*

P7; *"I got help from a private center. They gave a medicine but they said it is very difficult for me to quit. I did not see the benefit of the drug, I continued to smoke..."*

## Discussion

Smoking is much more common for individuals diagnosed with schizophrenia compared to the society, and the problems it brings negatively affect the lives of individuals in a multidimensional way. In this study, which was carried out to understand the experiences of smoking patients with schizophrenia about smoking and quitting, 4 themes were "Effects of schizophrenia", "Coping with smoking", "Factors affecting smoking", "Barriers to quitting smoking" and 13 sub-themes were determined.

In the theme of the effects of schizophrenia, four sub-themes were determined as bad/difficult illness, obligatory medication, disappearing dreams, and problems in marriage/work/social life. The negative effects of the disease, such as the onset of the disease generally in young adulthood, adversely affecting interpersonal relationships, disrupting functionality and causing disability, deeply affect and change the lives of diagnosed individuals (16). Young adulthood, which is the diagnosed period, is a period in which

individuals gain economic autonomy, tend to a profession, choose the person they will marry, establish a family and have gains that determine their future as an individual (17,18). It can be said that the participants, who stated that their dreams were destroyed, could not fulfill their expectations of this period as they wanted due to the negative effects of the disease, their education life was interrupted with the diagnosis of the disease, and this situation negatively affected the choice of profession and spouse. The low marriage rate of patients with schizophrenia supports this finding (19). In the research, it is seen that married patients describe problems in marriage, work and social life. In a study examining the experiences of men diagnosed with schizophrenia and their spouses, it was found that the majority of couples experienced psychological, social and marital problems after the diagnosis of the disease (20). When individuals whose spouses have schizophrenia were examined, it was found that spouses felt the burden of care intensely and their marital satisfaction was very low (21). This is due to reasons such as the fact that the individual diagnosed with schizophrenia and his relatives encounter many psycho-social, economic and social difficulties during the disease process, lack of sufficient knowledge about the disease, differentiation of roles, increase in problems, insufficient coping skills, decreased marital satisfaction and it is seen that there are difficulties in family sharing (22). In our research, similar to the literature, it can be said that disease-related problems have many effects on the lives of individuals, that these problems need to be managed, and that schizophrenia negatively affects their current life and future dreams.

The participants stated that they relieved with the problems arising from the disease process and the emotional intensity they felt with smoking. In general, they stated that they smoke in order to cope with boredom, to soothe negative emotions and to get rid of loneliness. In a study examining the effects of smoking on mood, it was stated that smoking had a calming effect on anger in women and on anger and sadness in men (23) and that nicotine replacement has been shown to be effective in controlling agitation in smokers with schizophrenia (9). In the literature, it has been defined that smoking and environmental factor such as stress are associated, and the assumption that patients with schizophrenia tend to self-medicate by smoking due to symptoms of mental illness, drug side effects and cognitive deficits has been mentioned (24). Also, the relationship between recurrent disease course and stressful life events in schizophrenia has been investigated, and it has been reported that patients with schizophrenia tend to experience stress more intensely and that this is caused by less effective approaches to coping with stress (25). In this direction, although it is thought that smoking increases in order to cope with the problems caused by the disease and the drugs used, it can be said that the inadequacy of the patients in the disease management contributes to this increase. In a study similar to this finding, it was found that low education level, unemployment, and the presence of disease symptoms that negatively affect life were associated with smoking in people with psychotic disorders (26). The changing lives of patients with schizophrenia due to disease-related problems, loss of functionality and difficulties in adapting to social life are also factors that increase smoking, causing boredom and loneliness. Ziedonis et al. (2003) reported that patients with schizophrenia experience deterioration in social relations and occupational functionality due to the negative symptoms they experience, this situation increases their loneliness level, they experience boredom, and they front to smoking to cope with these negative emotions (7). The research findings are similar to the literature, and it can be said that the increased stress and boredom with the diagnosis of schizophrenia increase the emotional difficulties of the patients, and they tend to smoke more as a relaxation method.

Another theme of the study was determined as "Factors affecting smoking". Patients with schizophrenia defined the factors that increase smoking as offering to friends, worrying about troubles, loneliness, feeling depressed/sad, increased thoughts and drugs used. Also, they reported that they reduced smoking in closed environments, increased social support and when they experienced respiratory system complaints. The overrepresentation of social risk factors for smoking, such as social norms that favor smoking, social and economic disadvantage, unemployment, alcohol and substance abuse, contribute to these high smoking rates (27). In a study conducted with patients with schizophrenia, patients stated the reasons for smoking as pleasurable and relieving anxiety (10). For patients, smoking is seen as a means of socialization in some cases, and a means of coping with emotional intensity and negative emotions in some cases. Some patients also stated that they smoke because of the symptoms related to the disease and the side effects of the

drugs. It can be said that this situation may be related to the assumption of self-treatment may also contribute significantly. Smokers experience many problems not only related to health, but also socially and economically. In a study conducted with 78 participants in the USA, it was found that people with schizophrenia or schizoaffective disorder spent about 27% of their monthly benefits on cigarettes (28). It is suggested that this disproportionate expenditure on cigarettes prevents people with schizophrenia from allocating appropriate resources to areas such as food and social situations that ensure their well-being (29). This situation may lead to the limitation of the patient's resources, increase in stress factors, and decrease in the finance required for socialization, thus increasing the problems of loneliness and boredom, causing them to smoke more. The increasing social support expressed by the participants, such as reducing smoking or not thinking about smoking, also supports this finding. In this respect, it can be thought that raising awareness of schizophrenic patients about the causes that increase smoking, improving their management skills, and strengthening factors that reduce smoking, such as social support.

The study also defined the conditions that prevent patients with schizophrenia from quitting smoking. Some individuals stated that smoking was enjoyable and they did not want to quit. Individuals who wanted stated that they had experiences of starting again, that they thought they could not quit, that they could only cope with their negative emotional burdens with smoking, and that they could not get professional support from the healthcare team. Motivation and determination level of the person, sociodemographic characteristics, severity of addiction, psychological state, environmental support and existing comorbidities (cancer, chronic cardiopulmonary disease, chronic diseases) have been defined as the factors affecting the success of smoking cessation (30). People living with schizophrenia are more likely to experience built-in barriers to quitting, such as higher levels of addiction, an increased likelihood of living with smokers, social norms with more smokers, greater financial stress, and increased depression and anxiety. Additionally, they are generally less likely to be formally supported in their smoking cessation efforts and are also less likely to afford nicotine replacement products. Ongoing stigma, discrimination, inequality and social exclusion are also thought to play a role in both why people smoke and contribute to the difficulties of quitting (31,32). These reasons are reflected in the reluctance of patients to quit smoking and naturally quitting rates. It is also seen that the rate of quitting smoking (around 4%) in more than one trial in the psychiatric population is quite low (33). In a study examining the applications made to a smoking cessation outpatient clinic in our country, it was reported that 126 of the applications made in an eight-month period were from the psychiatric population, but there was no individual with a diagnosis of schizophrenia among these patients (34). Another important condition affecting the success of smoking cessation is the nicotine withdrawal symptoms that occur after quitting smoking. Although symptoms such as irritability, sleep disorders, tension, and concentration problems generally disappear within 3-4 weeks, it is very important to overcome this critical threshold in quitting smoking (30). In a study, psychosocial interventions applied to individuals with psychiatric disorders to quit smoking were evaluated and it was reported that the psychiatric group experienced higher levels of withdrawal symptoms compared to the control group (35). This may adversely affect the dropout rates of patients with schizophrenia. In a meta-analysis, it was reported that the frequency of smoking cessation in patients with schizophrenia was 14.5%, while this rate was 23.1% in healthy controls and 19.6% in patients with other psychiatric diseases (12). However, the relatively low prevalence of smoking cessation in schizophrenia may also be due to ineffective smoking cessation policies or strategies in this population. It may be that healthcare team members are less likely to direct patients with schizophrenia to quit smoking for fear of worsening schizophrenia symptoms and increased aggression (36,37). Besides, it can be said that smoking is a generally accepted social activity, even in psychiatric treatment centers where patients are treated, smoking is allowed even in areas where smoking is prohibited, and accordingly, patients with schizophrenia are not encouraged to quit smoking at a desired level. The fact that some participants received feedback that they could not quit smoking in the center they went to for professional support explains this prejudice. Therefore, as well as motivating patients in the smoking cessation process of patients with schizophrenia, healthcare professionals who provide services to these patients should be freed from this prejudice.

This study has several limitations. Firstly, smokers included in the study were selected by purposeful sampling method and were patients who received rehabilitation services only in one institution. It is recommended to work with different sample groups in future studies. Another limitation of this study is that this study only evaluated the experiences of smokers, and it is recommended to evaluate the experiences of patients with schizophrenia who have quit smoking or who have never smoked in future studies.

In conclusion, it was seen that the causes of smoking in patients with schizophrenia were disease-related problems and that they smoked as an ineffective coping method. It was revealed that they were not willing enough to quit smoking and did not believe that they would quit, and it was also stated that sufficient support was not provided by the health team in this regard. Psychiatric nurses have a helpful role in facilitating smoking cessation patients with of schizophrenia or in coping with the problems that increase smoking. For this reason, it may be beneficial for nurses to raise awareness about the problem in patients' smoking cessation, to recognize the factors that increase smoking, to improve their management skills, and to combat obstacles to quitting smoking. Considering the possible negative consequences of smoking in terms of health, economy and social aspects, it is recommended to conduct scientific studies to provide professional support for patients to quit smoking.

## References

1. Chesney E, Robson D, Patel R, et al. The impact of cigarette smoking on life expectancy in schizophrenia, schizoaffective disorder and bipolar affective disorder: an electronic case register cohort study. *Schizophr Res* 2021; 238: 29-35.
2. Šagud M, Vuksan-Ćusa B, Jakšić N, et al. Smoking in schizophrenia: an updated review. *Psychiatr Danub* 2018; 30(Suppl 4): 216-223.
3. Dickerson F, Schroeder J, Katsafanas E, et al. Cigarette smoking by patients with serious mental illness, 1999-2016: an increasing disparity. *Psychiatr Serv* 2018; 69(2): 147-153.
4. Caponnetto P, Polosa R, Robson D, et al. Tobacco smoking, related harm and motivation to quit smoking in people with schizophrenia spectrum disorders. *Health Psychol Res* 2020; 8(1): 9042-9047.
5. Huang H, Dong M, Zhang L, et al. Psychopathology and extrapyramidal side effects in smoking and non-smoking patients with schizophrenia: systematic review and meta-analysis of comparative studies. *Prog Neuropsychopharmacol Biol Psychiatry* 2019; 92: 476-482.
6. Seki Öz H, Ayhan D, Taktak Ş. The effect of insight, loneliness, and hope levels on medication adherence in patients with schizophrenia. *Perspect Psychiatr Care* 2022; 58(4): 2208-2214.
7. Ziedonis D, Williams JM, Smelson D. Serious mental illness and tobacco addiction: a model program to address this common but neglected issue. *Am J Med Sci* 2003; 326(4): 223-230.
8. De Oliveira RM, Siqueira Júnior AC, Santos JL, et al. Nicotine dependence in the mental disorders, relationship with clinical indicators, and the meaning for the user. *Rev Lat Am Enfermagem* 2014; 22(4): 685-692.
9. Tomko RL, Saladin ME, Baker NL, et al. Sex differences in subjective and behavioral responses to stressful and smoking cues presented in the natural environment of smokers. *Nicotine Tob Res* 2020; 22(1): 81-88.
10. Mak YW, Chiang VCL, Loke AY. Experiences of tobacco use among chinese individuals with schizophrenia in community-based residential settings: a qualitative study. *Int J Environ Res Public Health* 2020; 17(1): 321-333.
11. Pinho S, Rocha V, Vieira-Coelho MA. Effectiveness of multimodal interventions focused on smoking cessation in patients with schizophrenia: a systematic review. *Schizophr Res* 2021; 231: 145-153.
12. Zeng LN, Zong QQ, Zhang L, et al. Worldwide prevalence of smoking cessation in schizophrenia patients: a meta-analysis of comparative and observational studies. *Asian J Psychiatr* 2020; 54:102190.
13. Ding JB, Hu K. Cigarette smoking and schizophrenia: etiology, clinical, pharmacological, and treatment implications. *Schizophr Res Treatment* 2021; 2021:7698030.
14. Tong A, Sainsbury P, Craig J. Consolidated criteria for reporting qualitative research (COREQ): a 32-item checklist for interviews and focus groups. *Int J Qual Health Care* 2007; 19(6): 349-357.
15. Baltacı, A. Nitel araştırma süreci: Nitel bir araştırma nasıl yapılır? *Ahi Evran Üniversitesi Sosyal Bilimler Enstitüsü Dergisi* 2019; 5(2): 368-388.
16. Jauhar S, Johnstone M, McKenna PJ. Schizophrenia. *Lancet* 2022; 399(10323): 473-486.
17. Fındıkoğlu S, Doğan S, Özbek H, et al. The effects of music therapy on mood in patients with schizophrenia. *JIA Journal* 2020; 3(4): 61-70.

18. Barron R, Gore JS. The many faces of stress: three factors that predict physical illness in young adults. *Psychol Rep* 2021; 124(3): 1184-1201.
19. Ran MS, Wong YI, Yang SY, et al. Marriage and outcomes of people with schizophrenia in rural China: 14-year follow-up study. *Schizophr Res* 2017; 182: 49-54.
20. Gök FA, Ölmez Ş. A qualitative research for the life experiences of wives and men who have a diagnosis of schizophrenia. *Journal of Society & Social Work* 2021; 32(1): 41-57.
21. Kaya Y, Öz F. Global social functioning of patients with schizophrenia and care burden of caregiving relatives. *J Psychiatric Nurs* 2019; 10(1): 28-38.
22. Peng MM, Xing J, Tang X, et al. Disease-related risk factors for caregiver burden among family caregivers of persons with schizophrenia: a systematic review and meta-analysis. *Int J Environ Res Public Health* 2022; 19(3): 1862-1878.
23. Allen MH, Debanné M, Lazignac C, et al. Effect of nicotine replacement therapy on agitation in smokers with schizophrenia: a double-blind, randomized, placebo-controlled study. *Am J Psychiatry* 2011; 168(4): 395-399.
24. Schröder R, Reuter M, Faßbender K, et al. The role of the SLC6A3 3' UTR VNTR in nicotine effects on cognitive, affective, and motor function. *Psychopharmacology (Berl)* 2022; 239(2): 489-507.
25. Wang Q, Zhu X, Jiang X, et al. Relationship between stressful life events, coping styles, and schizophrenia relapse. *Int J Ment Health Nurs* 2021; 30(5): 1149-1159.
26. Cooper J, Mancuso SG, Borland R, et al. Tobacco smoking among people living with a psychotic illness: the second Australian survey of psychosis. *Aust N Z J Psychiatry* 2012; 46(9): 851-863.
27. Saha S, Chant D, McGrath J. A systematic review of mortality in schizophrenia: is the differential mortality gap worsening over time? *Arch Gen Psychiatry* 2007; 64(10): 1123-1131.
28. Steinberg ML, Williams JM, Ziedonis DM. Financial implications of cigarette smoking among individuals with schizophrenia. *Tob Control* 2004; 13(2): 206-208.
29. Keltner NL, Grant JS. Smoke, smoke, smoke that cigarette. *Perspect Psychiatr Care* 2006; 42(4): 256-261.
30. Pereira MO, Assis BCS, Gomes NMR, et al. Motivation and difficulties to reduce or quit smoking. *Rev Bras Enferm* 2020; 73(1): e20180188.
31. Lum A, Skelton E, Wynne O, et al. A systematic review of psychosocial barriers to smoking cessation in people living with schizophrenia. *Front Psychiatry* 2018; 9: 565.1-17.
32. Twyman L, Bonevski B, Paul C, et al. Perceived barriers to smoking cessation in selected vulnerable groups: a systematic review of the qualitative and quantitative literature. *BMJ Open* 2014; 4(12): 1-15.
33. Anthenelli RM, Benowitz NL, West R, et al. Neuropsychiatric safety and efficacy of varenicline, bupropion, and nicotine patch in smokers with and without psychiatric disorders (EAGLES): a double-blind, randomised, placebo-controlled clinical trial. *Lancet* 2016; 387(10037): 2507-2520.
34. Vural F, Köroğlu MA. Social life and social work relationship of schizophrenic patients: Kütahya sample. *Optimum Journal of Economics and Management Sciences* 2020; 7(2): 653-668.
35. Hawes MR, Roth KB, Cabassa LJ. Systematic review of psychosocial smoking cessation interventions for people with serious mental illness. *J Dual Diagn* 2021; 17(3): 216-235.
36. Thorndike AN, Achtyes ED, Cather C, et al. Weight gain and 10-year cardiovascular risk with sustained tobacco abstinence in smokers with serious mental illness: a subgroup analysis of a randomized trial. *J Clin Psychiatry* 2016; 77(3): e320-e326.
37. Manzella F, Maloney SE, Taylor GT. Smoking in schizophrenic patients: a critique of the self-medication hypothesis. *World J Psychiatry* 2015; 5(1): 35-46.

<b>Yazar Katkıları:</b> Tüm yazarlar ICMJE'in bir yazarda bulunmasını önerdiği tüm ölçütleri karşılamışlardır
<b>Etik Onay:</b> Bu çalışma için ilgili Etik Kuruldan etik onay alınmıştır.
<b>Hakem Değerlendirmesi:</b> Dış bağımsız.
<b>Çıkar Çatışması:</b> Yazarlar çıkar çatışması olmadığını beyan etmişlerdir.
<b>Finansal Destek:</b> Yazarlar finansal destek beyan etmemişlerdir.
<b>Author Contributions:</b> All authors met criteria recommended by ICMJE for being an author
<b>Ethical Approval:</b> Ethical approval was obtained for this study from relevant Ethics Committee.
<b>Peer-review:</b> Externally peer-reviewed.
<b>Conflict of Interest:</b> The authors have declared that there is no conflict of interest.
<b>Financial Disclosure:</b> Authors declared no financial support