Original Article

The Correlation between Levels of Coping with Stress and Attitude Towards Smoking in Patients with Schizophrenia

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Abstract

Introduction: The rate of smoking in patients with schizophrenia is greater than the general population or individuals with other mental disorders. Patients consider smoking a way of controlling their mood especially when they feel angry or nervous. Smoking is defined as a coping strategy used in decreasing the emotions like anxiety, depression, stress and regulating the negative mood.
Aim: to determine the correlation between the attitudes displayed by patients with schizophrenia, who were hospitalized in psychiatric clinic, towards smoking and their levels of coping with stress.
Methods: The population of this descriptive study consisted of patients who were diagnosed with schizophrenia who were hospitalized in a psychiatric clinic of a training and research hospital in Erzurum and a psychiatric hospital in Elaziğ and compatible with the study criteria. The study was completed with 143 patients overall. The researcher used Personal Information Form, Stress Coping Styles Scale, Attitudes towards Smoking Questionnaire.
Results: The high rate (86.7) of smoking despite the negative attitudes of patients towards smoking is an important results in this study. This study revealed that patients with schizophrenia used mostly the passive style (helpless approach and submissive approach) in coping with stress. It was determined that individuals using the passive style in coping with stress displayed a positive attitude towards smoking. ($r= 0.228$, $p<0.001$; $r=0.234$, $p<0.05$).
Conclusions: In accordance with these results, it is required to provide a psychosocial support to cope with stress and plan training programs regarding the efficient methods in coping with stress in order to decrease smoking in patients with schizophrenia.

Key Words: smoking, schizophrenia, coping with stress

Introduction

Smoking is one of the most important and preventable public health problems in the world and in Turkey. Even though the negative effects of smoking on human health are known, a great part of the world population regularly smoke. Many clinical and population-based studies have determined a relationship between the smoking or nicotine addiction and various mental disorders like depression (Vander Meer, 2013), anxiety (Moylan et al., 2012), schizophrenia (Kalman, Morissete & George, 2005) and personality disorder (Zvolensky et al., 2011). Studies have revealed that the smoking behavior is seen more frequently in individuals with a mental disorder compared to the general population and they show a lower success in their smoking cessation attempts (Zhang et al.,2012; Gurpegui et al., 2007).

Schizophrenia, on the other hand, is generally accompanied by alcohol and substance use (Carra et al., 2012). It is known that more than

80% of patients with chronic schizophrenia in particular are nicotine addicted (Diaz et al., 2009). Thus, the rate of smoking in patients with schizophrenia is approximately two and four times greater than the general population or individuals with other mental disorders (John et al., 2004; Ucok, Polat, Bozkurt & Meteris, 2004). Patients with schizophrenia have a tendency of consuming more tar, using cigarettes containing higher nicotine and acquiring a greater amount of nicotine from cigarettes (Strand, 2005). This heavy cigarette consumption poses a significant burden on patients with schizophrenia (Hennekens & Hennekens, 2005).

It is reported that playing an important role in sustaining smoking in many healthy smokers, the sense of relaxation apparently decreases the stress-related disturbance (McKee et al., 2011). In addition, stressful life events may become a risk factor for relapse in individuals quitting smoking (Mckee et al., 2003).Compared to healthy individuals, individuals with a psychotic disorder usually smoke for the reasons of decreasing their stress, keeping calm, feeling comfortable in social situations, sustaining the concentration, and balancing their mood (Gonzales et al., 2008). Accordingly, smoking is also defined as a coping strategy aiming to regulate the negative feelings and decrease anxiety, depression, and stress.

In patients with schizophrenia, both the social stigmatization and a negative sense of self regarding the disease is caused by stress (Rush et al., 2009; Lee et al., 2005). Having changing sensitivities towards their environment and stress, these patients use negative coping strategies in stressful situations (Weid, 2000). As a consequence, the number of cigarettes consumed also increases together with the increase of the perceived stress (Snyder, Mcdevitt & Painter, 2008). Due to all these reasons, there is a need for studies that would reveal the factors affecting smoking in psychiatric clinics where smoking is observed at the highest rate in order to decrease smoking. Examining the relevant studies; it is found that there is no study efficaciously investigating the attitudes towards smoking and coping with stress in psychiatric patients. From this aspect, the study is thought to make a contribution to the literature. The study was designed and conducted in order to determine the correlation between the attitudes displayed by patients with schizophrenia, who were hospitalized in psychiatric clinic, towards smoking and their levels of coping with stress.

Material and method

Participants

The population of this descriptive study consisted of patients with schizophrenia who were hospitalized in a psychiatric clinic of a training and research hospital in Erzurum and a psychiatric hospital in Elazığ between December 2014 and March 2015. The sample group of the study on the other hand consisted of 143 patients with schizophrenia who met the sample criteria specified in the study and agreed to participate in the study.

Inclusion Criteria of the Study

Diagnosed with schizophrenia according to the DSM-IV diagnosis criteria.

Open for communication and cooperation.

In a remission period (the treatment period of the patient ended, signs of an active period, insight developed)

A history of disease for at least two years

Exclusion Criteria of the Study

Patients hospitalized for the first time.

Having other and/or additional axis 1 mental disorders (drug or alcohol addiction).

Patients with organic brain syndrome or mental retardation.

Instruments

Personal Information Form (PIF):

Being prepared by the researchers in line with literature; personal information form involved totally 7 questions about the gender, age, marital status, occupation, educational status, medical history and smoking features of individuals.

Stress Coping Styles Scale:

In order to evaluate the attitudes of patients to cope with stress, "Stress Coping Styles Scale", which was developed by Folkman and Lazarus (1988) as “Ways of Coping Questionnaire” to determine the methods of coping with stress and whose Turkish validity and reliability was conducted by Şahin and Durak (1995), was used in the study.

Being developed by Folkman and Lazarus (1988), the scale was extended to 74 items by

Sahin and Durak adding culture specific items. The scale was finalized by Sahin and Durak (1995) as 30 items to work with university students and was named as "Stress Coping Styles Scale". SCSS is a four-point likert scale with 30 items evaluating the situation. The scale involves 5 factors.

Examining the Cronbach alpha values of the scale in this study; they were determined as 0.78 for the optimistic approach, 0.78 for the self-confident approach, 0.79 for the helpless approach, 0.79 for the submissive approach, and 0.80 for the social support seeking behavior.

The Attitudes towards Smoking Questionnaire:

The validity of the scale was studied by discussing whether or not the concepts defined by Atay and Kurcer (2012), as well as each item in the scale and their distribution would exemplify the subject of measurement. In this study, the Cronbach alpha reliability value of the scale was determined as 0.80.

Questionnaire for the Attitudes towards Smoking consists of totally 4 subgroups, which are; "Attitude against Smoking", "Attitude towards cigarette itself", "Attitude against Smokers" and "Attitude of Participating in the Struggle against Smoking". The subsection of Attitude against Smoking involves items 1, 6, 7, 8, and 19. While the lowest score to be obtained is 0, the highest score is 15. The subsection of Attitude towards cigarette itself consists of items 3,10,13,14, and 16. While the lowest score to be obtained is 0, the highest score is 15. The subsection of Attitude against Smokers consists of items 4,5,9,11,12, and 18. While the lowest score to be obtained is 0, the highest score is 18. The subsection of Attitude of Participating in the Struggle against Smoking consists of items 2,15,17, and 20. While the lowest score to be obtained is 0, the highest score is 12. Highness of the scores obtained is associated with the highly negative attitude towards smoking.

Process and Statistical Evaluation

Dependent variables of this study were the levels of patients to cope with stress and their attitudes towards smoking. Independent variables of the study, on the other hand, were the socio-demographic characteristics of patients.

The data acquired as a result of the study were evaluated by the researchers in the computer environment and the SPSS 20.0 program was used to conduct their statistical analyses. While the data collected by the researchers were analyzed by using the descriptive statistical methods (Mean, Standard deviation); the correlation between the scales and their subscales was analyzed by using the Pearson Correlation analysis.

Ethical Considerations

Before conducting the study, both verbal and written permissions were obtained from the hospital participating in the study. Regarding ethical considerations, the protocol was approved by the Ethics Committee of Ataturk University in accordance with the Declaration of Helsinki. Before collecting the data for the study, the patients were informed about the purpose of the study, its duration and the procedures involved, with the aim of protecting the rights of the patients participating in the study. They were also informed that they could withdraw from the study anytime and that their identities and personal data collected during the study would be kept confidential. All interviews were conducted by the first author in a private room. The four questionnaires were completed with a participant in one session that lasted 25-30 minutes.

Results

Examining the descriptive characteristics of patients; it was determined that 81.1% were male, 65.7% single, 58.7% primary school graduates, and 86.7% daily smokers. While the age average of patients was 37.89±11.7 years, the disease duration was 11.95±9.35 years and the age of onset was 25.58±2.38 (Table 1).

The total mean score of patients for the Questionnaire for the Attitudes towards Smoking was determined as 26.12±7.20. On the other hand, the subscale mean scores of the Questionnaire for the Attitudes towards Smoking were determined as follows; 7.60±2.48 for "Attitude towards cigarette itself", 5.69±2.01 for "Attitude against Smoking", 7.47±3.19 for "Attitude against Smokers", and 4.64±2.09 for "Participating in the Struggle against Smoking"(Table 2).

Patients' subscale mean scores of the Stress Coping Styles Scale were determined as

5.69±4.66 for the "Self-Confident Approach",

4.16±3.01 for the "Optimistic Approach",

9.09±4.02 for the "Helpless Approach",

7.82±3.54 for the "Submissive Approach", and

5.10±2.12 for the "Social Support Seeking Approach"(Table 2).

The correlation between the scores of the Questionnaire for the Attitudes towards Smoking and the Scale for the Stress Coping Styles Scale was evaluated by using the Pearson Correlation analysis (Table 3).

There was a positively significant correlation between the passive style, which is one of the subscales of the Stress Coping Styles Scale, and total score of the Questionnaire for the Attitudes towards Smoking and Attitude against Smoking, which is among its subscales ($r= 0.228$, $p<0.001$; $r=0.234$, $p<0.05$).

Discussion

In this study examining the correlation between the levels of coping with stress and attitude towards smoking in patients with schizophrenia, the rate of smoking among the patients with schizophrenia was 86.7%. In studies in relevant literature conducted with patients with schizophrenia that are followed up in the department, the rates of smoking vary between 40-88% (Chaves & Shirakawa, 2008; Kotov, Bromet & Schwartz, 2008; Ziaddini, Kheradmand &Vahabi, 2009; Montemagni et al., 2014). The rate of smoking among the patients with schizophrenia is also observed to be high in studies conducted with similar samples in Turkey (Akvardar, Tumuklu & Akdede, 2015; Bosgelmez & Yildiz, 2006; Uneri, Tural & Memik, 2006).

Considering this value, it is observed that patients diagnosed with schizophrenia have a higher rate of smoking compared to the general population. A number of studies focus on the higher smoking rates among psychiatric patients and especially patients with schizophrenia compared to smoking rate in their society (Chou et al., 2004; Uzun et al., 2003).

Table 1. Illustrates the descriptive characteristics of patients included in the study.

Demographics	n	%
Cender		
Male	116	81.1
Female	27	18.9
Marital status		
Single	94	65.7
Married	46	34.3
Education level		
İlliteracy	11	7.7
Primary school	84	58.7
High school and university	48	33.6
Smoking status		
Daily smoker	124	86.7
Sometimes smoker	12	8.4
Never smoker	7	4.9
	$\bar{X}$ **± SD**	
Age (years)	37.89±11.7	
Disease duration (year)	11.95±9.35	
Age of onset of the disease (year)	25.58±2.38	

Table 2. Illustrates the mean scores obtained by patients from the scales and their subscales.

		$\bar{X}$ ± SD	Lower and Upper values are taken from	Lower and Upper values can be
Attitudes Towards Smoking Questionnaire	**Total**	**26.12±7.20**	**9-51**	**0-60**
	Attitude towards cigarette itself	7.60±2.48	0-14	0-15
	Attitude against Smoking	5.69±2.01	1-10	0-15
	Attitude against Smokers	7.47±3.19	0-17	0-18
	Participating in the Struggle against Smoking	4.64±2.09	0-12	0-12
Stress Coping Styles Scale	Self-Confident Approach	5.69±4.66	0-21	0-21
	Optimistic Approach	4.16±3.01	0-15	0-15
	Helpless Approach	9.09±4.02	0-20	0-24
	Submissive Approach	7.82±3.54	0-17	0-18
	Social Support Seeking Approach	5.10±2.12	0-11	0-12

Table 3. Illustrates the correlation between the scores of the Questionnaire for the Attitudes towards Smoking and the Scale for the Stress Coping Styles Scale

	Attitudes Towards Smoking Questionnaire									
Stress Coping Styles Scale	Attitude towards cigarette itself		Attitude against Smoking		Attitude against Smokers		Participating in the Struggle against Smoking		**Total**	
Active style	0.139	0.090	-0.034	0.685	0.130	0.123	0.011	0.901	0.130	0.121
Passive style	0.234**	**0.005**	0.103	0.221	0.118	0.161	0.106	0.206	0.228**	**0.006**

p<0.01

Despite the known risks of smoking, it is also known that individuals with schizophrenia have a difficulty in quitting smoking (Dolan & Sacco, 2004). The high rate of smoking among patients with schizophrenia is explained in various ways and many researchers associates one of underlying important reasons of this resistance with the general positive neuropsychological effects of nicotine delivery upon patients with schizophrenia, in other words, the "search of self-medication" (Uneri, Tural & Memik, 2006). Accordingly, excessive smoking is a habit that shows a tendency of lasting a lifetime in patients with schizophrenia. Thus, it is a very important activity to quit the smoking in order to protect and promote the mental health.

As a result of this study, a great majority of patients were observed to display a positive attitude towards smoking cessation. It was also remarkable that patients had negative attitudes towards smoking, according to their mean scores in the subscales of Attitude against Smoking and participating in the Struggle Against Smoking. Accordingly, it could be asserted that they were highly aware of the negative effects of smoking.

In the study of Esterberg and Compton (2005) one of the patients with chronic schizophrenia expressed the deleterious effects of smoking on health as follows:

"I have seen that many people that smoke are machine dependent and they are trying to breathe with the help of a large machine right now. It is a quite devastating view.. It is caused by smoking… I don't like smoking, but you know, I have been an addict for a long time.."

Previous studies have stated the psychiatric patients have emphasized the negative aspects of smoking especially in areas like participation in daily and physical activities, financial burden (Lucksted, Dixon & Sembly, 2000; Spring, Pingitore & Mcchargue, 2003). Even though smoking is known to be hazardous, patients attach a greater importance to the positive aspects of smoking rather than the negative aspects and a significant correlation has been found between smoking and emotional factors and stress (Esterberg & Compton 2005). As level of the perceived stress increases among individuals with a serious mental disorder, the smoking increases, as well (Snyder, Mcdevitt & Painter, 2008).) Therefore, patients are recommended to receive a more intensive medication and psychotherapeutic treatment program and social support under excessively stressful conditions.

This study revealed that patients with schizophrenia used mostly the passive style (helpless approach and submissive approach) in coping with stress. Patients with schizophrenia had a tendency of using avoidance and passive coping style in stressful conditions, which enables them to stay away from stress in daily life on one hand and restricts their adaptive skills on the other (Vander-Meer et al., 2013). It was found that due to the complicated underlying pathophysiology of schizophrenia, sensitivities of patients towards their environment and stress changed, and they used negative coping skills under stressful conditions (Gispende-Wied, 2000). Cooke et al. (2007) stated that schizophrenic patients with a restricted insight used the negative coping style and they had an impairment or deficiency in their cognitive functions. The addition of social and internal stigma to mental disorders may cause the development of both the nicotine addiction and the smoking behavior in the ability of patients to cope with stress and anxiety.

Numerous studies examine the relationships between the stress and mental disorders or smoking addiction and mental disorder; however, they fail to examine the correlation between smoking, which is the dependent variable, and stress, which is the independent variable, among individuals diagnosed with schizophrenia. This study determined a positive significant correlation between the passive style, which is one of the subscales of the stress coping style scale, and the total score of the Questionnaire for the Attitudes towards Smoking, and Attitude against Smoking, which is one of its subscales ($r= 0.228$, $p<0.001$; $r=0.234$, $p<0.05$). Accordingly, it was determined that individuals using the passive style in coping with stress displayed a positive attitude towards smoking. When smoking is used as a coping strategy in response to the life stressors, it causes the development of nicotine addiction and the repeated use aimed at coping delays the positive coping style (Morissete et al., 2007).The researchers investigating the psychological aspects of smoking in those with schizophrenia define smoking as a mechanism in coping with stress (Esterberg & Compton, 2005).

This temporary way of coping with unpleasant symptoms leads individuals into a dead end.

Because the inadequacy in smoking cessation causes stress and results in a greater anxiety than in the beginning. In their clinical trial, Solway (2011) explained the three main roles of smoking in the daily life of psychotic patients as follows; smoking is a means used in controlling the stress and it enables us to make interpersonal contacts and meet the needs of peace and comfort.

Due to their perception regarding the lack of control over important events in their lives, patients with schizophrenia experience a greater stress and reaction, and consequently they intensely and frequently smoke as the intervention in order to reduce the perceived stress (Keller & Miller, 2006). One of the most important and positive aspects of smoking for this sample is the decrease of stress and anxiety after smoking.

Patients consider smoking a way of controlling their mood especially when they feel angry or nervous. Smoking is defined as a coping strategy used in decreasing the emotions like anxiety, depression, stress and regulating the negative mood.[1] Being generally used as a way of coping with problems in negative affection situations, smoking is also known to be an ineffective way of coping by patients.

Conclusion and recommendations

The high rate of smoking despite the negative attitudes of patients towards smoking is an important results in this study. Another remarkable result of this study is that the patients developing positive attitudes towards smoking used the ineffective styles in coping with stress.

Although are well aware of the hazards of smoking, they continue smoking since they could not cope with stress. In accordance with these results, it is required to provide a psychosocial support to cope with stress and plan training programs regarding the efficient methods in coping with stress in order to decrease smoking in patients with schizophrenia.

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