THE ROLE OF AFFECT-RELATED SMOKING OUTCOME EXPECTANCIES IN RELATIONS BETWEEN EMOTION DYSREGULATION/NEGATIVE URGENCY AND SMOKING DEPENDENCE

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Approval of the Institute of Social Sciences

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I hereby declare that all information in this thesis has been obtained and presented in accordance with academic rules and ethical conduct. I also declare that, as required by these rules and conduct, I have fully cited and referenced all material and results that are not original to this work; otherwise I accept all legal responsibility.

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ABSTRACT

THE ROLE OF AFFECT-RELATED SMOKING OUTCOME EXPECTANCIES IN RELATIONS BETWEEN EMOTION DYSREGULATION/NEGATIVE URGENCY AND SMOKING DEPENDENCE

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The aim of the present study was to examine the relations between difficulties in emotion regulation/negative urgency and smoking dependence through the mediator roles of affect-related smoking outcome expectancies (i.e., negative affect reduction and boredom reduction expectancies). With this purpose in mind, firstly, the Brief Smoking Consequences Questionnaire – Adult (BSCQ-A; Rash &Copeland, 2008) was adapted into Turkish to measure smoking outcome expectancies of Turkish smokers. Next, two multiple mediation models between emotion dysregulation/negative urgency and smoking dependence with the mediator roles of affect-related smoking outcome expectancies were tested using multiple mediation analyses (Hayes, 2013). The results demonstrated that affect-related expectancies from smoking mediated the relationship between difficulties in emotion regulation and smoking dependence, as well as, the relationship between negative urgency and smoking dependence. In the light of the literature, findings, strengths and implications, as well as limitations and future suggestions of the present study were discussed.

Keywords: Smoking Dependence, Smoking Outcome Expectancies, Negative Urgency, Emotion Dysregulation

ÖZET

DUYGU DÜZENLEME GÜÇLÜĞÜ/OLUMSUZ SIKIŞIKLIK İLE SİGARA BAĞIMLILIĞI ARASINDAKİ İLİŞKİDE SİGARADAN DUYGU İLE İLİŞKİLİ BEKLENTİLERİN ROLÜ

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Bu araştırmanın amacı duygu düzenleme güçlüğü/olumsuz sıkışıklık ile sigara bağımlılık düzeyi arasındaki ilişkiyi incelemek ve bireylerin sigara içme davranışından duygu ile ilişkili beklentilerin ("olumsuz duyguyu azaltması" ve "can sıkıntısını azaltması") bu ilişkilerdeki rolünü belirlemektir. Bu amaç doğrultusunda, öncelikle, Sigaradan Beklentiler Ölçeği-Yetişkin Formu'nun kısa versiyonu (BSCQ-A; Rash & Copeland, 2008) sigara içme davranışından beklentileri belirleyebilmek amacıyla, Türkçe'ye çevrilerek, psikometrik özellikleri belirlenmiştir. Sonrasında ise; sigara içme davranışından duygu ile ilişkili beklentilerin, duygu düzenleme güçlüğü, olumsuz sıkışıklık ile sigara bağımlılık düzeyi arasındaki ilişkideki rolünü belirleyebilmek amacıyla iki çoklu aracı değişken modeli test edilmiştir (Hayes, 2013). Sigaradan olumsuz duyguyu azaltmasını ve can sıkıntısını azaltmasını beklemenin, hem duygu düzenleme güçlüğü ve sigara bağımlılığı ilişkisine, hem de olumsuz sıkışıklık ve sigara bağımlılığı ilişkisine aracılık ettiği raporlanmıştır. Çalışmanın sonuçları, güçlü yönleri ve çıkarımlar, aynı zamanda kısıtlılıklar ve gelecek çalışmalar için öneriler literatür ışığında tartışılmıştır.

Anahtar Kelimeler: Sigara Bağımlılığı, Sigaradan Beklentiler, Olumsuz Sıkışıklık, Duygulanım Düzensizliği

To women who run with the wolves…

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CHAPTER 1

INTRODUCTION

"Smoking is indispensable if one has nothing to kiss"

— Sigmund Freud, 1884

(as cited in Gale, p. 169, 2016)

People have different motives for their smoking behavior. Some expect to be calm down by smoking when they feel nervous or angry; on the other hand, some just report enjoying the flavor of the cigarette. Even if some expect negative smoking consequences such as taking the risk for heart disease or lung cancer by smoking, they maintain to smoke. Which factors might lead people to these motivations about smoking behavior and also, to smoking dependence? Can some of these expectations vary in women and men and/or differentiate depending on the factors such as their education level, perceived socioeconomic status etc.?

In this study, the focus was to address these issues and more. Based on the Smoking Expectancy Theory (Brandon & Baker, 1991), psychological factors (i.e. emotion dysregulation and negative urgency) and affect-related smoking expectancies were proposed to be related with smoking dependence. More specifically, smoking dependence was suggested to be related with emotion dysregulation and negative urgency constructs, and also, affect-related smoking outcome expectancies were suggested to be potential mediators of the relationship between smoking dependence and emotion dysregulation/negative urgency. With these suggestions, firstly, the Brief Smoking Consequences Questionnaire – Adult (BSCQ-A; Rash &Copeland, 2008) was adapted into Turkish to measure smoking outcome expectancies of Turkish smokers. Then, two multiple mediation models between emotion

dysregulation/negative urgency and smoking dependence with the mediator roles of affect-related smoking outcome expectancies were tested using multiple mediation analyses (Hayes, 2013).

In accordance with the purposes of the study, in the forthcoming parts of this chapter, firstly, the literature about smoking dependence was given. Secondly, the literature about emotion dysregulation in relation with smoking dependence was presented. Thirdly, the literature about negative urgency concept as a sub-dimension of impulsivity and smoking dependence was presented. Fourthly, the mediating roles of affect-related smoking outcome expectancies on the relations of emotion dysregulation/negative urgency and smoking dependence under the title of smoking outcome expectancy were discussed. Lastly, the aims of the present study were explained.

1.1. Smoking Dependence

1.1.1. Definition of Smoking Dependence

An unmanageable addiction on cigarettes is known as smoking dependence in which drastic psychological (behavioral, cognitive, and affective) and/or physical reactions would take place if a person quits smoking (Slowik, 2013). According to National Institute on Drug Abuse (NIH), in spite of negative health outcomes, compulsive drug craving and its abuse is the determinants of addiction (2016). The underlying cause of smoking dependence is the nicotine drug involved in tobacco and consumed substantially via cigarettes (Benowitz, 2008; Benowitz, 2009). Therefore, in dependence literature, it is possible to encounter more than one denotation in relation with the construct such as nicotine dependence, tobacco dependence, and smoking dependence and to see interchangeable use of terms.

As Baker, Breslau, Covey, and Shiffman (2012) informed, in the past, both Diagnostic and Statistical Manual of Mental Disorders Third and Fourth Edition (DSM-III, 1980; DSM-IV, 1994) and International Classification of Diseases Tenth Edition (ICD-10, 1992) identified respectively the terms, “nicotine dependence” and “tobacco dependence” and comprised criteria to categorize people as dependent or

non-dependent. Dependence is described in the DSM-IV (1994) as the use of nicotine in a maladaptive way that gives rise to clinically substantial impairment or distress, as shown by three (or more) of seven criteria (i.e., the presence of tolerance, existence of withdrawal syndrome, quit attempts without success, larger and longer amount of usage, becoming inactive in certain areas of life for use, wasting a substantial time to acquire, use or recover from drug use, and using in spite of harm), happening meanwhile in a 12 month period. In regard to ICD-10 clinical description, the dependence syndrome is "a cluster of physiological, behavioral, and cognitive phenomena in which the use of a substance or a class of substances takes on a much higher priority for a given individual than other behaviors that once had greater value" (1992). Based on these classification systems, dependence is assessed dichotomously that one is either nicotine dependent or not (Mwenifumbo & Tyndale, 2010). Researchers have criticized these resembling systems' existing measurement performance in comparison with other dependence measures and recommended significant revision, especially, for DSM criteria and scoring strategies (Baker, et al., 2012). The latest version of DSM, namely, DSM-V (2013) includes the term "tobacco use disorder" in its content. It presents a problematic pattern of tobacco use manifested in the presence of at least two of the eleven diagnostic criteria list. As it can be understood from the increase in number of diagnostic criteria, the new version of DSM has focused on different aspects of tobacco use disorder such as using tobacco and tobacco products recurrently, in potentially dangerous situations such as smoking in bed.

As being alternatives to medical and psychiatric perspective on dependence like DSMs, there have been other instruments developed to look at dependency via self-reports of smoking behavior, such as the Fagerström Test for Nicotine Dependence (FTND; Heatherton, Kozlowski, Frecker, and Fagerström, 1991), the Nicotine Dependence Symptom Scale (NDSS; Shiffman, Waters, & Hickcox, 2004), and so on. FTND and the Fagerström Tolerance Questionnaire (FTQ; Fagerström, 1978) have been frequently used ones that assume individuals' dependency as a continuous variable varying in its degree. Moreover, their ease of use and higher-level prediction of outcomes have been the reason of widely use. In contradiction to the diagnostic perspectives, a specifical explanatory model of dependence, based on the belief that a

physical dependence/tolerance process lead to dependence signs and symptoms (suggested in the DSM), draws a frame for the development of the Fagerström scales (Fagerström & Schneider, 1989). Therefore, these scales make a dependence assessment taking into consideration the gradations, and these gradations are suggested to represent the strength of physical dependence/tolerance processes.

For most users of tobacco products, specifically cigarette smokers, psychological dependence beside physical dependence has been a strong factor in relation with nicotine dependence (Acharya, 2008). The reason behind the psychological dependence is that smoker makes an association with smoking behavior and enjoyable moments which also functionally serves as a negative reinforcement mechanism; that is to say, undesirable emotions such as anxiety, boredom, anger, and other negative emotions diminish in short run, by using nicotine. Therefore, physical dependence along with psychological dependence makes defamiliarization more difficult. Comprehension of the level of physical dependence seems critical to designate the proper treatment. Moreover, determining the factors associated with dependence is crucial to comprehend the construct and determine appropriate strategies to make the habit broken.

1.1.2. The Prevalence of Smoking

Smoking is one of the most important and preventable public health problems of the world and of our country due to its being a widespread dependence type as well as the adverse effects of the substances in cigarette and its smoke on human health. Tobacco epidemic as addressed by the World Health Organization (WHO) is among the biggest public health problem in the world, causing the death of approximately 6 million people in a year (2016). Among those deaths, direct tobacco use kills more than 5 million people whereas being exposed to second-hand smoke kills more than 600.000 non-smokers. In the U.S., smoking is liable for a predicted $300 billion in healthcare expenses every year (Center for Disease Control and Prevention [CDC], 2016). Despite the fact that the harmful effects of tobacco use have been increasingly well reported by health care professionals and organizations and those effects have been known by many smokers, smoking behavior is still taking place as a serious issue to promote health. To realize country-wide trends in prevalence and

consumption plays a crucial role in taking action and forming an estimate of tobacco control progress.

The *WHO Global Report on Trends in Prevalence of Tobacco Smoking*, published in 2015, gave place to the both estimations for current and daily tobacco and cigarette smoking for the years 2000, 2005, 2010, and 2013 and projections for the years 2015, 2020, and 2025 relied on the trends of previous years. Based on this report, the results of the soonest time, for the year of 2013, showed that those being 15 years old and over and smoking currently were about 21.2 % of the world's population (35 % of males and 6 % of females). Also, there was a decrease in this prevalence in comparison with previous years, 26.5 % in 2000, 24 % in 2005, and 22.1 % in 2010. The projected prevalence will be 18.9 for the year 2025, if tobacco control measures, which were put into practice by countries within time period of 1990-2010, go on with similar consistency. In terms of these estimations, although the percentage of the prevalence of smoking is diminishing globally, the number of smokers has increased and is expected to increase in a close future by reason of population growth. Numerically, while the number of smokers is approximately 1.1 billion, it is expected to reach 1.15 billion by 2025.

Country-specific data for 2013 demonstrated that the majority of the smokers' population, about two-thirds of the world's smokers, were individuals living in only 13 countries, including Bangladesh, Brazil, People's Republic of China, Germany, India, Indonesia, Japan, Pakistan, Philippines, Russian Federation, Turkey, United States, and Viet Nam (WHO, 2015). In numeric expression, there were 736.3 million smokers consisted 646.2 million male and 90.1 million female smokers living in these 13 countries, whereas the rest of 376.9 million smokers were living in the remaining countries. Among these countries, China accounted for the majority of the world's male smokers with a number of 292.1 million (31.1%). When it was looked at the female smokers' prevalence, in spite of low ebb, China, due to its population density, was the third largest country with the highest numbers of female smokers (11.5 million), subsequently, the United States (21 million) and the Russian Federation (12.8 million). The same report declared that the number of current

tobacco smokers (≥ 15 years) was 11.5 million for males and 3.8 million for females with a total number of 15.3 million, in the context of Turkey.

Globally, the statistics of youth population as those people aged 13-15 indicated that there were 25 million youth current smokers with a total of 7 percent, involving about 9 % of boys and 4.5 % of girls (WHO, 2015). The rate of cigarette smoking is higher for boys in comparison with girls; however, the discrepancy between the smoking rate of boys and girls is a lot fewer than the discrepancy between men and women.

The smoking issue is particularly peaked in many developing countries like Turkey (Can, Çakırbay, Topbaş, Karkucak, & Çapkın, 2007). Turkish Statistical Institute carried out a research, namely, *the Global Adult Tobacco Survey* in 2008 and repeated it in 2012 to obtain information about tobacco and tobacco products use by adults and to provide data to decision makers and researchers in this regard. According to main findings of these researches, 31.3% of individuals aged 15 years and/or older are daily or occasionally using tobacco and tobacco products in 2008, while this ratio has decreased to approximately 27% in 2012. Specifically, when gender statistics was taken into consideration from 2008 to 2012, the smoking rate has decreased from 47.9 % to 41.1 % for men and from 15.2 % to 13.1 % for women. According to age statistics, among smokers of 2012, 25-34 and 35- 44 age group individuals most declared that they daily or occasionally use tobacco and tobacco products. For 25-34 age groups, smoking rate was 40.3 % in 2008, while it was 34.9 % in 2012. For 35-44 age groups, smoking rate was 39.6 % in 2008 and 36.2 % in 2012. Moreover, Turkish Statistical Institute (2012) also reported that from 2008 to 2012, the rate of women attempting to stop using tobacco and tobacco products in the last 12 months increased from 40.8 % to 44.9 %. The same rate for men was 40.5% and 41.8%, respectively. The rate of individuals who was planning to stop tobacco and tobacco products use within 12 months was 27.8% for 2008 and 35.4% for 2012.

1.1.3. Negative Consequences of Smoking on Health

Tobacco smoking, especially in the form of cigarettes, has been, in general, identified as a factor jeopardizing individuals' health status by causing vast of

diseases and increasing the risk of death both in middle and old age (Peto & Doll, 2005). There have been numerous studies explaining the greatness of the risk and defining a wide range of diseases related to smoking (Cheng & Mohammed, 2015; Khan, Stewart, Davis, Harvey, & Leistikow, 2015; Pinto, Pichon-Riviere, & Bardach, 2015).

The relationship between tobacco and diseases was first stated in the year 1761 by the British doctor John Hill, in his *"Cautions against the Immoderate Use of Snuff"* report which has been also known as the first tobacco-cancer research in the history (as cited in Haustein, 2003, p. 12). In the 18th and 19th century, the observation reports in relation with the dangerous and life-threatening effects of the smoking habit became widespread (Proctor, 2004). The link was established between tobacco snuff and cancer of the nose in 1761 by John Hill, between tobacco snuff and lip cancer in 1787 by Percival Pott, and tobacco snuff and mouth cancer in 1858. Since they have been seen with ease, tobacco cancers of the lips, mouth, and tongue were initially identified.

In parallel with the growth of tobacco consumption in the late 19th and early 20th century, the habit had also been popular in America (Proctor, 2004). In 1964, with the petition of President John F. Kennedy, a report, namely *Smoking and Health: Report of the Advisory Committee of the Surgeon General of the Public Health Service* was written and published by Luther L. Terry, M.D., Surgeon General of the United States (U.S. Department of Health and Human Services, 2014). After this first report, in 2014, a report of Surgeon General was released about the health consequences of smoking including the change from the year 1964 to 2014. Consequently, in addition to the findings previously mentioned in other Surgeon General's reports about the existing causal associations between active cigarette smoking and cancer types such as bladder cancer, cervical cancer, esophageal cancer, kidney cancer, larynx cancer, acute myeloid leukemia, cancers of the oral cavity and pharynx, pancreatic cancer, and gastric cancer, 2014's report of Surgeon General additionally and in an updated form made mention of the existence of the causal relations between active cigarette smoking and cancer types such as breast cancer, colorectal cancer, hepatocellular carcinoma as a type of liver cancer, and lung cancer.

For cardiovascular diseases, subclinical atherosclerosis, stroke, and coronary heart disease were among previously mentioned diseases of Surgeon General's reports that associated with active smoking, whereas early abdominal aortic atherosclerosis in young adults was added to this list from the conclusions of 2012/2014 Surgeon General's reports. For respiratory diseases, until the year of 2012, asthma, all major respiratory symptoms among adults, involving coughing, phlegm, wheezing, and dyspnea, acute respiratory illnesses, involving pneumonia, asthma-related symptoms (i.e., wheezing) in childhood and adolescence, impaired lung growth during childhood and adolescence, the early onset of lung function decline during late adolescence and early adulthood, and respiratory symptoms in children and adolescents, including coughing, phlegm, wheezing, and dyspnea were among the reported diseases that causally related with active smoking, whereas chronic obstructive pulmonary disease (COPD), tuberculosis, reduced lung function and impaired lung growth during childhood and adolescence were additionally reported diseases of 2012/2014 Surgeon General's report that causally related with active smoking. Based on the extra or updated determinations of the 2014 Surgeon General's report, there was enough evidence to derive a causal association between maternal smoking in early pregnancy and orofacial clefts, between smoking and erectile dysfunction, and between maternal active smoking and ectopic pregnancy. The causal relationships between active cigarette smoking and dental caries, between active cigarette smoking and diabetes, cigarette smoking and neovascular and atrophic forms of age-related macular degeneration were also additionally reported as the negative health outcomes of active cigarette smoking, in the 2014 Surgeon General's report.

Specifically, the risk and burden of heart disease mortality in relation with smoking was also demonstrated by the results of a prospective analysis (Khan et al., 2015) that was the nationally representative study carried on U.S. population aged 18-44 years. In this study, the combination of 8 years of the National Health Interview Survey data (NHIS) (1997–2004) and their connection with death reports partaking at the database of National Death Index which shows mortality reexamination statistics during the time period of the NHIS interview was taken into consideration. According to the results of these analyses, both female and male current smokers had

significantly higher mortality risk from all heart diseases than never smokers after the control of critical confounding variables. With numerical expression, there was twice and four times more adjusted risk of all heart disease deaths for male and female current smokers, respectively, in comparison with male and female never smokers. The comparison of current smokers with non-current smokers also yielded the same risk with stronger associations.

1.1.4. Risk Factors of Smoking

Smoking behavior is an important and complex problem that needs to be addressed from biological, environmental, psychological, and sociological aspects (Haire-Joshu, Morgan, & Fisher, 1991). So far, there have been many studies in the relevant literature that investigated the determinants of cigarette smoking in general population and/or in specific, different groups of smokers (e.g., adolescents) and identified risk factors for smoking (Sher, 2016; Pedersen & Soest, 2017).

In brief, these factors have been frequently reported, but not limited to, gender, age, education level, socioeconomic status (SES), marital status, family members' smoking status, and peer smoking status which would be examined in the present study (Aktürk et al., 2015; Atak, 2011; Dereje, Abazinab, & Girma, 2012; Doğan & Ulukol, 2010; Ertas, 2006; Espinoza & Monge-Najera, 2013; Genna, Goldschmidt, Day, & Cornelius, 2017; Hassoy, Ergin, Davas, Durusoy, & Karababa, 2011).

Smoking trial at an early age has been seen as a strong determinant of cigarette smoking in further years (Conrad, Flay, & Hill, 1992). In this regard, it is critical for youths to meet with cigarette and their first smoking experience. In Turkey, a decline was reported at the age of starting smoking (Ertas, 2006). Since starting smoking at an early age is a powerful factor in predicting adulthood cigarette dependence, distinguishing the reasons behind youth tobacco use and determining its prevalence seems crucial. Globally, the range of smoking prevalence was between 15 to 60 % among adolescents and the rate of tobacco consumption was 80 % in developing countries (as cited in Aktürk et al., 2015). When it was looked at Turkish statistics, Ergüder, Soydal, Uğurlu, Çakır, and Warren (2006) performed a nationally representative study with 15.957 students whose age range was between 13 and 15.

They reported that those who had already experienced the cigarette smoking formed one-third of the study sample and 10 % of the sample were currently smoking. In his research, trying to explore psychosocial determinants of smoking behavior, Atak (2011) stated that participants started cigarette smoking at most in high school, that is, at the time of adolescence. In another study conducted with adolescents, it was observed that the frequency of smoking increased with age (Doğan & Ulukol, 2010).

Furthermore, studies conducted in different cultures and in different age groups have found that cigarette use is more common in men and boys as compared to women and girls (Ergüder et al., 2006; TSI, 2012; WHO, 2015). In terms of *Global Adult Tobacco Research*, in comparison with the year 2008, the percentage of tobacco and tobacco users decreased by 6.5 points for men and by 2.1 points for women in 2012; however, the use of tobacco and tobacco products by men (% 41.4) was still higher than women (% 13.1). This result is supported by another study conducted in Turkey and by global findings (Dereje et al., 2012; Hassoy et al., 2011; Pedersen & Soest, 2017; WHO, 2015).

Education level has also been investigated as a risk factor for smoking. According to studies that identified the role of education level on smoking, as the level of education increases, the frequency and intensity of smoking decreases (Eriksen, Mackay, & Ross, 2012). Another similar finding demonstrated that chronic smoking was mostly seen on less educated mothers (Genna et al., 2017). According to the Ministry of Health of Turkey's report, contrary to most developed countries, the frequency of smoking increased in parallel with the level of education in Turkey (2010). The rate of smoking was found to be as 53 % for secondary school graduates, 13 % for illiterates. Although the smoking rate of university graduates was lower than high school graduates, it was still higher than the smoking rate of illiterates.

Socioeconomic status has been also reported as an important factor that played a role in adults' smoking (Pedersen & Soest, 2017). Individuals with low-SES characteristics were more likely viewed as being 'hard core' smokers by showing no attempt to quit smoking in the past 12 months, having no plan to quit, and smoking above 15 cigarettes in a day (Clare, Bradford, Courtney, Martire, & Mattick, 2013). There is suggestive evidence of the reviews on socioeconomic status and smoking

association that consumption is more frequent among low SES groups (Hiscock, Bauld, Amos, Fidler, & Munafo, 2012). However, the evidence in relation with negative association between the success of quit attempts and SES is reviewed as strong.

As being an associated factor with smoking, marital status has been investigated by researchers. In a study that looked into the effect of marriage on Korean people's smoking prevalence, the smoking rate of unmarried people was found to be higher in comparison with married ones (Cho, Khang, Jun, & Kawachi, 2008). Also, this effect was higher-up for women than men. Similarly, Espinoza and Monge-Najera reported that bachelors consumed tobacco more than married counterparts (2013).

The role of family in smoking behavior has been investigated in different ways such as parent-adolescent relationship (Mahabee-Gittens et al., 2011), family conflict (Flay, Hu, & Richardson, 1998), and family members' smoking status (Avenevoli & Merikangas, 2003; Leonardi-Bee, Jere, & Britton, 2011). The findings of a meta-analysis revealed that there was a strong association between parental smoking and smoking among youth (Leonardi-Bee et al., 2011). Moreover, in another study, the influence of older siblings was found to be more consistent predictor of youth smoking in comparison with parents' smoking (Conrad et al., 1992). For youths, smoking behavior may be the result of the identification that develops with admiration toward smoking parents or siblings.

Another important risk factor of smoking has been assessed as peer smoking. Aktürk et al. (2015) performed a study with the aim of determining the reasons of smoking among high school students and found out that the reasons of having friends who smoke, exam-related stress, and family problems were among the most shared reasons for participants. Furthermore, in terms of the findings, the risk of smoking was 8 times higher for students having friends who smoke. The findings of this study; that is to say, there was an association between smoking and having friends who smoke, were in parallel with other researchers' findings (Dereje et al., 2012).

In addition, having physical illness (Yarış, 2010) and having psychological illness (Breslau, 1995; Covey & Tam, 1990) which would be examined in the present study

have been also positively associated with smoking behavior and with smoking dependence in the literature.

To sum up, a variety of variables including personal ones (age, gender, education level, SES, marital status, having physical illness, and having psychological illness) and others related ones (family members' smoking status and peer smoking status) have been frequently recommended as critical risk factors for smoking behavior and smoking dependence. When it was looked at the findings of the relevant literature, it is not surprising to see equivalent findings for most of these factors. Moreover, even if there is a strong association between one of these variables and smoking dependence, it is not clear that this finding reflects a causal effect. Therefore, they can only be seen as crucial risk factors for smoking behavior and dependence, and to arrive more definitive results, further research is needed.

Apart from these risk factors mentioned above, maladaptive emotion regulation strategies, urgency as a sub-dimension of impulsivity, and smoking outcome expectancies were proposed as related variables with smoking dependence in the present study. The descriptive information related to these variables and the research conducted up to now with these variables and findings about them are the subject of the following sections.

1.2. The Role of Emotion Dysregulation

One of the psychological variables assumed to be correlated with the development of smoking dependence was difficulties in emotion regulation. Thompson (1994) characterized emotion regulation as the processes by which individuals extrinsically and intrinsically try to monitor, evaluate, and modify their emotional responses, specifically, intensified and transient characteristics of these responses, in order to fulfill their goals. Similarly, another emotion regulation definition assumed that it refers to the arrangement of emotions, either voluntarily or involuntarily, for reaching a wanted outcome (Aldao, Nolen-Hoeksema, & Schweizer, 2010). According to Gross (1998/2002), emotion regulation is the processes through which individuals use emotion regulatory strategies (i.e., situation selection, situation modification, attentional deployment, cognitive change, and response modulation) to

affect which emotions they experience, when they experience them, and how they have and enounce them. The modulation of emotion experience instead of the use of suppression or elimination for specific unpleasant emotions was described as the requirement of healthy or adaptive emotion regulation (Gratz and Roemer, 2004). Furthermore, Gratz and Roemer (2004, p. 52) introduced the existence of difficulties in emotion regulation with the presence of six distinct dimensions, namely, (a) "lack of awareness of emotional responses", (b) "lack of clarity of emotional responses", (c) "no acceptance of emotional responses", (d) "limited access to emotion regulation strategies perceived as effective", (e) "difficulties controlling impulses when experiencing negative emotions", and (f) "difficulties engaging in goal-directed behaviors when experiencing negative emotions". To sum up, many researchers has paid attention to comprehensively highlighting the role of emotion regulation, and their conceptualization of emotion regulation included, briefly, emotional awareness, understanding, and, acceptance, and their modulation when it was needed (e.g., to reach a goal), and also, behaving in an appropriate way despite the hardness of emotional situation.

The use of maladaptive emotion regulation strategies has been the subject of health psychology and health behavior research. For instance, Ferrer, Green, and Barrett (2015) addressed the influence of emotion regulatory processes on cancer risk and prevention behaviors. Moreover, DeSteno, Gross, and Kubzansky (2013) put forward that difficulties in emotion regulation strategies affect health behaviors through weakening the recognition of symptoms, making trouble at talking about health problems, delay to seek help in relation with health, difficulty with dietary adherence, making an appointment for check-up, doing exercises, using efficacious coping skills, and activating social support mechanisms. Possible effects of emotions on health was categorized as direct like forming physiological reactions and indirect like leading decision making and behavior (DeSteno et al., 2013).

Difficulties in emotion regulation have been also suggested to play a role in the tobacco addiction development and failure of smokers trying to stop smoking (Wu et al., 2015). The association between nicotine addiction and the use of emotion regulation strategies has been addressed by previous studies. Consistently, the

findings demonstrated that more frequently use of unhealthy strategies such as suppression was related with starting smoking early, increased smoking urges, and failure to quit smoking (Fucito, Juliano, & Toll, 2010). On the other hand, findings also showed that using reappraisal strategies regularly was related with reduction on cigarette urge, increase in positive mood, and decrease in depressive symptoms. Moreover, in terms of negative affect model of tobacco use, individuals with high negative affect with a combination of deficiency in emotion regulation have greater tendency to have difficulty in cessation (Brown, Lejuez, Kahler, Strong, & Zvolensky, 2005; Baker, Piper, McCarthy, Majeskie, & Fiore, 2004; Kenford et al., 2002).

The critical and complex role of emotion regulation on substance use disorders has been enlightened by Hedy Kober in *Emotion Regulation in Substance Use Disorders* chapter of *Handbook of Emotion Regulation* (2014, p. 428). According to Kober, acute drug intoxication plays a role in emotion regulation; that is to say, the reason behind the usage of drugs is to modify present emotional state. Enhancement of positive affect, reduction in negative affect and/or in cravings may be examples of this association. Kober claimed that emotion regulation enacts as a potential cause for drug use, as well as a potential consequence of drug use (2014). Specifically, in his argument, nonadaptive emotion regulation during childhood and adolescence is suggested to be both an early risk factor and/or distal cause for the further development of substance use disorders. Moreover, having difficulty to regulate our emotions in certain times has been argued as a proximal causal factor for examples of drug use in individuals whose health currently deteriorated due to substance use disorders. Also, substance use disorders were suggested as the markers of deficiency in adjustment of an appetizing condition – drug craving, which is the constituent of these disorders.

According to pharmacological explanation, drugs can play a part in emotion regulation by changing individual's present state (e.g., alcohol for reducing anxiety; Kober, 2014). Systematically, the negativity-reduction effects of drugs have been proposed as leading to negative reinforcement which in turn strengthens the probability of later drug use (Koob & Le Moal, 2008). This point of view, primarily,

became widespread through the *self-medication hypothesis* suggested by Khantzian (1985). The self-medication hypothesis has two fundamental elements as follows: (1) predisposing factor for drug use of individuals are uncomfortable emotional states, and (2) individuals do not select in a random way the drug for use; instead, the choice comes from the drug's natural effect on enhancement of the current negative state that makes into a specific drug more or less reinforcing.

Smokers have consistently been reported to use nicotine drug to regulate their negative emotions (Brown, Kahler, Zvolensky, Lejuez, & Ramsey, 2001; McChargue, Spring, Cook, & Neumann, 2004). Apart from pharmacological explanation, the expectancy hypothesis that assumes learned pairings between particular behaviors and outcomes of engaging in that behavior is in agreement with smokers' reports that smoking makes them relieved by reducing anxiety or anger (Brandon & Baker, 1991). Also, a variety of theories of substance use and relapse has been paid attention to motivations in regard to substance use for regulating mood (e.g.., Carmody, Vieten, & Astin, 2007; Tiffany, 1990). According to Sjöberg and Johnson (1978), regular smokers using smoking as a regulatory process for mood states may experience stressors when trying to stop smoking, and then, this experience may cause cognitive distortions. In further statements, they indicated that in craving state, the goal of behavioral restriction turns to processing the craving thoughts by some cognitive resources. This "mood pressure" leads to impairment in higher-level cognitive processing and so, an increase occurs in the probability of lapses. Therefore, expectancies for negative-affect regulation may be a fundamental element of comprehending the role of emotion and emotion regulation in smoking.

In sum, as being a multifactorial construct, emotion dysregulation has been reported as having the predictive ability in accounting for smoking behaviors of individuals (Novak & Clayton, 2001; Wills, Walker, Mendoza, & Ainette, 2006), and their smoking relapse (Kassel, Stroud, & Paronis, 2003). Particularly, individuals high in emotion dysregulation have been demonstrated to be more prone to smoke (Cheetham, Allen, Yücel, & Lubman, 2010) and also, affect-related expectancies have been reported as an important factor for smoking (Brandon & Baker, 1991).

1.3. Negative Urgency as a Subdimension of Impulsivity

Among cigarette smokers in comparison with overall population, several maladaptive personality traits have been determined as more prevalent (Gilbert & Gilbert, 1995). Doran, Cook, McChargue, and Spring (2009) suggested that pre-existent psychological and biological traits have a role in risk-increasing of initiation and in inhibiting ability to quit for smokers. The research area of traits and smoking have mostly concentrated on traits specifically related with negative affect, such as neuroticism (Lerman et al., 2000; Waters, 1971), hostility (Weiss et al., 2005; Whiteman, Fowkes, Deary, & Lee, 1997), depression proneness (Friedman-Wheeler, Ahrens, Haaga, McIntosh, & Thorndike, 2007), trait anxiety (Canals, Domenech, & Blade, 1996) and anxiety sensitivity (Comeau, Stewart, & Loba, 2001). On the other hand, researchers recently reveal the effect of traits related with appetitive, reward-seeking behavior, like impulsivity, on smoking behavior (Doran, Spring, McChargue, Pergadia, & Richmond, 2004; Schepis et al., 2008).

As being viewed as a potential factor for smoking behavior (Mitchell, 1999), impulsivity, has lacked a consistent definition that exists in the literature (Doran et al, 2009). The definitions made up to now have involved being unwary, impatient, difficulty in practicing delayed gratification, seeking for immediate pleasure, and having tendency toward risky behavior (Mitchell, 2004). Also, Evenden (1999) conceptualized impulsivity as including a broad range of "actions that are poorly conceived, prematurely expressed, unduly risky, or inappropriate to the situation and that often result in undesirable outcomes" (p. 348). Whiteside and Lynam (2001) mentioned that difficulty in defining the concept has led to a complication of using alternative labels for equipollent constructs, including disinhibition (Zuckerman, 1994) or constraint (Tellegen, 1982).

Recently, researchers have accepted impulsivity as a multifactorial construct. Whiteside and Lynam (2001) have taken steps in the direction of identifying and separating several psychological traits that had been formerly banded together as impulsivity in the previous literature. Using the Five-Factor Model of personality (FFM; McCrae & Costa, 1990), they presented a 4-factor model of impulsivity, namely, *urgency, lack of premeditation, lack of perseverance*, and *sensation seeking*

(Whiteside & Lynam, 2001). The first factor, *urgency* was defined as the tendency toward experiencing powerful impulses, often accompanied by negative emotions. The higher an individual's score in urgency, the more likely this person will attempt impulsive behaviors because of relieving negative affects even if these actions lead to the detrimental outcomes in long run. The second factor, *lack of premeditation* was conceptualized as the tendency toward thinking and reflecting the outcomes of a behavior prior to attempting that behavior. While low scores in this factor are the markers of being thoughtful and deliberative, high scores represent behaving on the spur of the moment and not weighing the consequences. *Lack of perseverance*, the third factor, was the ability of concentrating a task despite difficulty or boringness of that task. Low scorers have the ability to finish projects and work in the jobs that need to be resistant to distracting stimuli. According to Whiteside and Lynam, (2001) individuals high in this factor, cannot motivate themselves about doing something for themselves, as stated by Costa and McCrae (1992) as well. As being the fourth and also, the last factor, *sensation seeking* included two aspects within its conceptualization as follows: (1) having a preference for liking and following exciting activities and (2) becoming open to newly experiences without considering whether they are dangerous or not (Whiteside and Lynam, 2001). Individuals high in sensation seeking are assumed to be more likely taking risks and attempting in detrimental activities in comparison with individuals low in this factor.

Later, researchers suggested to extend the Whiteside and Lynam's four–factor model of impulsivity by adding a factor, namely, *positive urgency* to the model since the model did not include impulsive behavior occurring from positive mood states (Cyders et al., 2007). Therefore, the existing *urgency* factor was renamed as *negative urgency.* While negative urgency reflects to have a preference for acting rashly in response to negative emotions, positive urgency is characterized by tendency to behave rashly with that positive emotions.

Among all these facets of impulsivity, urgency domain has been assumed to have incomparable and clinically considerable association with a variety of different risk taking behaviors, involving substance use (Cyders & Smith, 2008). The literature has been fruitful with the studies that have made comparisons of predictive power of

urgency as against other impulsivity-related traits relative to risk-taking and substance use (Smith & Cyders, 2016) and these studies have put support behind the unique function of urgency on a lot of risk-taking behaviors such as risky sexual acts (Deckman & DeWall, 2011), use of illegal drug (Zapolski, Cyders, & Smith, 2009), problematic alcohol use (Anestis, Selby, & Joiner, 2007; Stautz & Cooper, 2013), gambling (Canale, Vieno, Griffiths, Rubaltelli, & Santinello, 2015), and tobacco use (Pang et al., 2014). Smith and Cyders (2016) suggested that negative urgency was a significant trait that accounted uniquely for problematic levels of risk-taking. For instance, although there was an association between sensation seeking and the frequency of substance use (Wood, Cochran, Pfefferbaum, & Arneklev, 1995), negative urgency was significantly related to problematic levels of alcohol use (Fischer, Smith, Annus, & Hendricks, 2007).

Specifically, when it was looked at the relation of impulsivity with tobacco use, there have been consistent findings that smokers were more impulsive than nonsmokers (Kassel, Shiffman, Gnys, Paty, & Zettler-Segal, 1994; Mitchell, 1999). As being a broad construct, impulsivity has been reported as related with adolescent smoking (Burt, Dinh, Peterson, & Sarason, 2000), whereas negative urgency, which has been shown as one of the most consistent trait of impulsivity predicting smoking behaviors (Dir, Banks, Zapolski, McIntyre, & Hulvershorn, 2016), has been viewed to be related with smoking initiation, maintenance, and relapse (Bloom, Matsko, & Cimino, 2014; Combs, Spillane, Caudill, Stark, & Smith, 2012; Doran et al., 2013).

In sum, in addition to its emphasis on personality, negative urgency seems to play an important role on smoking behavior. Although there have been a variety of research conducted frequently to understand the prominent role of negative urgency on problematic alcohol use (Fischer, Settles, Collins, Gunn, & Smith, 2012; Spillane, Cyders, & Maurelli, 2012), an important advance in understanding the smoking dependence has also been the recognition of negative urgency (Pang et al., 2014).

1.4. Smoking Outcome Expectancy

Expectancy theory has emerged from the work of Tolman (1932; as cited in Bitterman, LoLordo, Overmier, & Rashotte, 1979). As being a cognitive theory, it

has been beneficial on standing the breach between past experience and further behavior of an individual (Goldman, 1989). In simple terms, expectancy is a belief that an individual keeps about events in the world. As individuals grow up, they begin to learn about smoking behavior and its correlates from their families, their friends, their teachers, or from exposure to the media etc. by observing what they do, what they told, by taking education in schools, by watching the use of cigarettes on TV, by reading about it, by seeing advertisements about it or seeing campaigns against the use of it. Next, not surprisingly, the beliefs about smoking behavior as well as other behaviors are formed at an early age (McMurran, 1994).

Outcome expectancy, one particular type of these beliefs, is known as the information in regard to the association between behavior and behavioral consequences (McMurran, 1994); the information that if tobacco use occurs, then a particular consequence will come after. As illustrated, this prevenient *if-then* association between events is the defining characteristic of outcome expectancy and motivates individuals for attempting or not attempting to certain behaviors based on their perceptions about that behavior. Similarly, Bandura's Social-Learning Theory (also known as Social Cognitive Theory, SCT) that has contributed to the development of Expectancy Theory, assumed that an individual's behavior is depending "more on what they believe than on what is objectively true" (1997, p. 2).

As being an integrative theory, SCT has concentrated on learning basis with cognitive psychology to account for how individuals attempt a behavior in social context (Bandura 1977, 1986). By way of observation and personal interaction, individuals can form value, improve knowledge, develop skills and self-efficacy (Simons-Morton, Greene, & Gottlieb, 1995). According to SCT, human behavior is under the powerful influence of positive and negative outcomes of engaging that behavior (Bandura, 1986).

Although outcome expectancies are thought as a functional way to guarantee survival in a dynamic environment by helping continual behavioral adjustment, with regard to substance use, research has suggested that they can be maladaptive (Goldman, 2002; Goldman, Darkes, Reich, & Brandon, 2006). Recently, addiction models, specifically those fed on cognitive or social learning perspective, have taken into consideration

outcome expectancy as a central construct (Kristjanssona et al., 2011). The theory of these models is that an individual decides whether or not to use a substance according to its anticipated positive and negative consequences combined with its use. Although negative outcome expectancies are considered to prevent substance use and relapse, positive ones are seen to have the opposite effect.

By comparison with alcohol expectancies literature, there exist a number of studies determining factor structure of smoking outcome expectancies (Bauman & Chenoweth, 1984; Brandon & Baker, 1991; Copeland, Brandon, & Quinn, 1995; Rash & Copeland, 2008; Wetter et al., 1994). Bauman and Chenoweth (1984) with their work on adolescents reported six factors of smoking outcome expectancies, which are *Negative Physical/Social, Positive Peer Relationships, Negative Peer Relationships, Habit, Health,* and *Pleasure*. They established a link a between increased smoking and *Pleasure* factor, and between smoking initiation and *Negative Physical/Social* and Pleasure scales as well.

The present smoking outcome expectancy research area has revealed different factor structure of these expectancies with both different factor names and factor numbers. For instance, in Brandon and Baker' study (1991), four reliable dimensions were assessed by the development and application of Smoking Consequences Questionnaire (SCQ), namely, (1) *Negative Consequences,* (2) *Positive Reinforcement/Sensory Satisfaction,* (3) *Negative Reinforcement/Negative Affect Reduction, and* (4) *Appetite/Weight Control.* Through this study, the hypothesis that more experienced smokers would have the most positive smoking outcome expectancies, while less experienced ones would have the least positive smoking outcome expectancies was supported. Subsequently, Copeland et al. (1995) developed the adult version of SCQ and the findings yielded a 10-factor solution, namely, (1) *Negative Affect Reduction*, (2) *Stimulation/State Enhancement*, (3) *Health Risks*, (4) *Taste/Sensorimotor Manipulation*, (5) *Social Facilitation*, (6) *Appetite/Weight Control*, (7) *Craving/Addiction*, (8) *Negative Physical Feelings*, (9) *Boredom Reduction*, and (10) *Negative Social Impression.* Furthermore, in the literature, it is possible to see the studies that determined brief version of smoking outcome expectancy, the studies that tried to find out empirical evidence of smoking

outcome expectancy measures for different groups of smokers, the studies that created a new form of SCQ by combining two or more factors together under a new factor name (Lewis-Esquerre, Rodrigue, & Kahler, 2005; Rash & Copeland, 2008; Thomas et al., 2009).

In the literature, there have been a number of studies that tried to show causality among expectancies and several outcomes of smoking. Among the several suggested explanatory factors, affect related expectancies have consistently reported as a major motive for smoking (Ikard, Green, & Horn, 1969; Kassel et al., 2003). In an experimental study, researchers have tried to examine the role of expectancies on situation-specific motivation to smoke tobacco by giving either a positive or negative mood manipulation to smokers (Brandon, Wetter, & Baker, 1996). The findings demonstrated that negative reinforcement expectancies (e.g., relieving negative affect) had a predictor role on smoking ad-lib cigarette for nicotine deprived participants. Moreover, there was a marginal moderation effect of these expectancies on negative affect and urge to smoke relationship. That is to say, individuals with stronger affect related expectancies such as relieving negative affect were significantly more likely to have stronger urge to smoke. Moreover, Juliano and Brandon (2002) conducted an experimental study with the balanced placebo design to make an evaluation about unique effect of nicotine dose and expectancies in relation with smoking on self-reported anxiety, urge to smoke, and withdrawal symptoms. The results indicated that individuals who were in non-nicotine deprived state and had smoking expectancy of relieving negative affect (immediately after an anxious mood induction) had an experience of raised mood, even if they smoked de-nicotinized (placebo) cigarette. These studies underline the importance of negative reinforcement mechanisms such as negative affect reduction and/or boredom reduction smoking outcome expectancies on smoking behavior and subsequently, how these expectancies influence smoking dependence.

In addition to the importance of affect-related expectancies on smoking behavior, researchers have suggested that there is a role of these expectancies on urgency-smoking relations (Pang et al., 2014). The smoking studies based on the relations between expectancies, urgency as an impulsivity trait and smoking became

widespread through the *Acquired Preparedness Model (APM)* suggested by Smith and Anderson (2001). This model has put forward a new perspective by integrating the effects of personality and learning to account for maladaptive behaviors (Barnow et al., 2004; Bolles, Earleywine, & Gordis, 2014; Combs, Smith, Flory, Simmons, & Hill, 2010; Ginley, Whelan, Relyea, Meyers, & Pearlson, 2015; Vangness, Bry, & LaBouvie, 2005). For instance, in a study, Pang and colleagues reported that among both positive and negative reinforcement smoking expectancies, only negative reinforcement expectancies had a significant predictive power on urgency-nicotine dependence relationship (2014). This finding suggests that the influence of negative reinforcement on smoking among individuals with emotion based impulsivity traits is more crucial in comparison with their counterparts. According to a previous report supporting this suggestion, there was a mediator role of negative reinforcement smoking expectancies on the association between negative urgency and smoking initiation (Doran et al., 2013).

Although there was no research identifying the mediator role of affect-related expectancies on the emotion dysregulation and smoking dependence relationship, in Dir and colleagues' study (2016), a risk model for non-smoking youth was proposed to assess the role of positive smoking expectancies on smoking initiation. Moreover, both unique and interactive effects of emotion dysregulation and negative urgency risk factors on positive smoking expectancies were determined within this study. The results indicated that children who had more difficulties in emotional regulation and who acted rashly in return for negative emotions seem more likely to believe positive smoking expectancies. Therefore, this finding suggested that these children might be at a greater risk to initiate smoking.

In sum, negative reinforcement role of smoking outcome expectancies such as negative affect reduction and/or boredom reduction expectancies from smoking have been theorized as a significant risk factor that drives smoking behavior. The literature about the mediating roles of these expectancies mentioned above brings to the mind the hypothesis that how these expectancies play a role on the relationship between previously mentioned factors (emotion dysregulation and negative urgency) and smoking dependence.

1.5. General Aims of the Current Study

Previous studies have provided plentiful evidence about which factors in a unique or combined form contribute to smoking dependence. Since smoking dependence is a complex phenomenon and ongoing global problem, there is still great need to realize the determinants of smoking behavior that make contribution to the incremental number of people who currently smoke cigarettes and who are at a point in the dependency level range. Psychological variables like emotion dysregulation, negative urgency, and affect-related smoking expectancies, can be regarded as crucial risk factors of smoking dependence for current smokers.

Cognitively-driven negative affect relief expectancies have suggested and evidenced to contribute to the initiation, maintenance of smoking, and nicotine dependence later on (Heinz, Kassel, Berbaum, & Mermels, 2010). Affect-related smoking expectancies including negative affect reduction and boredom reduction expectancies are the beliefs that negative emotions would relieve following experience of smoking; the beliefs that "If I am feeling irritable, a cigarette can really help" or "Cigarettes help me deal with anxiety or worry" (Copeland et al., 1995). To date, there is no measure in Turkish, particularly, focusing on multifactorial aspects of smoking outcome expectancies. To establish a direct or combined link between these expectancies and smoking dependence seems important for taking further steps in smoking cessation programs such as aiming to modify these outcome expectancies to reduce tobacco use. Therefore, there is a need for a standardized measure to determine these aspects. Accordingly, one of the aims of the present study was to translate Brief Smoking Consequences Questionnaire (Rash & Copeland, 2008) into Turkish and analyze its psychometric properties within Study I.

Subsequently, the aims of Study II, were, firstly, to find out the relationship among emotion dysregulation, negative affect reduction and boredom reduction smoking outcome expectancies, and their potential effects on smoking dependence among current smokers and secondly, to investigate the relationship among negative urgency, negative affect reduction and boredom reduction smoking outcome expectancies, and their potential effects on smoking dependence among the same group as well.

As being a multifactorial construct, emotion regulation has been reported as a risk factor for smoking (Cheetham et al., 2010). The researchers have established a link between emotion dysregulation and smoking outcome expectancies (Dir et al., 2016). However, there is only one published study testing the emotion dysregulation and affect-related expectancies in the same risk model. This study conducted to provide an insight into nonsmoking status of youth and to examine the risk for initiation among youth (Dir et al., 2016). Therefore, the evidence supporting the model for smoking dependence among current smokers is required. In consequence of, this study is a pioneering in trying to bring light into smoking dependence on the basis of emotion dysregulation and negative reduction and boredom reduction smoking outcome expectancies.

Another psychological variable reported as a risk factor for smoking dependence was negative urgency. Negative urgency has been consistently demonstrated as a personality trait that accounted for problematic levels of risky-behavior and reported consistently as a predictor of smoking behaviors such as initiation, continuation and relapse (Bloom et al., 2014; Combs et al., 2012; Dir et al., 2016; Doran et al., 2013). The literature has provided evidence on the significant mediational effects of negative reinforcement expectancies on the relationship between urgency and smoking dependence (Pang et al., 2014). Moreover, the researchers commented that the replications and extensions of studies supporting these results might avail on treatments that adjust beliefs about smoking reinforcement outcomes to minimalize the risk of nicotine dependence transported by urgency. Accordingly, the aim of the present study was to expend the empirical evidence showing the association between negative urgency, negative reinforcement expectancies such as negative reduction and boredom reduction smoking outcome expectancies, and smoking dependence. Furthermore, as stated above, although there has been preliminary evidence for these associations, to examine cultural differences seems important since that especially for smoking outcome expectancy variable, culture has a critical impression to establish learned pairings between behavior and behavioral outcome. In sum, the current study was thought to give an insight in terms of stated measures in Turkish culture.

Based on the arguments mentioned above, the main hypotheses of Study II were as follows:

(1) Total scores of smoking outcome expectancy dimensions would mediate the relationship between emotion dysregulation and smoking dependence;
   (a) Negative affect reduction smoking outcome expectancy would mediate the relationship between emotion dysregulation and smoking dependence,
   (b) Boredom reduction smoking outcome expectancy would mediate the relationship between emotion dysregulation and smoking dependence

(2) Total scores of smoking outcome expectancy dimensions would mediate the relationship between negative urgency and smoking dependence.
   (a) Negative affect reduction smoking outcome expectancy would mediate the relationship between negative urgency and smoking dependence,
   (b) Boredom reduction smoking outcome expectancy would mediate the relationship between negative urgency and smoking dependence

CHAPTER 2

STUDY I:
EXAMINATION OF THE BRIEF SMOKING CONSEQUENCES QUESTIONNAIRE-ADULT (BSCQ-A): INFORMATION RELATED TO ITS PSYCHOMETRIC PROPERTIES IN A TURKISH SMOKERS SAMPLE

The assessment of outcome expectancies about smoking has been conducted with the use of the original, shortened or revised versions of Smoking Consequences Questionnaire (SCQ) (Brandon & Baker, 1991; Copeland, Brandon, & Quinn, 1995; Rash & Copeland, 2008). The original form of this scale (SCQ) was, firstly, developed to assess outcome expectancies of college students about cigarette smoking (Brandon & Baker, 1991). This initial study was conducted with 382 undergraduate smokers with the use of an 80-item questionnaire comprising possible smoking outcomes. The results of the principal component analysis demonstrated four types of smoking expectancies including 50 items. These expectancies were Negative Consequences, Positive Reinforcement/Sensory Satisfaction, Negative Reinforcement/Negative Affect Reduction and Appetite-Weight Control that differentiated different groups of smokers (never-smokers, daily smokers, and occasional smokers). In this study, parallel with the explanation of addiction models, Brandon and Baker reported that the most positive outcome expectancies about smoking belonged to the heavy smokers while the least positive ones belonged to nonsmokers (1991).

Although Brandon and Baker's study (1991) showed good reliability and validity for its specifically determined population, there was limitedness of it in relation with generalizability of the results from college student population to the adult population. Then, with the need of an adult version of the questionnaire, Copeland et al. (1995)

developed the SCQ-A to assess more regular, experienced, nicotine-dependent smokers' expectancies for smoking. The subsequent study using the revised version adapted for adult population has found evidence for different outcome expectancies, namely, Negative Affect Reduction, Stimulation/State Enhancement, Health Risks, Taste/Sensorimotor Manipulation, Social Facilitation, Appetite/Weight Control, Craving/Addiction, Negative Physical Feelings, Boredom Reduction, and Negative Social Impression. The questionnaire included 55 items rated on a 10-point Likert type scale ranging from 0 (completely unlikely) to 9 (completely likely) and showing the possibility of that consequence happening. The SCQ-A was successful at telling the difference between smokers, individuals taking treatment for smoking, and ex-smokers that was an indicator of good validity. Moreover, it also significantly predicted outcomes of smoking cessation treatment.

Later studies of SCQ also tried to investigate the validity of the questionnaire with adult population. One of them studied with individuals trying to give up smoking with the help of the nicotine patch and testing the effectiveness of it verified the original four-factor structure of SCQ (Wetter et al., 1994). The results of the study, trying to identify the predictive utility of the SCQ subscales, demonstrated that there was a significant relationship between expectancy sub-dimensions and nicotine withdrawal measures and success rates of smoking cessation, and no relationship between expectancy sub-dimensions and nicotine dependence.

To sum up, both the SCQ and the SCQ-A researches found valid results for adult samples suggesting that different smoking status groups evaluated the possibility of positive and negative smoking outcome expectancies in a different way (Myers et al., 2003). Moreover, both positive and negative outcome expectancies were the predictors of smoking variables following the treatment for stopping smoking. Despite demonstrating good measurement properties, both the SCQ and SCQ-A were seen too long as a measurement tool (Lewis-Esquerre, Rodrigue, & Kahler, 2005; Myers et al., 2003; Rash & Copeland, 2008). In order to prevent the trouble of finishing-off the questionnaire for participants, a psychometrically valid, economic version of the SCQ-A was developed by Rash and Copeland (2008). The shortened form included 25-item (reduced from 55-item SCQ-A scale) with 10 sub-scales

which were the same as the long version. Moreover, Rash and Copeland (2008) reported the reliability of the abbreviated version of SCQ-A subscales as good and presented initial proof for its validity.

As it can be understood from the literature mentioned above, there have been a wide range of scale development and adaptation studies of smoking outcome expectancies. The studies distinguishing both different patterns of smoking and different groups of people bring to the mind the importance of outcome expectancies for initiation, maintenance, and cessation of smoking. Specifically, this issue should be addressed in every culture to make sense of individual's need for smoking and to create proper prevention and cessation programs. For smoking behavior, cross-cultural examinations are critical. Although some outcome expectancies can be universal, others can be culture-specific. For this reason, adaptation studies of SCQ were carried out in different languages such as Spanish (Cepeda-Benito & Ferrer, 2000) and Iranian (Zeidi, Saffari,Chen, & Pakpour, 2014). However, neither the SCQ nor the other versions have been adaptated into Turkish. Since there has been a lack of instrument explaining so many types of outcome expectancies about smoking in Turkish smokers, the aim of this study was to examine a Turkish version of the BSCQ-A and its factor structure, to verify the applicability of it in a Turkish smokers' sample, and also to represent psychometric properties of the scale in Turkish smokers' sample.

The hypotheses of the present study were:

1) The Turkish version of the BSCQ-A will consist of 10 subscales as in its original form;
2) The Turkish version of the scale and its subscales will demonstrate good internal consistency and test-retest reliability values;
3) As an indication for construct validity, pros of smoking and cons of smoking that are theoretically relevant constructs to examine cognitive and motivational dimensions of human decision-making (Prochaska et al., 1994; Velicer et al., 1985) will correlate positively with the related BSCQ-A subscales. Specifically, while pros of smoking will show positive correlations with *negative affect reduction, stimulation/state enhancement, taste/sensorimotor manipulation,*

social facilitation, craving/addiction, appetite/weight control, boredom reduction subscales, cons of smoking will correlate positively with *health risks, negative physical feelings, negative social impression* subscales.

4) For construct validity, again, there will be positive correlations among negative affect and the BSCQ-A subscales representing positive outcome expectancies. Specifically, *negative affect reduction* will be expected to show most positive correlation to the construct, as suggested by previous studies (Rash & Copeland, 2008).
5) As theorized by previous studies; there will be a positive association between nicotine dependence and BSCQ-A subscales reflecting positive outcome expectancies.

CHAPTER 3

METHOD OF THE STUDY I

3.1. Participants

The study was conducted with a total of 516 volunteer smokers living in different cities of Turkey. Being 18 years old or over the age of 18, smoking currently and over the one year has been determined as the inclusion criteria in this study. Totally, the sample included 271 women (52.5 %) and 245 men (47.5 %) smokers. Their age range was between 18-58, with the mean of age 25.69 (*SD* = 6.93). The education level of participants was as follows; 0.2 % illiterate (*n* = 1), 0.6 % primary school graduates (*n* = 3), 1 % secondary school graduates (*n* = 5), 54.5 % high school graduates (*n* = 281), 31.4 % university graduates (*n* = 162), and 12.4 % master/PhD graduates (*n* = 64). In terms of marital status, 13 % (*n* = 67) of them were married, 82.9 % (*n* = 428) of them were single, 1.4 % (*n* = 7) of them were engaged, 0.4 % of them (*n* = 2) were widowed, and 2.3 % (*n* = 12) of them were divorced. Table 1 represents the sociodemographic and smoking related variables in a detailed way.

For the test-retest reliability of this study, a total of 30 volunteer smokers that completed the first questionnaire set participated time 2 measurement. The sample consisted of 18 women (60 %) and 12 men (40 %) smokers with the age range of 20-29. Their mean age was 22.03 (*SD* = 1.94).

Table 1. Sociodemographic and Smoking Related Characteristics of the Sample

Variables	N	%	Mean	SD	Range
Gender					
Women	271	52.5			
Men	245	47.5			
Age			25.69	6.93	18-58
Education					
Illiterate	1	0.2			
Primary	3	0.6			
Secondary	5	1			
High School	281	54.5			
University	162	31.4			
Master/PhD	64	12.4			
Marital status					
Married	67	13			
Single	428	82.9			
Engaged	7	1.4			
Widowed	2	0.4			
Divorced	12	2.3			
Number of siblings			2.44	1.17	0-9
Birth order					
First-born	277	54.4			
Others	232	45.6			
Smoking status of mother					
Yes	170	46.2			
No	198	53.8			
Smoking status of father					
Yes	237	64			
No	131	36			

Table 1 (Continued)

Variables	N	%	Mean	SD	Range
Smoking status of sibling(s)					
Yes	147	40			
No	221	60			
Smoking status of friends					
Yes	505	97.9			
No	11	2.1			
Perceived SES					
Low	7	1.4			
Under the middle	63	12.2			
Middle	297	57.6			
Above the middle	132	25.6			
High	17	3.3			
Alcohol use					
Yes	409	79.3			
No	107	20.7			
Frequency of alcohol use					
Once or less in a month	124	24			
Two or four times in a month	195	37.8			
Two or three times in a week	78	15.1			
Four times or more in a week	12	2.3			
Trial to quit smoking before					
Yes	328	63.6			
No	188	36.4			
Stages of change of the sample					
Precontemplation	274	53.1			
Contemplation	242	46.9			
Preparation	159	30.8			
Action	171	33.1			

Table 1 (Continued)

Variables	N	%	Mean	SD	Range
The length of time for first cigarette after waking up					
Within 6 – 30 minutes	185	35.9			
Within 31 – 60 minutes	106	20.5			
One hour later	225	43.6			
Difficulty in refraining from smoking in forbidden places					
Yes	112	21.7			
No	404	78.3			
The most satisfying cigarette of the day					
The first one in the morning	199	38.6			
Others	317	61.4			
Amount of daily cigarette consumption					
10 or less	244	47.3			
11 – 20	188	36.4			
21 – 30	66	12.8			
31 or more	18	3.5			
Smoking more in the morning compared to the rest of the day					
Yes	141	27.3			
No	375	72.7			
Smoking even so ill that it causes you to spend most of your day in bed					
Yes	221	42.8			
No	295	57.2			

3.2. Instruments

The questionnaire set included the demographic information form, Fagerstrom Test for Nicotine Dependence (FTND; Heatherton et al., 1991), Decisional Balance Scale (DBS; Velicer, DiClemente, Prochaska, & Brandenburg, 1985), Positive and Negative Affect Schedule (PANAS; Watson, Clark, & Telegen, 1988), and Brief Smoking Consequences Questionnaire-Adult (BSCQ-A; Rash & Copeland, 2008).

Demographic Information Form. This form included the questions related to participants' demographic variables (i.e., age, gender, education, marital status, working status, and use of alcohol). There were also questions on participants' present and past smoking patterns such as cigarette use frequency, years of smoking, number of smoking cessation attempts. Moreover, in this part, participants were asked to choose one statement that best described them among the five statements, which are the categories of the stages of change in smoking (Prochaska & DiClemente, 1983). These categories comprise of, firstly, precontemplation ("I am currently smoking and not seriously thinking about quitting smoking in the next 6 months"), contemplation ("I am currently smoking and seriously thinking about quitting in the next 6 months but not seriously thinking about quitting in the next 30 days"), preparation ("I am currently smoking and seriously thinking about quitting in the next 30 days"), action ("I quitted smoking in the past 6 months"), and finally maintenance ("I have quitted smoking for more than 6 months") that were translated into Turkish by Yalçınkaya-Alkar and Karancı (2007). A copy of the demographic information form is demonstrated in Appendix A.

Fagerstrom Test for Nicotine Dependence (FTND). FTND was the revised version of The Fagerstrom Tolerance Questionnaire (FTQ; Fagerstrom, 1978). It was developed by Heatherton et al. (1991) to assess individuals' nicotine dependence level. The scale includes 6 questions measuring the markers of nicotine addiction on a continuous scale (e.g., the length of time to first cigarette after waking, difficulty in refraining from smoking in forbidden places, and amount of daily cigarette consumption). Sum of the scores ranges from 0 to 10 and higher scores are interpreted as an indicative of considerable dependence.

The research on the Turkish translation of the FTND and the examination of its psychometric proporties was carried out by Uysal et al. (2004). They reported .56 Cronbach alpha value of the Turkish version of FTND as a sign of moderate reliability. In this sample, the Cronbach's alpha of the scale was .79. A copy of the Turkish version of FTND is presented in Appendix F.

Decisional Balance Scale (DBS). The perception of the positive and negative aspects of smoking in the individuals was assessed using the Decisional Balance Scale (see Appendix G). DBS was developed by Velicer, DiClemente, Prochaska, and Brendenburg (1985). Its translation to Turkish language and adaptation study was conducted by Yalçınkaya-Alkar and Karancı to examine desicion-making process throughout the stages of change (2007). The scale consists of 24 items with two constructs, namely, "Pros of smoking" (12 items) and the "Cons of smoking" (12 items). Items are rated on a 5-point Likert type scale ranging from 1 (completely disagree) to 5 (completely agree). For both sub-scales, the highest score that can be taken from the sub-scale is 60 and the lowest score is 12. In Yalçınkaya-Alkar and Karancı's study (2007), the reliabilities were found to be .74 and .81 for Pros of Smoking and Cons of Smoking, respectively. For the present study, the reliabilities of two sub-scales were .71 for Pros of Smoking and .79 for Cons of Smoking.

Positive and Negative Affect Schedule (PANAS). It was developed by Watson, Clark, and Telegen to measure positive and negative affect (1988). It consists of 20 items with two mood scales, namely, positive affect (10 items) and negative affect (10 items). These items are a series of words that label diverse feelings and emotions and they are rated on a 5-point Likert type scale ranging from 1(too little/never) to 5 (too much) in Turkish form. Turkish translation and adaptation of the scale was conducted by Gençöz (2000). The reliabilities of two mood scales were . 83 for positive affect and .86 for negative affect. In this study, the negative affect dimension was used to look at the correlation of it with BSCQ-A subscales. For the present sample, Cronbach's alpha coefficient for the negative affect scale was .87. A copy of the PANAS is included in the Appendix H.

Brief Smoking Consequences Questionnaire-Adult (BSCQ-A). Smoking Consequences Questionnaire (SCQ) was developed in 1991 (Brandon & Baker, 1991), and a revised version for adult smokers, Smoking Consequences Questionnaire was published in 1995 (Copeland, Brandon, & Quinn, 1995). In BSCQ-A, researchers tried to create an economically valid instrument that was an alternative form to SCQ-A (Rash & Copeland, 2008). While SCQ-A includes 55-item measuring ten domains of smoking outcome expectancies, BSCQ-A includes 25-item measuring the same ten domains of smoking outcome expectancies with SCQ-A. These domains are negative affect reduction (3 items), stimulation/state enhancement (2 items), health risks (2 items), taste/sensorimotor manipulation (3 items), social facilitation (3 items), appetite/weight control (3 items), craving/addiction (2 items), negative physical feelings (2 items), boredom reduction (2 items), negative social impression (3 items). Items are rated on a 10-point Likert type scale ranging from 0 (completely unlikely) to 9 (completely likely). For scoring, the mean response for each 10 sub-scales is calculated. The sub-scales of the BSCQ-A showed good reliability with .79 value of the mean coefficient alpha and convergent validity (Rash & Copeland, 2008). The Turkish translation and adaptation of this scale was conducted with this study. For this sample, the Cronbach's alpha values of the sub-scales were calculated as follows; .89 for negative affect reduction, .72 for stimulation/state enhancement, .77 for health risks, .88 for taste/sensorimotor manipulation, .67 for social facilitation, .88 for appetite/weight control, .82 for craving/addiction, .71 for negative physical feelings, .81 for boredom reduction, .62 for negative social impression. A copy of the BSCQ-A is included in the Appendix C.

3.3. Procedure

After the permission and support was provided from the team that developed the original scale in English, the process of translation and adaptation of the scale was started. The scale was translated to Turkish by three research assistants who specialized in the psychology department and a single form was created among the different translations with the help of an associate professor. When the scale was being translated to Turkish, as Savaşır (1994) stated, it was taken into consideration

that the translation was done in a culturally appropriate manner. After a pilot study was conducted for the clarity of the items, incohorent items were revised and the final version of the Brief SCQ-A was created in line with the agreement of researchers. Then, it was applied to the ethics committee of Yıldırım Beyazıt University.

After the study was approved by the ethics committees of Yıldırım Beyazıt University, the questionnaire set was loaded to the Qualtrics program that was a private research company permitting users to collect the data online. A link of the study including whole questionnaire set was constituted on the Qualtrics survey tool. Then, this link was shared on social media with volunteer participants. Before encountering the instruments, participants saw an informed consent form, explaining the aim of the study and ensuring the confidentiality of information. They confirmed that they were participating the study voluntarily. After the participants completed filling-out the questionnaires, a debriefing form was given to disclose them to the purpose of the study. For test-retest reliability, a link was also created on Qualtrics survey tool including the demographic information form and BSCQ-A subscales. For time 2 measurement, the link was sent via e-mail after three weeks to one month to approximately 50 participants who the researcher had contact information, and 30 of them were returned.

3.4. Data Analysis

To test whether The Turkish version of the BSCQ-A will consist of 10 sub-scales as in its original form, a confirmatory factor analysis using the linear structural relationship (LISREL 8.8) model (Jöreskog & Sörbom, 2004) was performed. For the rest of the hypotheses testing, the Statistical Package for Social Sciences (SPSS), version 22.0 (2013) was practiced. The reliability of the whole scale and its sub-scales was determined by computing the Cronbach's Alpha coefficients. The calculations of Pearson correlations between the BSCQ-A subscale scores measured in time 1 and time 2 and a total score of BSCQ-A measured in time 1 and time 2 were done to see test-restest reliability coefficents. Moreover, the calculations of Pearson correlations were done among the BSCQ-A subscales in pursuit of their

means and standard deviations. Next, Pearson correlations of the BSCQ-A subscales with negative affect, pros of smoking, cons of smoking, and nicotine dependence measures were computed to determine construct validity.

CHAPTER 4

RESULTS OF THE STUDY I

4. 1. Confirmatory Factor Analysis

A confirmatory factor analysis using the linear structural relationship (LISREL 8.8) was carried out and depending on the previous research of Brief SCQ-A (Rash & Copeland, 2008), 10-factor model with 25 items of BSCQ-A was tested. Results indicated that 10 factor solution fit the data very well (χ^2 (230, N = 516) = 588.70, p = .00, $\chi^2/df \approx 2.55$, NNFI = .95, GFI = .91, AGFI = .88, PGFI = .65, CFI = .96, RMSEA ≈ .06, 90 % CI [.05, .06]). Moreover, all items' standardized factor loadings to the related latent variables were significant, ranging between .44 and .99. As can be seen from Table 3, all items significantly loaded to the factors with a value above .40. Modifications were not taken into account since they did not produce any significant and/or notable increment in χ^2.

4.2. Correlations among the Brief SCQ-A Subscales

The correlations among the Brief SCQ-A subscales are presented in Table 5. The value of their correlations varied from .00 (*health risk and negative social impression, and boredom redution and negative social impression*) to .48 (*negative affect reduction and boredom reduction, and stimulation/state enhancement and taste/sensorimotor manipulation*). The weak and/or moderate correlation coefficients verified ten expectancy scales' discriminant validity.

4.3. The Brief SCQ-A Means and Standard Deviations

For the first and second measurement, the means and standard deviations of BSCQ-A subscales were computed (see Table 2). Among all subscales of the BSCQ-A, *health*

risk was revealed to be most frequently expected smoking outcome by participants both for the first (*M* = 8.75, *SD* = 1.44) and second measurement (*M* = 7.73, *SD* = 1.87). On the other hand, *negative social impression* was revealed to be most infrequently expected smoking outcome by participants both for the first (*M* = 4.56, *SD* = 1.85) and second measurement (*M* = 4.68, *SD* = 1.64).

Table 2. Means, Standard Deviations, and Test Retest Reliabilities of BSCQ-A

BSCQ-A Subscales	*M* (*N* = 516)	*SD* (*N* = 516)	Test-Retest *r* (*N* = 30)
NAR	7.04	1.93	.71**
SSE	4.79	2.16	.52**
HR	8.75	1.44	.58**
TSM	5.53	2.31	.74**
SF	5.71	2.10	.65**
CA	6.70	2.22	.55**
NPF	6.11	2.03	.76**
BR	7.50	1.95	.61**
NSI	4.56	1.85	.53**
AWC	5.28	2.47	.74**

Note. NAR, negative affect reduction; SSE, stimulation/state enhancement; HR, health risks; TSM, taste/sensorimotor manipulation; SF, social facilitation; CA, craving/addiction; NPF, negative physical feeling; BR, boredom reduction; NSI, negative social impression; AWC, appetite/weight control.
** Correlation is significant at the .01 level (2-tailed)
* Correlation is significant at the .05 level (2-tailed)

4.4. Internal Consistency and Test-Retest Reliability Analyses of the BSCQ-A

In order to test whether the BSCQ-A and its subscales are reliable, the Cronbach's alpha values were calculated (see Table 3). The lowest coefficient alpha reliabilities were found to be .67 for social facilitation and .62 for negative social impression subscales. Since the Cronbach's alpha values of these two subscales fell below .70, their internal consistency coefficients were questionable. However, it was an expected result for these shorter subscales since the functionality of alpha is related to the item number. On the other hand, the other subscales demonstrated good and acceptable reliability values ranging between .89 (*negative affect reduction*) and .71 (*negative physical feelings*) (see Table 2). For test-retest reliability, the results were also good, ranging between .52 (*stimulation/state enhancement*) and .76 (*negative physical feelings*) (see Table 2).

4.5. Construct Validity of the BSCQ-A

Correlations between the BSCQ-A subscales and the DBS constructs (Velicer et al., 1985) were calculated for the same sample to determine construct validity (see Table 4). For the "Pros of smoking", there were positive and significant correlations of it with *negative affect reduction* (r = .49, p < .01), *stimulation/state enhancement* (r = .47, p < .01), *taste/sensorimotor manipulation* (r = .47, p < .01), *social facilitation* (r = .54, p < .01), *craving/addiction* (r = .35, p < .01), *boredom reduction* (r = .32, p < .01), and, *appetite/weight control* (r = .32, p < .01) subscales. On the other hand, the "Cons of smoking" correlated positively and significantly with *negative affect reduction* (r = .13, p < .01), *health risks* (r = .40, p < .01), *craving/addiction* (r = .26, p < .01), *negative physical feelings* (r = .31, p < .01), *boredom reduction* (r = .14, p < .01), *negative social impression* (r = .32, p < .01); correlated negatively and significantly with *stimulation/state enhancement* (r = -.12, p < .01), and *taste/sensorimotor manipulation* (r = -.17, p < .01) subscales.

To examine the relationship between smoking outcome expectancies and negative affect, the BSCQ and the Negative Affect subscale of PANAS (Watson, Clark, & Telegen, 1988) were given to the participants. As it can be seen in Table 4, negative affect correlated positively and significantly with *negative affect reduction* (r = .14, p

< .01), *stimulation/state enhancement* (r = .13, p < .01), *social facilitation* (r = .14, p < .01), *boredom reduction* (r = .12, p < .01), *negative social impression* (r = .14, p < .01), and *appetite/weight control* (r = .11, p < .05).

The relationship between smoking outcome expectancies and nicotine dependence was determined through the administration of the BSCQ-A and FTND (Heatherton et al., 1991) (see Table 4). Although the correlation between nicotine dependence and *negative physical feelings* was significantly negative (r = -.09, p < .05), nicotine dependence correlated positively and significantly with *negative affect reduction* (r = .18, p < .01), *health risks* (r = .09, p < .05), *taste/sensorimotor manipulation* (r = .17, p < .01), *craving/addiction* (r = .35, p < .01), *boredom reduction* (r = .23, p < .01), and *appetite/weight control* (r = .10, p < .05).

Table 3. Item and scale information of Brief Smoking Consequences Questionnaire-Adult

Subscale and its items (coefficient alpha reliability)	Factor Loadings
Negative affect reduction (α = .89)	
Smoking calms me down when I feel nervous.	.88
When I'm feeling irritable, a smoke will help me relax.	.86
When I'm angry, a cigarette can calm me down.	.84
Stimulation/state enhancement (α = .72)	
Smoking a cigarette energizes me.	.74
A cigarette can give me energy when I'm bored and tired.	.76
Health risks (α = .77)	
The more I smoke, the more I risk my health.	.83
By smoking I risk heart disease and lung cancer.	.75
Taste/sensorimotor manipulation (α =.88)	
I will enjoy the flavor of a cigarette.	.73
When I smoke, the taste is pleasant.	.86
I enjoy the taste sensations while smoking.	.93
Social facilitation (α = .67)	
I feel more at ease with other people if I have a cigarette.	.66
Smoking helps me enjoy people more.	.67
I feel like part of a group when I'm around other smokers.	.59
Weight control (α = .88)	
Smoking keeps my weight down.	.82
Smoking helps control my weight.	.90
Cigarettes keep me from eating more than I should.	.79
Craving/addiction (α = .82)	
Smoking will satisfy my nicotine cravings.	.81
Nicotine ''fits'' can be controlled by smoking.	.86
Negative physical feelings (α = .71)	
Smoking irritates my mouth and throat.	.56
My throat burns after smoking.	.99

Table 3(continued)

Boredom reduction (α = .81)	
When I am alone, a cigarette can help me pass the time.	.86
If I have nothing to do, a smoke can help kill time.	.79
Negative social impression (α = .62)	
I look ridiculous while smoking.	.44
Smoking makes me seem less attractive.	.49
People think less of me if they see me smoke.	.93

Table 4. Correlations between Brief Smoking Consequences Questionnaire–Adult (BSCQ-A) Subscales and Scales of Selected Measures

	Scales of Selected Measures			
BSCQ-A Subscales	FTND	PROS	CONS	NA
NAR	.18**	.49**	.13**	.14**
SSE	.08	.47**	-.12**	.13**
HR	.09*	-.06	.40**	-.02
TSM	.17**	.47**	-.17**	.02
SF	.03	.54**	-.01	.14**
CA	.35**	.35**	.26**	.07
NPF	-.09*	-.04	.31**	.08
BR	.23**	.32**	.14**	.12**
NSI	-.03	-.04	.32**	.13**
AWC	.10*	.32**	.02	.11*

Note. NAR, negative affect reduction; SSE, stimulation/state enhancement; HR, health risks; TSM, taste/sensorimotor manipulation; SF, social facilitation; CA, craving/addiction; NPF, negative physical feeling; BR, boredom reduction; NSI, negative social impression; AWC, appetite/weight control. FTND, Fagerström Test for Nicotine Dependence; PROS, Pros of Smoking; CONS, Cons of Smoking; NA, Negative Affect.

** Correlation is significant at the .01 level (2-tailed)

*Correlation is significant at the .05 level (2-tailed)

Table 5. Brief Smoking Consequences Questionnaire–Adult (BSCQ-A) Subscale Correlations.

	NAR	SSE	HR	TSM	SF	CA	NPF	BR	NSI	AWC
NAR	-									
SSE	.43**	-								
HR	.21**	-.13**	-							
TSM	.41**	.48**	-.05	-						
SF	.40**	.43**	.02	.40**	-					
CA	.47**	.22**	.18**	.26**	.26**	-				
NPF	.08	-.02	.22**	-.19**	.09*	.11*	-			
BR	.48**	.25**	.23**	.27**	.47**	.40**	.04	-		
NSI	.01	.01	.00	-.13**	.03	.04	.22**	.00	-	
AWC	.30**	.34**	-.04	.23**	.35**	.20**	.08	.17**	.15**	-

Note. NAR, negative affect reduction; SSE, stimulation/state enhancement; HR, health risks; TSM, taste/sensorimotor manipulation; SF, social facilitation; CA, craving/addiction; NPF, negative physical feeling; BR, boredom reduction; NSI, negative social impression; AWC, appetite/weight control.

** Correlation is significant at the .01 level (2-tailed)

* Correlation is significant at the .05 level (2-tailed)

CHAPTER 5

DISCUSSION OF THE STUDY I

Where did the importance of an adaptation study related to a measurement tool determining smoking outcome expectancies come from? It may be appropriate to briefly mention again about the outcome expectancy concept before answering this question. To make a prediction about forthcoming behavior, it is essential to understand the expectancy about exhibiting that behavior which is called as outcome expectancy (Christiansen, Smith, Roehling, & Goldman, 1989).

The research about various forms of smoking behavior for separate groups has put emphasis on the importance of the outcome expectancies for smoking behavior (Brandon & Baker, 1991; Copeland et al., 1995; Copeland et al., 2007; Jeffries et al., 2004). The researchers taking into consideration the construct for smoking behavior have made a mention of its significance for addiction, maintenance, and cessation of smoking (Copeland et al., 1995; Doran et al., 2013; Myers et al., 2003; Wetter et al., 2004). When it is looked for how the concept can be measured, the Brief SCQ-A with its multifactorial and economically valid structure has been a favorable instrument to assess these expectancies. Despite its psychometric performance and clinical usefulness, there has been a lack of instrument as BSCQ-A explaining so many types of outcome expectancies about smoking in Turkish sample of smokers. Hence, to adapt the questionnaire to Turkish language seems fundamental both to underline the importance of the outcome expectancy concept for smoking behavior and to see the culture specific expectancies in relation with smoking behavior.

The main aims of this study were to adapt the Brief SCQ-A for use in Turkey and to evaluate its reliability and validity. Therefore, whether the 10-factor model (Rash &

Copeland, 2008) fit or not with this data was tested. Next, the relations of BSCQ-A and a frequently used measure of decisional balance and negative affect were determined to evaluate construct validity. Moreover, the BSCQ-A's relationship with nicotine dependence was assessed to examine concurrent validity.

The results from a CFA demonstrated initial evidence that the 10-factor model as parallel with Rash and Copeland' study (2008) is a satisfactory fit for this sample. Additionally, the BSCQ-A showed good internal consistency ($\alpha = .85$) as well as its subscales' good internal and test retest reliability values. Moreover, the Turkish form of the questionnaire demonstrated initial evidence for its validity.

In accordance with our hypothesis, *negative affect reduction, stimulation/state enhancement, taste/sensorimotor manipulation, social facilitation, craving/addiction, appetite/weight control, boredom reduction* subscales showed positive and significant correlations with pros of smoking. In addition, as expected, cons of smoking correlated positively and significantly with *health risks, negative physical feelings, negative social impression* subscales. Unexpectedly, *negative affect reduction, craving/addiction, and boredom reduction* subscales also had positive association with cons of smoking but its strength was weaker than pros of smoking. Since cons of smoking is a measure assessing negative aspects of smoking behavior, the expectancies in relation with emotional needs such as reducing boredom, negative feelings and/or cravings might have a negative meaning for some smokers.

As hypothesized, positive and significant correlations among negative affect and the BSCQ-A subscales representing positive outcome expectancies (*negative affect reduction, stimulation/state enhancement, social facilitation, boredom reduction, and appetite/weight control*) were found. *Negative affect reduction*, as expected, showed most strength positive correlation to the construct that was a parallel suggestion with initial studies (Rash & Copeland, 2008). *Negative social impression* was also among the subscales showing positive and significant correlation with negative affect, unexpectedly. This finding actually suggested that people's cognitions about smoking such as *"I look ridiculous while smoking", "Smoking makes me seem less attractive"* may prepare the ground for negative feelings and reciprocally, when they

feel in a negative way, they may also expect some negative consequences about smoking behavior.

In line with our hypothesis about concurrent validity of nicotine dependence, there were positive and significant associations between nicotine dependence and BSCQ-A subscales reflecting positive outcome expectancies such as *negative affect reduction, taste/sensorimotor manipulation, boredom reduction, craving/addiction, appetite/weight control.* When it was expected that the relation between negative outcome expectancies and nicotine dependence would be in negative direction, the *health risk* outcome expectancy dimension correlated positively and significantly with nicotine dependence. This result suggested that although smokers in Turkey expect to risk their health or to take the risk of being exposed to heart and lung disease by smoking, this expectancy cannot relate negatively with their smoking behavior.

On the whole, the Turkish form of BSCQ-A subscales with a number of criterion variables demonstrated sufficient performance in terms of its validity. However, its subscales' validity performance was weaker than expected. Although the validity results were almost like the performance of Rash and Copeland's study (2008), they had weaker associations than the previous studies conducted to evaluate the validity of SCQ-A scales (Copeland et al., 1995) and later studies (e.g., Jeffries et al., 2004). The predicted direction of the relationship between the BSCQ-A subscales and a common measure of decisional balance scale including pros of smoking and cons of smoking was an evidence for construct validity. Also, the association of BSCQ-A subscales with negative affect provided similar results that majority of the positive outcome expectancy subscales correlated positively and significantly. Results for the association between the BSCQ-A subscales and nicotine dependence were also significant for most of the hypothesized positive outcome expectancy subscales. In spite of the significant, initiative results about the validity of the Turkish form of the BSCQ-A subscales reported above, the strength of the relationship between the BSCQ-A subscales and selected variables was weak. Therefore, future research is needed to support the psychometric strength of Turkish BSCQ-A. Additionally, as a proposal for future studies, the predictive validity of the questionnaire might also be

addressed by assessing the predictive function of these expectancies on smoking cessation results.

Although its psychometric properties were initially looking good and adequate, there were the limitations of this study like not addressing the selection criteria of the sample, specifically. The sample of this study included the participants who are 18 years old or over the age of 18, who smoke currently and over the one year. The majority of the participants were light and current smokers in this study. Therefore, further research is needed to support its psychometric meaningfulness with different smoking status groups or to develop an alternative form of the questionnaire based on these differences.

In summary, this was the first study adapting the Brief SCQ-A version of SCQ into Turkish language. The results demonstrated that the Turkish version of BSCQ-A also is a valid and shorter option instead of the SCQ-A like the results of Rash and Copeland's study (2008). Finally, we find its use credible for both in research area about smoking behavior and in clinical settings.

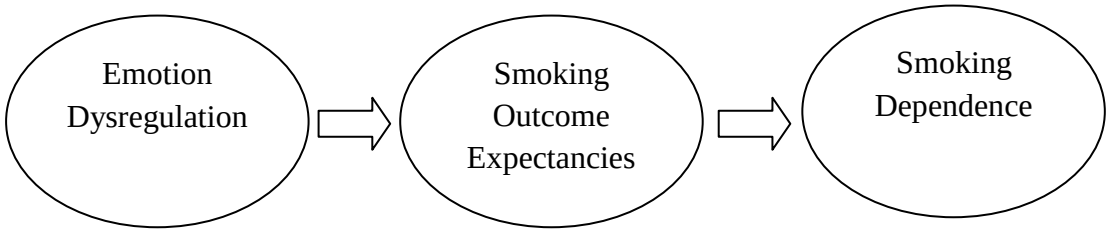
CHAPTER 6

STUDY II:

MAİN STUDY

As mentioned earlier in Chapter 1, the aims of the present study were to look at the relations between emotion dysregulation, negative urgency as a dimension of impulsivity, and smoking dependence among current smokers who are smoking at least 10 cigarettes per day and smoking over the one year with the mediator roles of affect-related smoking outcome expectancies, namely, negative affect reduction and boredom reduction expectancies. The hypothesized models were as follows:

(1)



(2)

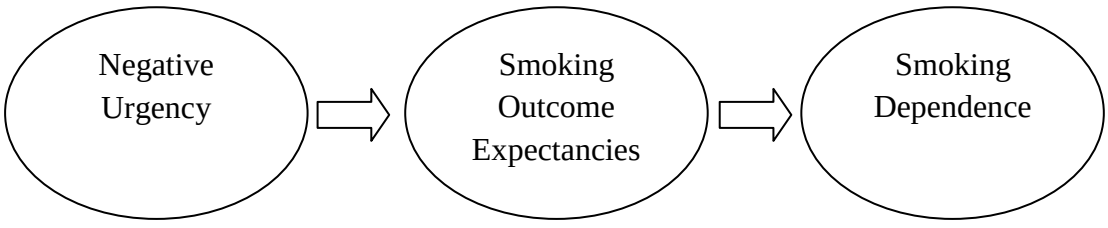


Figure 1. Hypothesized Models of the Study II

Apart from main analyses shown in *Figure 1*, it was aimed to find out group differences based on the levels of demographic variables (i.e., gender, education level, marital status, perceived SES, history of psychiatric diagnosis, and history of medical diagnosis) according to the study main variables (i.e., difficulties in emotion regulation, one of the impulsivity dimensions – *negative urgency*, affect related smoking outcome expectancies – *negative affect reduction* and *boredom reduction*, and smoking dependence). Moreover, it was aimed to look at the predictors of smoking dependence by taking into consideration the demographic variables of the study (i.e., gender, education level, marital status, perceived SES, history of psychiatric diagnosis, and history of medical diagnosis), and main variables of the study (i.e., difficulties in emotion regulation, one of the impulsivity dimensions – *negative urgency*, affect related smoking outcome expectancies – *negative affect reduction* and *boredom reduction).*

CHAPTER 7

METHOD OF THE STUDY II

7.1. Participants

Participants in this study were 305 volunteer smokers that are the residents of many cities of Turkey. Their inclusion to the study was determined according to their age (being 18 years old or older than 18 years) and their smoking status (being a current smoker, smoking at least 10 cigarettes per day and smoking over the one year). Of the 305 volunteer smokers, 162 were women (53.1 %) and 143 were men (46.9 %) smokers. These participants were between 18 and 64 years old (M = 28.21, SD = 7.86). According to education level, 0.7 % were primary school graduates (n = 2), 1 % were secondary school graduates (n = 3), 27.9 % were high school graduates (n = 85), 46.9 % were university graduates (n = 143), and 23.6 % were master/PhD graduates (n = 72). Moreover, when looking at marital status, 25.6 % (n = 78) of them were married, 70.5 % (n = 215) of them were single, 0.3 % of them (n = 1) was widowed, and 3.6 % (n = 11) of them were divorced. The sociodemographic and smoking related variables were represented enclosed in a detailed way in Table 5.

Table 6. Sociodemographic and Smoking Related Characteristics of the Sample

Variables	N	%	Mean	SD	Range
Gender					
Women	162	53.1			
Men	143	46.9			
Age			28.21	7.86	18-64
Education					
Primary	2	0.7			
Secondary	3	1			
High School	85	27.9			
University	143	46.9			
Master/PhD	72	23.6			
Marital status					
Married	78	25.6			
Single	215	70.5			
Widowed	1	0.3			
Divorced	11	3.6			
Number of siblings			2.74	1.44	1-13
Perceived SES					
Low	9	3			
Under the middle	30	9.8			
Middle	159	52.1			
Above the middle	98	32.1			
High	9	3			
Smoking status of mother					
Yes	89	38.2			
No	144	61.8			
Smoking status of father					
Yes	126	54.1			
No	107	45.9			

Table 6 (continued)

Variables	N	%	Mean	SD	Range
Smoking status of sibling(s)					
Yes	110	47.2			
No	123	52.8			
Smoking status of partner					
Yes	37	55.2			
No	30	44.8			
Smoking status of friends					
Yes	295	96.7			
No	10	3.3			
History of psychiatric diagnosis					
Yes	75	24.6			
No	230	75.4			
History of medical diagnosis					
Yes	73	23.9			
No	232	76.1			
Smoking duration (year)			10.24	7.87	1-48
Trial to quit smoking before					
Yes	200	65.6			
No	105	34.4			
Stages of change of the sample					
Precontemplation	173	56.7			
Contemplation	132	43.3			
Preparation	52	17.0			
Action	67	22			
The length of time for first cigarette after waking up					
Within first 5 minutes after waking up	69	22.6			
Within 6 – 30 minutes	113	37			
Within 31 – 60 minutes	69	22.6			

Table 6 (continued)

Variables	N	%	Mean	SD	Range
One hour later	54	17.7			
Difficulty in refraining from smoking in forbidden places					
Yes	64	21			
No	241	79			
The most satisfying cigarette of the day					
The first one in the morning	137	44.9			
Others	168	55.1			
Amount of daily cigarette consumption			16.87	6.43	10-45
Smoking more in the morning compared to the rest of the day					
Yes	111	36.4			
No	194	63.6			
Smoking even so ill that it causes you to spend most of your day in bed					
Yes	164	53.8			
No	141	46.2			

7.2. Instruments

The questionnaire set included demographic information form, Fagerstrom Test for Nicotine Dependence (FTND; Heatherton et al., 1991), Brief Smoking Consequences Questionnaire-Adult (BSCQ-A; Rash & Copeland, 2008), Difficulties in Emotion Regulation Scale (DERS; Gratz & Roemer, 2004), and UPPS Impulsive Behavior Scale (Whiteside & Lynam, 2001).

Demographic Information Form. It consisted of questions about the personal and demographic characteristics of the participants such as age, gender, education level, and marital status, number of siblings, perceived socioeconomic status, and presence of medical and psychiatric diagnosis. There were also questions to assess smoking related characteristics of the participants such as cigarette use of family and friends, smoking duration, and smoking cessation history of participants. Moreover, as in the first study (see Chapter 3, section 3.2), the questions in relation with the stages of change in smoking (Prochaska & DiClemente, 1983; Yalçınkaya-Alkar & Karancı, 2007) were also asked to the participants through the demographic information form. A copy of the demographic information form is illustrated in Appendix B.

Fagerstrom Test for Nicotine Dependence (FTND). Being a revised version of The Fagerstrom Tolerance Questionnaire (FTQ; Fagerstrom, 1978), Fagerstrom Test for Nicotine Dependence (FTND) was generated by Heatherton et al. (1991) to determine individuals' addiction to nicotine, more particularly cigarette use. The form of the Turkish version of FTND examined by Uysal et al. (2004) was used in this study to assess the participants' intensity of addiction to smoking (see Appendix F). The FTND consists of 6 clear cut questions that gather information about, for instance, the first cigarette of individuals after waking up, whether individuals avoid smoking in areas where cigarette smoking is illegal or not, and the number of cigarettes per day they smoke. The answers to 4 questions in the FTND are evaluated on a 0-1-point scale and the remaining questions are rated on a 0-3 point scale. In this test, the highest score is 10 and the level of dependence is determined according to the range of scores (0 to 10). Higher scores are regarded as a

demonstration of higher dependence. Uysal et al. (2004) reported .56 Cronbach alpha value of the Turkish version of FTND as a sign of moderate reliability. In this sample, the Cronbach's alpha of the scale was .61.

Brief Smoking Consequences Questionnaire-Adult (BSCQ-A). Smoking Consequences Questionnaire (SCQ) was developed in 1991 (Brandon & Baker, 1991), and a revised version for adult smokers, Smoking Consequences Questionnaire was published in 1995 (Copeland, Brandon, & Quinn, 1995). In BSCQ-A, researchers tried to create an economically valid instrument that was an alternative form to SCQ-A (Rash & Copeland, 2008). While SCQ-A includes 55-item measuring ten domains of smoking outcome expectancies, BSCQ-A includes 25-item measuring the same ten domains of smoking outcome expectancies with SCQ-A. These domains are negative affect reduction (3 items), stimulation/state enhancement (2 items), health risks (2 items), taste/sensorimotor manipulation (3 items), social facilitation (3 items), appetite/weight control (3 items), craving/addiction (2 items), negative physical feelings (2 items), boredom reduction (2 items), negative social impression (3 items). Items are rated on a 10-point Likert type scale ranging from 0 (completely unlikely) to 9 (completely likely). For scoring, the mean response for each 10 sub-scales is calculated. In Rash and Copeland's study, the subscales of the BSCQ-A showed good reliability with .79 value of the mean coefficient alpha and adequate convergent validity (2008).

The Turkish translation and adaptation study of this questionnaire has been conducted by the author in Study I. When it was looked at the original study (Rash & Copeland, 2008), the psychometric properties of the Turkish version of the questionnaire found commensurable. For the present study, *negative affect reduction* and *boredom reduction* dimensions were used. Their Cronbach's alpha values were .88 and .84, respectively. A copy of the Brief BSCQ-A is included in the Appendix C.

Difficulties in Emotion Regulation Scale (DERS). The scale was developed by Gratz and Roemer (2004) to identify various dimensions of emotion dysregulation. It consists of 36 items rated between 1 (almost never) and 5 (almost always). The measure gives both scale total score and scores on six-subscales,

namely, (1) nonacceptance of emotional responses – NONACCEPTANCE (e.g., When I am upset, I feel guilty for feeling that way), (2) impulse control difficulties – IMPULSE (e.g., When I am upset, I become out of control), (3) difficulties engaging in goal-directed behavior – GOALS (e.g., When I am upset, I have difficulty concentrating), (4) lack of emotional clarity – CLARITY (e.g., I have no idea how I am feeling), (5) lack of emotional awareness – AWARENESS (e.g., I pay attention to how I feel), and (6) limited access to emotion regulation strategies – STRATEGIES (e.g., When I am upset, I believe that there is nothing I can do to make myself feel better). Higher scores indicate more problems in emotion regulation. The Turkish adaptation study of the scale was conducted by Rugancı and Gençöz (2010). In the Turkish version of the scale, the total and subscale internal consistency reliability values were as follows: .93 for total scale, .83 for nonacceptance of emotional responses, .90 for impulse control difficulties, .90 for difficulties engaging in goal-directed behavior, .82 for the lack of emotional clarity, .75 for lack of emotional awareness, and .89 for lack of strategies. In the present study, a total score (SUM) was computed and used for analyses and alpha coefficient of the total scale was .94 for the present study. Appendix D contains a copy of the DERS.

UPPS Impulsive Behavior Scale. UPPS Impulsive Behavior Scale was designed by Whiteside and Lynam (2001) in order to assess various aspects of individuals' impulsivity depending on the Five Factor Model of personality (FFM; McCrae & Costa, 1990). This scale is composed of 45 items rated on a 4-point Likert type scale ranging between 1 (does not apply to me) and 4 (strongly applies to me). It consists of four subscales, namely, (1) premeditation (e.g., I am a cautious person), (2) urgency (e.g., I have trouble controlling my impulses), (3) sensation seeking (e.g., I will try anything once), and (4) perseverance (e.g., I finish what I start). Moreover, higher scores obtained by the subscales suggest higher levels of impulsive behavior. The UPPS Impulsive Behavior Scale adapted into Turkish language by Yargıç, Ersoy, and Oflaz (2011). The total internal consistency reliability of Turkish version was found to be .81. In the Turkish adaptation study of the scale, alpha coefficients of the subscales were .86 for lack of premeditation, .80 for the urgency, .86 for

sensation seeking, and .80 for lack of perseverance. In the present study, only the urgency dimension of the scale was used and the internal consistency reliability coefficient of this subscale was .88. Appendix E contains a copy of the UPPS Impulsive Behavior Scale.

7.3. Procedure

After being confirmed by the ethics committees of Yıldırım Beyazıt University, the questionnaire set was carried over to the same online survey system (Qualtrics) used in Study I and a link of the study was created in the program for the purpose of social sharing. The link was shared with volunteer participants through various social network services. Moreover, the data was also collected from Yıldırım Beyazıt University students through online survey announcements. Four hundred and sixty-two participants joined in the present study between 14th of November and 23rd of December 2016. Survey completion time was approximately 15 minutes. Informed consent, explaining the aim of the study and ensuring the confidentiality of information was obtained from all of the participants. They were informed that the participation in the study is voluntary and they are able to leave it when they have any discomfort. After the completion of the survey, a debriefing form was presented to the participants to enlighten them about the purposes of the study.

7.4. Data Analysis

Prior to analysis, data screening was made. Participants who were younger than 18 years old and not being a current smoker, and who does not smoke at least 10 cigarettes per day and over the one year were excluded from the study. In consequence of various data screening criteria, further analyses were carried out with 305 smokers. Preliminary analyses and main analyses were conducted using the Statistical Package for Social Sciences (SPSS), version 22.0 (2013). Before testing the main hypotheses of the current study, several *t*-test analyses and one-way Analysis of Variances (ANOVAs) were preliminarily run to find out the differences among the levels of demographic variables. Then, correlation analyses were conducted to see the relations of study variables. Finally, two mediation models

between emotion regulation and smoking dependence with the mediator role of smoking outcome expectancies, and between urgency and smoking dependence with the mediator role of smoking outcome expectancies were tested using multiple mediation analyses (Hayes, 2013).

CHAPTER 8

RESULTS OF THE STUDY II

8.1. Preliminary Analyses

This part includes the descriptive statistics of the variables of the study (i.e., sample size, mean, standard deviation, and range) and the differences in between the levels of demographic variables (i.e., gender, education level, marital status, perceived SES, history of psychiatric diagnosis, and history of medical diagnosis) in terms of the study main variables (i.e., difficulties in emotion regulation, one of the impulsivity dimensions – *urgency*, two of the smoking expectancy subscales – *negative affect reduction* and *boredom reduction*, and smoking dependence). Moreover, the results of the bivariate correlation analyses of the study variables are presented in this part. Finally, the results of a hierarchical regression analysis performed to assess the predictors of smoking dependence are mentioned in this part.

8.1.1. Descriptive Statistics of the Study Variables

Table 7 provides detailed information on the sample size of the main study, mean, standard deviations, and ranges (i.e., minimum and maximum score) of the study variables.

Table 7. Means, Standard Deviations and Ranges of the Study Variables

	Mean	Standard Deviation	Min.	Max.
DERS	81.53	21.13	40	144
Urgency	21.81	6.30	11	43
NAR	20.89	5.80	3	30
BR	14.18	4.57	2	20
FTND	4.12	2.19	0	10

Note. DERS, difficulties in emotion regulation; NAR, negative affect reduction; BR, boredom reduction; FTND, Fagerström Test for Nicotine Dependence.

8.1.2. Group Comparisons in Terms of the Study Variables

To better see whether the smokers being a member of different levels of demographic variables scored dissimilarly on the dependent variables or not, several independent samples *t*-test analyses and one-way Analysis of Variance (ANOVAs) were conducted. The dependent variables for all these analyses were difficulties in emotion regulation, one of the impulsivity dimensions – *urgency*, two of the smoking expectancy subscales – *negative affect reduction* and *boredom reduction*, and smoking dependence. The independent variables for all *t*-test analyses were gender, history of psychiatric diagnosis, and history of medical diagnosis and for one-way Analyses of Variance (ANOVAs), they were education level, marital status, and perceived SES. For all analyses, the significant results were just reported and all results including the significant and no significant ones were presented in tables. The descriptive statistics and *t*-test results were presented in Table 8, for history of psychiatric diagnosis variable, and in Table 9, for history of medical diagnosis variable. Moreover, the descriptive statistics and one-way ANOVA results were demonstrated in Table 10, for marital status variable, in Table 11, for perceived SES variable, and in Table 12, for education level variable, and lastly, in table 13, for gender variable.

8.1.2.1. Group Comparisons of Demographic Variables in Terms of Difficulties in Emotion Regulation

In this part, a series of *t*-test analyses was conducted to see the difference among the levels of demographic variables (i.e., gender, history of psychiatric diagnosis, history of medical diagnosis) on difficulties in emotion regulation. Moreover, a series of one-way Analysis of Variances (ANOVAs) was run to see the variation among the levels of demographic variables (i.e., education level, marital status, and perceived SES) on difficulties in emotion regulation.

According to *t*-test analyses results, participants who have the history of psychiatric diagnosis significantly differed from others in terms of difficulties in emotion regulation ($t(303) = 4.07$, $p < .05$). As can be seen in Table 8, smokers with psychiatric diagnosis history ($m = 89.93$, $sd = 21.78$) had greater difficulty in emotion regulation than smokers with no psychiatric diagnosis history ($m = 78.79$, $sd = 20.22$).

Table 8. Descriptive Statistics and t-Test Results for History of Psychiatric Diagnosis Variable

		N	Mean	*SD*	*t*
DERS	Yes	75	89.93	21.78	4.07*
	No	230	78.79	20.22	
Urgency	Yes	75	24.41	7.16	3.80*
	No	230	20.96	5.76	
NAR	Yes	75	21.95	5.45	1.82
	No	230	20.55	5.88	
BR	Yes	75	14.56	4.17	.82
	No	230	14.06	4.70	
FTND	Yes	75	4.76	2.20	2.94*
	No	230	3.91	2.15	

Note. DERS, difficulties in emotion regulation; NAR, negative affect reduction; BR, boredom reduction; FTND, Fagerström Test for Nicotine Dependence. *$p < .05$

For the medical diagnosis history categories, there was also a significant difference in terms of difficulties in emotion regulation ($t(303) = -2.55$, $p < .05$). That is to say, smokers with medical diagnosis history ($m = 76.67$, $sd = 17.55$) had fewer difficulty in emotion regulation than smokers with no medical diagnosis history ($m = 83.06$, $sd = 21.96$) (see Table 9).

Table 9. Descriptive Statistics and t-Test Results for History of Medical Diagnosis Variable

		N	Mean	*SD*	*t*
DERS	Yes	73	76.67	17.55	-2.55*
	No	232	83.06	21.96	
Urgency	Yes	73	20.78	5.47	-1.76
	No	232	22.13	6.51	
NAR	Yes	73	22	5.32	1.88
	No	232	20.54	5.91	
BR	Yes	73	15.33	4.07	2.47*
	No	232	13.82	4.67	
FTND	Yes	73	4.14	2.08	.07
	No	232	4.12	2.23	

Note. DERS, difficulties in emotion regulation; NAR, negative affect reduction; BR, boredom reduction; FTND, Fagerström Test for Nicotine Dependence. *$p < .05$

When the effect of marital status was examined by performing one-way ANOVA (see Table 10), the results showed that its effect on difficulties in emotion regulation was significant ($F[2,301] = 4.09$, $p < .01$). Post-hoc tests could not be performed since widowed category of marital status includes fewer than two cases ($n = 1$).

Table 10. Descriptive Statistics (Means and Standard Deviations in Parentheses) and One-Way ANOVA Results for Marital Status Variable

	Married	Single	Widowed	Divorced	F(2,301)
DERS	74.55	84.16	82	79.64	4.09**
	(17.99)	(21.70)	(not exist)	(21.89)	
Urgency	20.03	22.47	23	21.36	2.97*
	(5.93)	(6.34)	(not exist)	(6.38)	
NAR	20.56	21.25	19	16.36	2.67
	(6.27)	(5.40)	(not exist)	(8.33)	
BR	13.62	14.66	7	9.55	6.07
	(4.85)	(4.19)	(not exist)	(6.53)	
FTND	4.04	4.10	5	5.09	.81
	(2.28)	(2.18)	(not exist)	(1.87)	

Note. DERS, difficulties in emotion regulation; NAR, negative affect reduction; BR, boredom reduction; FTND, Fagerström Test for Nicotine Dependence.
$^{**}p < .01$, $^{*}p < .05$

Moreover, to test the effect of perceived SES variable on difficulties in emotion regulation, again, one-way ANOVA was performed. According to its result, the effect of perceived SES on difficulties in emotion regulation was found to be significant ($F[4, 300] = 4.36$, $p < .01$) (see Table 11). More specifically, post-hoc comparisons performed with Tukey's HSD indicated that participants whose perceived SES was under the middle level ($m = 92.73$, $sd = 21.49$) had greater difficulties in emotion regulation than participants whose perceived SES was middle level ($m = 77.48$, $sd = 19.22$).

Table 11. Descriptive Statistics (Means and Standard Deviations in Parentheses) and One-Way ANOVA Results for Perceived SES Variable

	Low	Under the Middle	Middle	Above the Middle	High	F(4,300)
DERS	89.33	92.73	77.48	83.76	83.78	4.36**
	(25.23)	(21.49)	(19.22)	(22.27)	(20.60)	
Urgency	22	23.5	20.86	22.85	21.44	2.15
	(7.38)	(5.92)	(6.05)	(6.53)	(6.64)	
NAR	20.56	20.77	20.74	21.20	21	.11
	(4.19)	(4.64)	(5.68)	(6.51)	(5.36)	
BR	12	13.93	13.87	15.05	13.22	1.72
	(3.94)	(4.83)	(4.59)	(4.42)	(4.76)	
FTND	4.56	4.87	3.89	4.20	4.33	1.45
	(1.51)	(1.85)	(2.26)	(2.27)	(1.22)	

Note. DERS, difficulties in emotion regulation; NAR, negative affect reduction; BR, boredom reduction; FTND, Fagerström Test for Nicotine Dependence. ***p* < .01

8.1.2.2. Group Comparisons of Demographic Variables in Terms of Impulsivity Dimension – Urgency

In this part, again, a series of *t*-test analyses was run to examine the difference among the levels of demographic variables (i.e., gender, history of psychiatric diagnosis, and history of medical diagnosis) on urgency dimension. Moreover, three one-way Analysis of Variances (ANOVAs) were conducted to see the effect of demographic variables (i.e., education level, marital status, and perceived SES) on urgency dimension.

The results of *t*-test analyses demonstrated that participants who have the history of psychiatric diagnosis significantly differed from others in terms of urgency ($t(303) = 3.80$, $p < .05$). In more detail, smokers with psychiatric diagnosis history ($m = 24.41$, $sd = 7.16$) had higher levels of urgency in comparison with smokers who have no psychiatric diagnosis history ($m = 20.96$, $sd = 5.76$) (see Table 8).

According to one-way ANOVA result that was run to test the effect of marital status (see Table 10), its effect on urgency was found to be significant (F[2, 301] = 2.97, p < .05). Post-hoc comparisons could not be run since one of four groups of marital status, namely, widowed category includes fewer than two cases (n = 1).

8.1.2.3. Group Comparisons of Demographic Variables in Terms of Smoking Outcome Expectancies Dimensions – Negative Affect Reduction and Boredom Reduction

In this part, group comparisons were evaluated by using t-test analyses for gender, history of psychiatric diagnosis, and history of medical diagnosis variables that may affect negative affect reduction and boredom reduction smoking outcome expectancy dimensions. Furthermore, in order to examine the effect of demographic variables (i.e., education level, marital status, and perceived SES) on negative affect reduction and boredom reduction smoking outcome expectancy dimensions, a series of one-way Analysis of Variances (ANOVAs) was performed.

For the medical diagnosis history categories, there was a significant difference in terms of boredom reduction expectancy (t(303) = 2.47, p < .05). As can be seen in Table 9, smokers with medical diagnosis history (m = 15.33, sd = 4.07) had more boredom reduction expectancy from smoking in comparison with smokers with no medical diagnosis history (m = 13.82, sd = 4.67).

As shown in Table 12, the effect of education level on negative affect reduction was significant (F[4, 300] = 3.20, p < .05). According to post-hoc comparisons using Tukey's HSD, secondary school graduate participants (m = 11.33, sd = 2.52) were less likely to expect negative affect reduction outcome from smoking behavior than high school graduates (m = 22.06, sd = 4.72), university graduates (m = 20.48, sd = 5.96), and master/PhD graduates (m = 20.72, sd = 6.26).

Table 12. Descriptive Statistics (Means and Standard Deviations in Parentheses) and One-Way ANOVA Results for Education Level Variable

	Primary School	Secondary School	High School	University Graduates	Master/PhD Graduates	F(4,300)
DERS	89.5	102	82.85	80.98	80	.98
	(3.54)	(15.59)	(21.04)	(21.66)	(20.47)	
Urgency	23.5	26	22.48	21.81	20.79	1.08
	(3.54)	(2.65)	(6.11)	(6.54)	(6.11)	
NAR	21.5	11.33	22.06	20.48	20.72	3.20*
	(9.19)	(2.52)	(4.72)	(5.96)	(6.26)	
BR	8.5	8.67	14.25	14.45	13.96	2.07
	(6.36)	(7.02)	(4.78)	(4.47)	(4.25)	
FTND	4.5	5.33	4.16	4.23	3.79	.75
	(.71)	(1.15)	(2.13)	(2.23)	(2.26)	

Note. DERS, difficulties in emotion regulation; NAR, negative affect reduction; BR, boredom reduction; FTND, Fagerström Test for Nicotine Dependence. *$p < .05$

8.1.2.4. Group Comparisons of Demographic Variables in Terms of Smoking Dependence

This part includes a series of *t*-test analyses results run to see the difference among the levels of demographic variables (i.e., gender, history of psychiatric diagnosis, and history of medical diagnosis) on smoking dependence. Moreover, the results of several one-way Analysis of Variances (ANOVAs) that were conducted to see the variation among the levels of demographic variables (i.e., education level, marital status, and perceived SES) on smoking dependence were presented.

As can be viewed in Table 8, participants who have the history of psychiatric diagnosis significantly differed from others in terms of smoking dependence ($t(303) = 2.94$, $p < .05$). Specifically, smokers with psychiatric diagnosis history ($m = 4.76$, $sd = 2.20$) had higher levels of smoking dependence in comparison with smokers who have no psychiatric diagnosis history ($m = 3.91$, $sd = 2.15$).

Among group comparisons in terms of study main variables presented up to now, only gender variable did not produce any differences, suggesting that women and men smokers did not differ in terms of difficulties in emotion regulation, urgency, affect-related smoking outcome expectancies, and smoking dependence which were dependent variables of these analyses (see Table 13).

Table 13. Descriptive Statistics and t-Test Results for Gender Variable

		N	Mean	*SD*	*t*
DERS	Women	162	81.06	21.78	-.41
	Men	143	82.06	20.44	
Urgency	Women	162	22.10	6.35	.87
	Men	143	21.48	6.24	
NAR	Women	162	21.36	4.83	1.47
	Men	143	20.36	6.71	
BR	Women	162	13.91	4.48	-1.10
	Men	143	14.49	4.67	
FTND	Women	162	3.99	2.04	-1.12
	Men	143	4.27	2.35	

Note. DERS, difficulties in emotion regulation; NAR, negative affect reduction; BR, boredom reduction; FTND, Fagerström Test for Nicotine Dependence. *$p < .05$

8.1.3. Bivariate (Pearson) Correlation Analyses

Bivariate correlation coefficients were computed among the study variables to see their associations and revealed in Table 14. The correlation analyses demonstrated that gender of smokers had positive association with psychiatric diagnosis history ($r = .20$, $p < .01$), whereas its association with education level was negative ($r = -.14$, $p < .05$). When it was looked at the strength of these associations, they were weak.

For age variable, there were negative correlations of it with urgency dimension ($r = -.20$, $p < .01$), with boredom reduction expectancy ($r = -.28$, $p < .01$), and with

difficulties in emotion regulation (r = -.16, p < .01). It positively correlated with education level (r = .18, p < .01).

When the associations between education level and other variables were determined, the results indicated that the association between education level and marital status was negative (r = -.25, p < .01). On the other hand, education level was positively correlated with age (r = .18, p < .01), and perceived SES (r = .16, p < .01).

In addition, marital status was found to be negatively associated with education level (r = -.25, p < .01), perceived SES (r = -.13, p < .05), and boredom reduction expectancy (r = -.12, p < .05).

When the relations of perceived SES were analyzed, the results revealed that although its correlation with education level was positive (r = .16, p < .01), it correlated in a negative direction with marital status (r = -.13, p < .05).

For psychiatric diagnosis history, the relations were also investigated. The correlation analyses revealed that psychiatric diagnosis history had negative correlations with urgency (r = -.24, p < .01), smoking dependence (r = -.17, p < .01), and difficulties in emotion regulation (r = -.23, p < .01). Also, its correlation with gender was found to be positive (r = -.20, p < .01).

As demonstrated in Table 14, the relation of medical diagnosis history with boredom reduction was determined as negative (r = -.14, p < .05), while its relation with difficulties in emotion regulation was noticed to be positive (r = .13, p < .05).

When urgency was taken into consideration for correlation analyses, the results indicated that it correlated positively with smoking dependence (r = .15, p < .01), negative affect reduction expectancy (r = .21, p < .01), boredom reduction expectancy (r = .26, p < .01), and difficulties in emotion regulation (r = .66, p < .01). It had negative associations with age (r = -.20, p < .01), and psychiatric diagnosis history (r = -.24, p < .01).

There was negative association between smoking dependence and psychiatric diagnosis history (r = -.17, p < .01), whereas smoking dependence correlated in a

positive direction with urgency (r = .15, p < .01), negative affect reduction (r = .21, p < .01), and boredom reduction (r = .21, p < .01) expectancies.

The calculations of Pearson correlations among negative affect reduction expectancy and other variables showed that negative affect reduction expectancy related positively to urgency (r = .21, p < .01), smoking dependence (r = .21, p < .01), boredom reduction expectancy (r = .47, p < .01), and difficulties in emotion regulation (r = .14, p < .01).

When Pearson correlations were computed to see the relations of boredom reduction expectancy with other variables, boredom reduction expectancy was found to be related negatively with age (r = -.28, p < .01), marital status (r = -.12, p < .05), and medical diagnosis history (r = -.14, p < .05). The results also showed the positive associations of boredom reduction expectancy with urgency (r = .26, p < .01), smoking dependence (r = .21, p < .01), negative affect reduction expectancy (r = .47, p < .01), and difficulties in emotion regulation (r = .12, p < .05).

Lastly, it was looked at the relations of difficulties in emotion regulation with other study variables. The observed correlation matrix indicated that while difficulties in emotion regulation correlated positively with medical diagnosis history (r = .13, p < .05), urgency (r = .67, p < .01), negative affect reduction expectancy (r = .14, p < .05), and boredom affect reduction expectancy (r = .12, p < .05), it correlated negatively with age (r = -.16, p < .01), and psychiatric diagnosis history (r = -.23, p < .01).

Table 14. Bivariate correlation coefficients of Study Variables

	Gender	Age	Education Level	Marital Status	Perceived SES	Psychiatric Diagnosis	Medical Diagnosis	Urgency	FTND	NAR	BR	DERS
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
(1)	-											
(2)	-.05	-										
(3)	-.14*	.18**	-									
(4)	-.09	-.06	-.25**	-								
(5)	.01	.02	.16**	-.13*	-							
(6)	.20**	-.09	-.08	-.05	.02	-						
(7)	.11	-.05	-.01	.07	-.05	.07	-					
(8)	-.05	-.20**	-.11	.09	.03	-.24**	.09	-				
(9)	.07	.06	-.07	.08	-.04	-.17**	.00	.15**	-			
(10)	-.09	-.11	-.04	-.10	.03	-.10	-.11	.21**	.21**	-		
(11)	.06	-.28**	.04	-.12*	.11	-.05	-.14*	.26**	.21**	.47**	-	
(12)	.02	-.16**	-.08	.10	-.04	-.23**	.13*	.66**	.10	.14*	.12*	-

Note. DERS, difficulties in emotion regulation; NAR, negative affect reduction; BR, boredom reduction; FTND, Fagerström Test for Nicotine Dependence.

** Correlation is significant at the .01 level (2-tailed)

* Correlation is significant at the .05 level (2-tailed)

8.1.4. Hierarchical Regression Analysis

To assess the predictive value of study variables on smoking dependence, a hierarhical regression was conducted. Smoking dependence was the dependent variable of this analysis. For the first step, demographic variables (i.e., gender, age, education level, marital status, perceived SES, history of psychiatric diagnosis, and history of medical diagnosis) were entered into the model as predictor variables to ensure that these variables do not account for whole relations between hypothesized variables of the study. Next, as a second step, difficulties in emotion regulation and urgency variables were put into the model. Finally, the mediators of the study, negative affect reduction and boredom reduction expectancies, were entered into the model. Table 15 contains a summary of this statistical analysis.

When it was looked at the first step of hierarchical regression analysis, the results demonstrated that the demographic variables (i.e., gender, age, education level, marital status, perceived SES, history of psychiatric diagnosis, and history of medical diagnosis) put the model up significantly, $F(7, 296) = 2.26$, $p < .05$. Also, model in the first stage showed 5 % of variability in smoking dependence that was accounted for by all demographic variables. Psychiatric diagnosis only had a significant association with smoking dependence ($\beta = -.18$, $t(296) = -3.13$, $p < .005$). That is to say, smokers with psychiatric diagnosis had higher level of smoking dependence than smokers with no psychiatric diagnosis. By the addition of independent variables to the model and also, after the control for demographic variables, it was seen that difficulties in emotion regulation and urgency were not significantly added predictive power to the model with 2 % explained variance, $\Delta F(2, 294) = 2.41$, $p > .05$. In general, the second model was significant, $F(9, 296) = 2.31$, $p < .05$. The association between urgency dimension of impulsivity and nicotine dependence was marginally significant ($\beta = .15$, $t(294) = 1.96$, $p = .05$). More specifically, smokers with high levels of urgency had higher level of smoking dependence than smokers with low levels of smoking dependence. According to the final step, after the addition of the mediators to the model and also, after the control for both demographic variables (i.e., gender, age, education level, marital status, perceived SES, history of psychiatric diagnosis, and history of medical diagnosis) and independent variables

(i.e., difficulties in emotion regulation and urgency), there was a significant increase in the explained variance of smoking dependence, $\Delta F(2, 292) = 10.21$, $p < .001$. That is to say, in the last step, negative affect reduction and boredom reduction expectancies accounted for 6 % variance in smoking dependence. Both negative affect reduction ($\beta = .13$, $t(292) = 2.00$, $p < .05$) and boredom reduction ($\beta = .19$, $t(292) = 2.78$, $p < .01$) expectancies had significantly associated with smoking dependence. In more detail, smokers who had higher negative affect expectation from smoking reported higher smoking dependence. Also, smokers with higher expectation of boredom reduction from smoking revealed higher smoking dependence. Totally, the model explained 13 % of the variance in smoking dependence.

Table 15. Hierarchical Regression Analysis Summary Related to the Predictors of Smoking Dependence

Predictor Variables	*B*	*t*	*ΔF*	*df*	R^2	ΔR^2
Step 1			2.26	7, 296	.05	.05
Gender	.10	1.71		296		
Age	.07	1.13		296		
Education Level	-.07	-1.06		296		
Marital Status	.06	1.08		296		
Perceived SES	-.02	-.18		296		
Psychiatric Diagnosis	-.18	-3.13***		296		
Medical Diagnosis	.00	-.08		296		
Step 2			2.41	2, 294	.07	.02
Gender	.11	1.82		294		
Age	.09	1.54		294		
Education Level	-.05	-.84		294		
Marital Status	.06	1.03		294		
Perceived SES	-.03	-.44		294		
Psychiatric Diagnosis	-.15	-2.50*		294		
Medical Diagnosis	-.02	-.28		294		
Urgency	.15	1.96*		294		
Diffuculties in Emotion Regulation	-.03	-.43		294		
Step 3			10.21	2, 292	.13	.06
Gender	.10	1.70		292		
Age	.15	2.53*		292		
Education Level	-.06	-1.02		292		
Marital Status	.10	1.65		292		
Perceived SES	-.04	-.71		292		
Psychiatric Diagnosis	-.14	-2.39*		292		
Medical Diagnosis	.03	.53		292		
Urgency	.07	.96		292		
Diffuculties in Emotion Regulation	-.02	-.30		292		
Negative Affect Reduction	.13	2.00*		292		
Boredom Reduction	.19	2.78**		292		

Note. $*p < .05$, $**p < .01$, $***p < .005$

8.2. Multiple Mediation Analyses

The multiple mediation analyses were conducted to test multiple mediator models by using a nonparametric resampling method, bootstrapping (Preacher & Hayes, 2008). Bootstrapping method is a concentrated and complicated strategy of calculation that contains the procedure of resampling the data over and over again from the data set to test the indirect effects. Then, as being an estimator, it computes the indirect effects for each random sample and creates confidence intervals for indirect effects. Hayes (2013) and Preacher and Hayes (2008) have discussed this method's advantages and requirements in detail with existing literature. Firstly, methodologically and practically, there has been little interest in the literature about a design that allows for performing concurrent mediation by multiple variables. The use of this method allows multiple mediation by providing higher statistical power (control for the probability of making Type II) and going over the Type I error in comparison with Sobel test (MacKinnon, Lockwood, Hoffmann, West, & Sheets, 2002). Secondly, when the large sample is in need of the structural equation models, it does not a need for this method (Hayes, 2013). Thirdly, normality assumption is also not a requirement criteria for bootstrapping method (Preacher & Hayes, 2008) as compared to Sobel test which is a conservative test relying on normal distribution for use (MacKinnon, Warsi, & Dwyer, 1995). Lastly, according to Baron and Kenny's mediation procedure (1986), the causal steps strategy, mediation is performed if the conditions of significant *a* and significant *b* paths which show the effect of independent variable on the mediator and the effect of mediator on dependent variable, respectively are met. With the difference of Baron and Kenny's mediation procedure, bootstrapping procedure does not necessitate these conditions for mediation analysis (Preacher & Hayes, 2008). Moreover, to make an evaluation about whether an indirect effect is significant or not, 95 % the bootstrap confidence intervals of the mediator variable derived from 1000 bootstrap resamples do not involve zero. Since this study hypothesized the mediation by multiple possible mediators, the recommended multiple mediation model of Preacher and Hayes (2008) was seen a suitable strategy and the multiple mediation models were examined through PROCESS macro for SPSS presented by Hayes (2013).

8.2.1. Multiple Mediation Roles of Smoking Outcome Expectancy Subscales in the Difficulties in Emotion Regulation-Smoking Dependence Relation

To test the hypothesized relation between difficulties in emotion regulation and smoking dependence with the mediator role of smoking outcome expectancies, a multiple mediation model involving two mediators (negative affect reduction and boredom reduction expectancies) was examined. The demographic variables (i.e., gender, age, education level, marital status, perceived SES, psychiatric diagnosis, and medical diagnosis) were also controlled in this analysis. Table 16 contains the summary of multiple mediation analysis for first hypothesized model of the study as shown in the first figure of Chapter 6. As can be seen in the summary of findings, negative affect reduction and boredom reduction expectancies had mediator role in difficulties in emotion regulation and smoking dependence relation.

Table 16. The Summarization of Multiple Mediation Analysis for Model 1

Independent Variable (IV)	Mediators (Ms)	Dependent Variable (DV)	Confidence Intervals (CIs)	Mediation
Difficulties in emotion regulation	Negative Affect Reduction	Smoking Dependence	Significant	+
Difficulties in emotion regulation	Boredom Reduction	Smoking Dependence	Significant	+

Specifically, the smokers with greater difficulty in emotion regulation were more likely to have negative affect reduction expectancy from their smoking behavior (a_1 = .04, p < .05), which in turn led higher smoking dependence (b_1 = .05, p < .05). Furthermore, higher difficulty in emotion regulation of smokers led to higher boredom reduction expectancy (a_2 = .02, p > .05), which in turn increased smoking dependence of smokers (b_2 = .10, p < .005). When it was looked at the bias corrected confidence intervals of indirect effects for mediators, the ranges on the basis of 1000 bootstrap resamples were above zero for both negative affect reduction (B = .00, SE

= .00) and boredom reduction (B = .00, SE = .00). The direct effect of difficulties in emotion regulation on smoking dependence was found to be non-significant (c' = .00, p > .05). Also, the total effect of difficulties in emotion regulation on smoking dependence with the mediator roles of negative affect reduction and boredom reduction expectancies was not found to be significant (c = .00, p > .05). As shown in Table 16, the range of the bias corrected confidence intervals was between .00 and .01 and so, the total indirect effect of difficulties in emotion regulation on smoking dependence with the mediator roles of negative affect reduction and boredom reduction expectancies was evaluated as significant (B = .00, SE = .00). When it was looked at the model summary, this model was found to be significant, $F(10, 293) = 4.16$, $p < .001$, with an R^2 value of 12, indicating that the model explained 12 % of variance in smoking dependence from emotion dysregulation variable through two mediators. Table 17 and Figure 2 show the findings of the analysis.

Table 17. Bootstrap Findings for Model 1 (Indirect Effects)

Indirect Effects	B	Standard Error (SE)	Lower (BCCIs)	Upper (BCCIs)
Total	.00*	.00	.00	.01
Negative Affect Reduction	.00*	.00	.00	.01
Boredom Reduction	.00*	.00	.00	.01

Note 1. *$p < .05$
Note 2. BCCIs, Bias Corrected Confidence Intervals with a level of % 95
Note 3. All coefficents indicate unstandardized weights

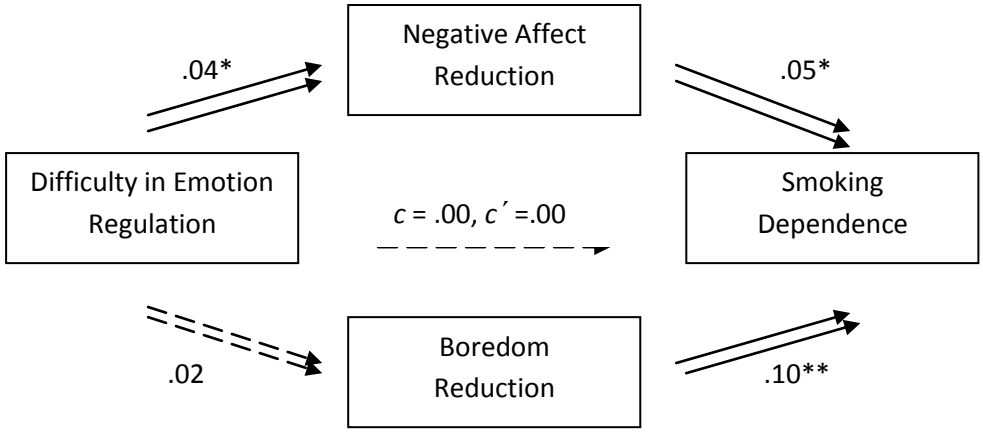


Figure 2. The paths of Model 1 with unstandardized regression coefficients that illustrates the mediator roles of negative affect reduction and boredom reduction on the relation between difficulty in emotion regulation and smoking dependence

Note 1. *$p < .05$, **$p < .005$
Note 2. En dashed lines show nonsignificant paths
Note 3. There are double lines in paths if there is mediation

8.2.2. Multiple Mediation Roles of Smoking Outcome Expectancy Subscales in Negative Urgency-Smoking Dependence Relation

Second hypothesized model that took into consideration the relation between urgency and smoking dependence with the mediator roles of smoking outcome expectancies was also tested through multiple mediation analysis with two potential mediators, namely, negative affect reduction and boredom reduction expectancies. Gender, age, education level, marital status, perceived SES, psychiatric diagnosis, and medical diagnosis were also among control variables for this analysis. As shown in Table 18, negative affect reduction and boredom reduction expectancies mediated the relation between urgency and smoking dependence.

Table 18. The Summarization of Multiple Mediation Analysis for Model 2

Independent Variable (IV)	Mediators (Ms)	Dependent Variable (DV)	Confidence Intervals (CIs)	Mediation
Urgency	Negative Affect Reduction	Smoking Dependence	Significant	+
Urgency	Boredom Reduction	Smoking Dependence	Significant	+

Particularly, urgency levels of the smokers were not significantly related to their smoking dependence (c' = .00, p > .05), whereas the total effect of the urgency on smoking dependence of smokers through the negative affect reduction and boredom reduction expectancies was found to be significant (c = .05, p < .05). The smokers with higher levels of urgency had higher negative affect reduction expectancy from their smoking behavior (a_1 = .18, p < .005), which in turn led higher smoking dependence (b_1 = .05, p < .05). Furthermore, higher levels of urgency led smokers to higher boredom reduction expectancy (a_2 = .18, p < .001), which in turn increased their dependence to smoking (b_2 = .09, p < .01). According to bootstrap findings for indirect effects, the bias corrected 95 % confidence intervals for mediators ranged between .00 and .02 for negative affect reduction (B = .01, SE = .01) and ranged between .00 and .03 for boredom reduction (B = .02, SE = .01).

As can be viewed in Table 18, the total indirect effect of urgency on smoking dependence through negative affect reduction and boredom reduction expectancies was evaluated as significant (B = .02, SE = .01), since the range of the bias corrected 95 % confidence intervals was between .01 and .04. Totally, the second model explained 13 % variance in smoking dependence from urgency through negative affect reduction and boredom reduction expectancies, significantly, $F(10, 293)$ = 4.26, p < .001. Table 19 and Figure 3 show the findings of the analysis.

Table 19. Bootstrap Findings for Model 2 (Indirect Effects)

Indirect Effects	B	Standard Error (SE)	Lower (BCCIs)	Upper (BCCIs)
Total	.02*	.01	.01	.04
Negative Affect Reduction	.01*	.01	.00	.02
Boredom Reduction	.02*	.01	.00	.02

Note 1. *$p < .05$
Note 2. BCCIs, Bias Corrected Confidence Intervals with a level of % 95.
Note 3. All coefficents indicate unstandardized weights

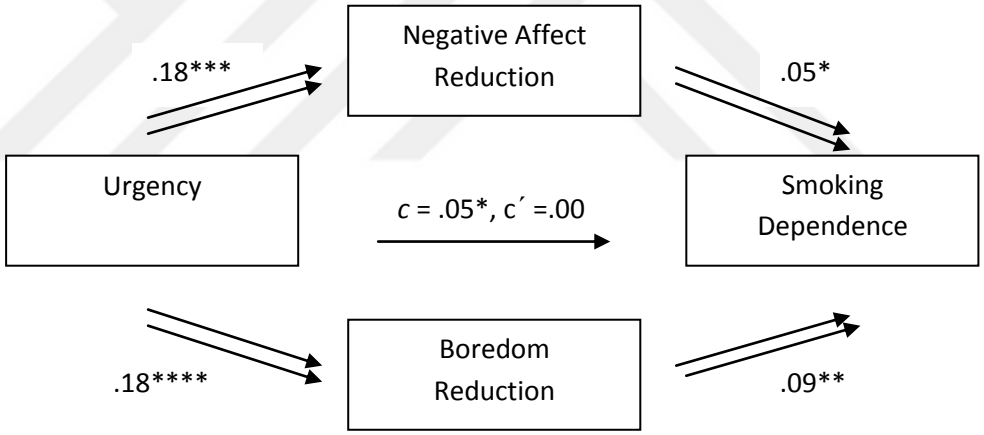


Figure 3. The paths of Model 2 with unstandardized regression coefficients that illustrates the mediator roles of negative affect reduction and boredom reduction on the relation between difficulty in emotion regulation and smoking dependence

Note 1. *$p < .05$, **$p < .01$, ***$p < .005$, ****$p < .001$
Note 2. En dashed lines show nonsignificant paths
Note 3. There are double lines in paths if there is mediation

CHAPTER 9

DISCUSSION OF THE STUDY II

Smoking behavior is still a critical health problem all across the world despite its harmful effects. To date, extensive researches have been conducted to examine factors that lead to smoking behavior and to identify the mechanisms through which these factors might affect each other and influence risk for smoking dependence. To examine risk factors for smoking and to identify mechanisms leading to smoking dependence seem very considerable for smoking prevention and intervention studies. In the literature, whereas emotion dysregulation and the personality trait of negative urgency has been associated with smoking dependence as exemplified in Chapter 1, research identifying the underlying psychological mechanisms that mediate the association between emotion dysregulation/negative urgency and smoking addiction is lacking. Therefore, the current study was one of those studies carried out in order to light the missing part of the literature by focusing on the relations between, emotion dysregulation/negative urgency, affect-related smoking expectancies, and smoking dependence. Specifically, the main aim of the present study was to determine whether affect-related expectancies mediated the association between emotion dysregulation and smoking dependence as well as the association between negative urgency and smoking dependence.

9.1. Findings of the Present Study

In this part, the findings of the present study would be discussed in the light of the literature. Specifically, group comparisons in terms of the study variables, multiple mediation analyses, and discussions on these findings are the subject of this section.

Next, clinical implications, limitations, and future suggestions in relation with the present study would also be presented.

9.1.1. Group Comparisons in Terms of the Study Variables

The findings to better see whether the smokers being a member of different levels of demographic variables (i.e., gender, education level, marital status, perceived SES, history of psychiatric diagnosis, and history of medical diagnosis) scored dissimilarly in terms of the study main variables (i.e., difficulties in emotion regulation, one of the impulsivity dimensions – *negative urgency*, two of the smoking expectancy subscales – *negative affect reduction* and *boredom reduction*, and smoking dependence) were obtained by *t* test analyses and one-way Analysis of Variance (ANOVAs).

It was found that history of psychiatric diagnosis is an important variable associated with difficulties in emotion regulation, negative urgency, and smoking dependence. The results demonstrated that participants who had psychiatric diagnosis had greater difficulty in emotion regulation, higher levels of negative urgency, and higher levels of smoking addiction. Firstly, the result of the significant association between difficulties in emotion regulation and having a psychiatric diagnosis is consistent with the literature. There have been a number of studies, stating notable associations between emotion dysregulation and many psychiatric conditions such as anxiety disorders, mood disorders, interpersonal trauma, post-traumatic stress etc. (Aldao et al., 2010; Dvir, Ford, Hill, & Frazier, 2014; McLaughlin, Hatzenbuehler, Mennin, & Nolen-Hoeksema, 2011; Nolen-Hoeksema, 2012; Sheppes, Suri, & Gross, 2015). Moreover, Gross and Jazairei reported that several psychiatric disorders contain in itself difficult modality of emotional reactivity and emotion regulation (2014). Secondly, when it was looked at the finding that there was a significant association between having a psychiatric diagnosis and negative urgency, this finding is also supported by research up to now utilized Whiteside and Lynam's impulsivity model. In brief, a body of research has demonstrated that negative urgency dimension is associated with psychopathology symptoms in both children and adults (Marmorstein, 2013). Lastly, the finding that having a psychiatric diagnosis is related to smoking dependence is consistent with several studies, demonstrating a link

between psychopathology and smoking dependence (Blalock et al., 2011; Breslau, 1995; Farris, Brown, Goodwin, & Zvolensky, 2017; Grant, Hasin, Chou, Stinson, & Dawson, 2004).

Another independent variable examined in terms of the study main variables was history of medical diagnosis. The results suggested that the participants who had medical diagnosis got lower scores on difficulties in emotion regulation and higher scores on boredom reduction expectancy than the participants who did not have medical diagnosis. The relationship between emotion regulation and history of medical diagnosis may be explained by emotion regulation function of current smoking for these individuals. In parallel, the relationship between boredom reduction expectancy and history of medical diagnosis supports this suggestion. Since individuals with medical diagnosis history expect their boredom to be reduced by smoking, this cognition may also be reflected in regulatory process of these individuals.

Education level was a variable that had an effect on negative affect reduction smoking outcome expectancy variable of this study. According to the findings, the participants who were graduated from high school or university had stronger negative affect reduction expectancy from smoking than secondary school graduate participants. The reason for this difference could be that individuals with higher levels of education are more likely to have knowledge of the pharmacologic effects of nicotine that maintain smoking behavior. It was well documented that nicotine by entering to the brain leads to a number of neurotransmitters' release in the brain which in turn plays a part in pleasure and reward perception (Benowitz, 2010). Since expectancies are formed by learning and educated individuals might have greater stimuli from their environment such as smoking studies, books etc., they are so prone to learn about smoking behavior and to be motivated about its expected consequences.

When the effect of perceived SES of the participants was examined, it was found that participants whose perceived SES was under the middle level had greater difficulties in emotion regulation than participants whose perceived SES was middle level. Being in accord with this finding, a body of research has been attempted to establish

a link between childhood poverty and adult emotion regulatory process (Javanbakht et al., 2016; Kim et al., 2013; Liberzon et al., 2015). Individuals face in that compelling socioeconomic environment may experience stress. In a study, Beck (2013) reported that problems come from chronic stressors that individuals meet in their socioeconomic surrounding can lead critical, permanent changes in the brain, resulting permanently changed ability of individuals to regulate their emotions.

Up to the present, the findings of the preliminary analysis were discussed. Subsequent section would present a discussion of main analysis of the present study.

9.1.2. Multiple Mediation Models

The mediator roles of total scores of affect-related smoking outcome expectancies were examined. Two multiple mediation models suggested between emotion dysregulation/negative urgency and smoking dependence. Negative affect reduction and boredom reduction expectancies from smoking mediated both the relationship between difficulties in emotion regulation and smoking dependence, and negative urgency and smoking dependence. Possible explanations in regard to these findings would be presented.

9.1.2.1. Multiple Mediation Roles of Smoking Outcome Expectancy Subscales in the Difficulties in Emotion Regulation-Smoking Dependence Relation

Difficulties in emotion regulation were related to smoking dependence through negative affect reduction and boredom reduction expectancies, as two of smoking outcome expectancies. As hypothesized, the greater difficulties in emotion regulation, the stronger participants expected negative affect reduction and boredom reduction from smoking, which in turn increased their smoking dependence.

These findings are in line with the literature. As previously explained, several researchers (Brown, Lejuez, Kahler, Strong, & Zvolensky, 2005; Baker, Piper, McCarthy, Majeskie, & Fiore, 2004; Kenford et al., 2002; Wu et al., 2015) had showed the evidence of the linkage between emotion dysregulation and smoking behavior as well as smoking outcome expectancies and smoking behavior (Brandon & Baker, 1991; Ikard et al., 1969; Kassel et al., 2003). Individuals with greater

difficulties in emotion regulation may feel stuck in the face of compelling emotions and may noodle over management strategies that they have already known to deal with these emotions. At this point, previously learned associations may determine action route. Therefore, consistent with contemporary smoking expectancy theory (Rash & Copeland, 2008), smokers' negative affect reduction and boredom reduction expectancies from smoking may play a role in their choice of cigarette smoking behavior in the face of difficulty with regulating these emotions. As being a negative reinforcement mechanism, these expectancies strengthen the dependence to smoking. The reason behind the choice of unhealthy behaviors such as cigarette smoking instead of healthy ones (e.g., doing exercises) when under compelling emotions may be related to the short term and relatively effortless effect of this habit. In sum, all these expectations are learned associations and play a role in smoking dependence by contributing the maintenance of smoking behavior.

9.1.2.2. Multiple Mediation Roles of Smoking Outcome Expectancy Subscales in the Negative Urgency-Smoking Dependence Relation

Negative urgency was related to smoking dependence through negative affect reduction and boredom reduction expectancies, as two of smoking outcome expectancies. As hypothesized, the higher the levels of negative urgency, the stronger the participants expected negative affect reduction and boredom reduction from smoking, which in turn increased their smoking dependence.

Findings in this section of the present study are valuable in point of providing support for Acquired Preparedness Model (APM; Smith & Anderson, 2001). The APM suggests that personality and learning together have an impact on substance use such that "individuals who are high on a risky personality trait are predisposed (prepared) to learn (acquire) certain beliefs and expectations regarding substance use" (Hayaki et al., 2011, p.390). As being a cognitive etiological model, the APM proposes a mediational model in which high-risk trait characteristics in case of being actuated by specific patterns of psychosocial learning, create non-adaptive substance use consequences (Hayaki et al., 2011). Although much of the research based on this model has presented evidence on a variety of alcohol use outcomes, the APM has recently been an enlightening and guiding model for smoking studies (Combs et al.,

2012). The present study, which is one of those studies presenting evidence in support of this model, verified the view that learning processes, assessed in this study via expectancies, have an influence on smoking behavior (a form of risky behavior) acted by individuals high in negative urgency (dispositional risk).

9.1.3. Strengths and Implications of the Current Study

This thesis aimed to explore the linkages between emotion dysregulation/negative urgency and smoking dependence through the mediating effects of affect-related smoking outcome expectancies. To date, there has been only one study to our knowledge that proposed a risk model including emotion dysregulation and smoking outcome expectancies together to determine the risk for initiation to smoking among youth. Therefore, this study was a pioneering in trying to bring light into smoking dependence on the basis of emotion dysregulation and negative reduction and boredom reduction smoking outcome expectancies. Although these variables were previously tested in the same model, the smoking status and the risk evaluation was the issue of concern in the previous study. Regarding the effects of these variables on smoking dependence was the novelty of this thesis.

As previously mentioned, based on Acquired Preparedness Model, a body of research has directed attention to mediator roles of expectancies on the relationship between impulsivity trait and risky behaviors such as marijuana use (Bolles, Earleywine, & Gordis, 2014; Vangness, Bry, & LaBouvie, 2005), alcohol use (Barnow et al., 2004; Fu, Ko, Wu, Cherng, & Cheng, 2007), eating disorder risk (Combs, Smith, Flory, Simmons, & Hill, 2010), and gambling (Ginley, Whelan, Relyea, Meyers, & Pearlson, 2015). Our findings make contribution to the APM as it associates to smoking dependence. Since APM is person-environment transaction theory, cultural examinations seem critical. This was the first study in Turkish psychology literature examining APM in cigarette use and also testing the relations of negative urgency/emotion regulation, affect-related expectancies, and smoking dependence.

Moreover, a variety of studies has identified the linkage between personality traits and variables of cigarette smoking. When smokers and non-smokers are compared

based on personality, the difference are generally small but when it was taken into consideration that too many people smoke, this small difference in regard to personality seems important. Our study tested the role of personality traits on smoking dependence through affect-related smoking outcome expectations. Even these relations made a small contribution in predicting smoking dependence, they have a clinical impact that these findings might gain favor on smoking prevention and cessation programs by adjusting beliefs about smoking reinforcement outcomes to minimalize the risk of nicotine dependence transported by urgency.

Emotion regulation is also among one of the growing areas in psychology research. Although the comorbidity of affective and substance use disorders is well-documented, the role of emotion dysregulation in smoking dependence and also, the underlying psychological mechanisms that mediate the association between emotion dysregulation and smoking addiction is overlooked. This study contributed to the Turkish literature and emotion regulation area by presenting a better understanding of the effect of emotion dysregulation on smoking dependence through affect-related smoking outcome expectancies. This result has also clinical implication that clarifying how smoking behaviors and dependence are maintained for individuals high in emotion dysregulation plots the road on clinical psychologists' work. That is to say, clinical psychologists must modify a treatment process to ensure that affect-related expectations from smoking are brought to light, while working with smoking dependent individuals who have difficulties in emotion regulation.

9.1.4. Limitations and Future Suggestions

There have been the drawbacks of this study that need to be noted and addressed. One of them is that the present study was correlational and cross-sectional study. Therefore, arriving causal conclusions is not possible. Even these findings were consistent with theories of smoking dependence (i.e., Acquired Preparedness Model and Smoking Expectancy Theory), a strong point is to identify these relations and test the theory further with longitudinal design.

Another limitation to be noted is the use of availability sampling and our reliance on online data survey. This led to concentration of the sample on certain individuals that

were more likely to have internet access and to respond to online questionnaires. Collecting the data online and on a limited population made the finding of the current study less representative of the whole Turkey population.

The convenience sampling is the most significant limitation for the generalizability of these findings, but there are other limitations as well. We assessed study variables using self-report measurements. This may lead participants to respond in a socially desirable way such as underreporting their amount of daily cigarette consumption, their difficulty in emotion regulation, their negative urgency traits etc. Moreover, as being a self-report measurement utilized for assessing smoking dependence, the Fagerström Test of Nicotine Dependence was criticized for having low internal consistency and poor criterion validity (Korte, Capron, Zvolensky, & Schmidt, 2013). Additionally, another debate comes from doubt that whether the scale measures smoking dependence or heaviness (Yarış, 2010). Subsequent studies also focused the factor structure and dimensions of the FTND and claimed that the FTNF is a multifactorial construct (Radzius et al., 2003; Uysal et al., 2015). Consequently, further research should utilize objective measures of smoking such as tests of exhaled carbon monoxide (eCO), urinary cotinine etc.

Results of this study documented that psychiatric diagnosis play a part in emotion regulation and smoking dependence and also, the smoking prevalence among individuals with psychiatric conditions is reported to be more common in comparison with general population (Buckley et al., 2005). Therefore, specifically, exploratory studies on the topic that smoking expectancies in Turkish smokers with psychiatric diagnosis would be recommended for future studies.

Further studies may also pay attention mediator and/or moderator role of another variable on these relations, namely, refusal self-efficacy that has been suggested to be related to smoking (Hiemstra, Otten, Leeuw, Schayck, & Engels, 2011). The confidence in the ability to have an impact on the consequences of a situation through behaviors is defined as self-efficacy (Bandura, 1997). This construct incorporates both feeling of confidence and competence. The negative linkage between self-efficacy and cigarette smoking has been well-documented (Yalçınkaya-Alkar & Karancı, 2007; Yan, Jacques-Tiura, Chen, & Yang, 2013) and also, this

cognitive factor is specified as a unique significant predictor of initiation, frequency and quantity of cigarette smoking behavior in some studies (Kear, 2002; Diane, Ebert, & Ngamvitroj, 2005). In particular, these results may be extended by adding self-efficacy variable to the model, proposing that, among smokers high in negative urgency and/or difficulties in emotion regulation, those with low self-efficacy would have stronger positive expectancies from smoking behavior, which in turn would increase their dependence to smoking.

CHAPTER 10

CONCLUSION

The purpose of this thesis was to identify the mediator roles of affect-related smoking outcome expectancies (i.e., negative affect reduction and boredom reduction expectancies) on the relationship between difficulties in emotion regulation/negative urgency and smoking dependence. With this object in mind, in the first study, the Brief Smoking Consequences Questionnaire – Adult (BSCQ-A; Rash & Copeland, 2008) was adapted into Turkish to measure smoking outcome expectancies of Turkish smokers. The results revealed that the Turkish version of BSCQ-A was a reliable and valid measurement tool with its psychometric performance parallel with the original study. The use of Turkish version of BSCQ-A was suggested to be credible for both in research area about smoking behavior and in clinical settings. In the second study, by employing the multiple mediation analysis of Hayes (2013), two multiple mediation models between emotion dysregulation/negative urgency and smoking dependence with the mediator roles of affect-related smoking outcome expectancies were tested. The results demonstrated that there were mediator roles of affect-related smoking outcome expectancies on the relationship between difficulties in emotion regulation and smoking dependence, as well as, on the relationship between negative urgency and smoking dependence.

We give credence to important contributions of this study to smoking dependence literature, as well as psychology literature, in Turkey. First and chief point, the first study of this thesis satisfied the need for a reliable and valid measurement tool of smoking outcome expectancies that explains so many types of outcome expectancies about smoking. Consequently, we believe that the adaptation and the use of the Turkish version of BSCQ-A will inspire and facilitate the work of Turkish researchers who are interested in smoking studies.

Moreover, this was the first thesis to examine the relations between smoking outcome expectancies, difficulties in emotion regulation, negative urgency, and smoking dependence, in Turkey. Highlighting the mediator roles of expectations, in other words, exploring the underlying psychological mechanisms that mediate the association between emotion dysregulation/negative urgency and smoking dependence was the strength of this thesis. These findings have also some clinical implications. Since affect-related smoking outcome expectancies were found to be mediators of the relations between emotion dysregulation/negative urgency and smoking dependence, practitioners who work with dependent individuals high in emotion dysregulation and/or negative urgency must give due importance to outcome expectations of their clients from their risky behaviors like smoking behavior and designate a treatment protocol to ensure these expectations are brought out and handled.

REFERENCES

Acharya, E. S. (2008). *Assessment of nicotine dependence and its demographic correlates among African American smokers.* Unpublished master thesis, University of Maryland, College Park.

Aktürk, Ü. A., İçmeli, Ö. S., Öztaş, S., Koçak, N. D., Şengül, A., Salepçi, B. M., … Ernam, D. (2015). Evaluation of cigarette smoking attitudes and behaviors among students of a state high school in İstanbul. *Eurasian Journal of Pulmonology, 17*(2), 107–111. doi: 10.5152/ejp.2015.02996

Aldao, A., Nolen-Hoeksema, S., & Schweizer, S. (2010). Emotion-regulation strategies across psychopathology: A meta-analytic review. *Clinical Psychology Review, 30*(2), 217–237. doi: 10.1016/j.cpr.2009.11.004

American Psychiatric Association. (1980). *Diagnostic and statistical manual of mental disorders* (3rd ed.). Washington, DC: American Psychiatric Association.

American Psychiatric Association. (1994). *Diagnostic and statistical manual of mental disorders* (4th ed.). Washington, DC: American Psychiatric Association.

American Psychiatric Association. (2013). *Diagnostic and statistical manual of mental disorders* (5th ed.). Washington, DC: American Psychiatric Association.

Anderson, K. G., Smith, G. T., & Fischer, S. F. (2003). Women and acquired preparedness: personality and learning implications for alcohol use. *Journal of Studies on Alcohol, 64*(3), 384–392. doi: 10.15288/jsa.2003.64.384

Anestis, M. D., Selby, E. A., & Joiner, T. E. (2007). The role of urgency in maladaptive behaviors. *Behavior Research and Therapy, 45*(12), 3018–3029. doi: http://dx.doi.org/10.1016/j.brat.2007.08.012

Atak, H. (2011). Yetişkinliğe geçiş yıllarında sigara içme davranışının psikososyal

belirleyicileri ve sigara içmenin yaşam doyumu ve öznel iyi oluşla ilişkisi. *Klinik Psikiyatri, 14*, 29–43.

Avenevoli, S., & Merikangas, K. R. (2003). Familial influences on adolescent smoking. *Addiction, Suppl1*, 1–20. doi: 10.1046/j.1360-0443.98.s1.2.x

Baker, T. B., Breslau, N., Covey, L., & Shiffman, S. (2012). DSM criteria for tobacco use disorder and tobacco withdrawal: a critique and proposed revisions for DSM-5. *Addiction, 107*(2), 263–275. doi: 10.1111/j.1360-0443.2011.03657.x.

Baker, T. B., Piper, M. E., McCarthy, D. E., Majeskie, M. R., & Fiore, M. C. (2004). Addiction motivation reformulated: an affective processing model of negative reinforcement. *Psychological Review, 111*(1), 33–51. doi: 10.1037/0033-295X.111.1.33

Bandura, A. (1977). Self-efficacy: Toward a unifying theory of behavioral change. *Psychological Review, 84*(2), 191–215. doi: 10.1016/0146-6402(78)90002-4

Bandura, A. (1986). *Social foundation of thought and action: A social cognitive theory.* Englewood Cliffs, NJ: Prentice-Hall.

Bandura, A. (1997). *Self-efficacy: The exercise of control.* New York: Freeman.

Barnow, S., Schultz, G., Lucht, M., Ulrich, I., Preuss, U. W., & Freyberger, H. J. (2004). Do alcohol expectancies and peer delinquency/substance use mediate the relationship between impulsivity and drinking behaviour in adolescence? *Alcohol and Alcoholism, 39*(3), 213–219. doi: 210.1093/alcalc/agh1048.

Baron, R. M., & Kenny, D. A. (1986). The moderator-mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. *Journal of Personality and Social Psychology, 51*(6), 1173–1182.

Bauman, K. E., & Chenoweth, R. L. (1984). The relationship between the consequences adolescents expect from smoking and their behavior: a factor analysis with panel data. *Journal of Applied Social Psychology, 14*, 28–41. doi: 10.1111/j.1559-1816.1984.tb02218.x

Beck, J. (2013). Childhood poverty linked to less emotional regulation later in life. Retrieved from http://www.theatlantic.com/health/archive/2013/10/study-childhood-poverty-linked-to-less-emotional-regulation-later-in-life/280806/

Benowitz, N. L. (2008). Neurobiology of nicotine addiction: implications for smoking cessation treatment. *The American Journal of Medicine, 121*(4 Suppl 1), S3–10. doi: 10.1016/j.amjmed.2008.01.015

Benowitz, N. L. (2009). Pharmacology of nicotine: addiction, smoking-induced disease, and therapeutics. *Annual Review of Pharmacology, 49*(1), 57–71. doi: 10.1146/annurev.pharmtox.48.113006.094742

Benowitz, N. L. (2010). Nicotine addiction. *The New England Journal of Medicine, 362*(24), 2295–2303. doi: 10.1056/NEJMra0809890

Bitterman, M. E., LoLordo, V. M., Overmier, J. B., & Rashotte, M. E. (1979). *Animal learning: Survey and analysis.* New York: Plenum Press.

Blalock, J. A., Nayak, N., Wetter, D. W., Schreindorfer, L., Minnix, J. A., Canul, J., & Cinciripini, P. M. (2011). The relationship of childhood trauma to nicotine dependence in pregnant smokers. *Psychology of Addictive Behaviors, 25*(4), 652–663. doi: 10.1037/a0025529

Bloom, E. L., Matsko, S. V., & Cimino, C. R. (2014). The relationship between cigarette smoking and impulsivity: A review of personality, behavioral, and neurobiological assessment. *Addiction Research & Theory, 22*(5), 386–397. doi: 10.3109/16066359.2013.867432

Bolles, J. R., Earleywine, M., & Gordis, E. (2014). The acquired preparedness model and impulsivity moderated expectancies: Examining predictors of marijuana use. *Addiction, Research, & Theory, 22*(6), 490–497. doi: 10.3109/16066359.2014.892929

Brandon, T. H., & Baker, T. B. (1991). The Smoking Consequences Questionnaire: The subjective expected utility of smoking in college students. *Psychological Assessment: A Journal of Consulting and Clinical Psychology, 3*(3), 484–491. doi: 10.1037/1040-3590.3.3.484

Brandon, T. H., Wetter, D. W., & Baker, T. B. (1996). Affect, expectancies, urges, and smoking: Do they conform to models of drug motivation and relapse? *Experimental and Clinical Psychopharmacology, 4*(1), 29–36. doi: 10.1037/1064-1297.4.1.29

Breslau, N. (1995). Psychiatric comorbidity of smoking and nicotine dependence. *Behavior Genetics, 25*(2), 95–101. doi: 10.1007/BF02196920

Brown, R. A., Lejuez, C. W., Kahler, C. W., Strong, D. R., & Zvolensky, M. J. (2005). Distress tolerance and early smoking lapse. *Clinical Psychology Review, 25*(6), 713–733. doi: 10.1016/j.cpr.2005.05.003

Brown, R. A., Kahler, C. W., Zvolensky, M. J., Lejuez, C. W., & Ramsey, S. E. (2001). Anxiety sensitivity: Relationship to negative affect smoking and smoking cessation in smokers with past major depressive disorder. *Addictive Behaviors, 26*(6), 887–899.

Buckley, T. C., Kamholz, B. W., Mozley, S. L., Gulliver, S. B., Holohan, D. R., Helstrom, A. W., … Kassel, J. D. (2005). A psychometric evaluation of the, Smoking Consequences Questionnaire-Adult in smokers with psychiatric conditions. *Nicotine and Tobacco Research, 7*(5), 739–745. doi: 10.1080/14622200500259788

Burt, R., Dinh, K., Peterson, A., & Sarason, I. (2007). Predicting adolescent smoking: A prospective study of personality variables. *Preventive Medicine, 30*(2), 115–125. doi: 10.1006/pmed.1999.0605

Can, G., Çakırbay, H., Topbaş, M., Karkucak, M., & Çapkın, E. (2007). The prevalence of cigarette smoking in the Eastern Black Sea Region. *Journal of Tuberculosis and Thorax, 55*(2), 141–147.

Canale, N., Vieno, A., Griffiths, M. D., Rubaltelli, E., & Santinello, M. (2015). Trait urgency and gambling problems in young people: the role of decision-making processes. *Addictive Behaviors, 46*, 39–44. doi: 10.1016/j.addbeh.2015.02.020

Canals, J., Dome´nech, E., & Blade´, J. (1996). Smoking and trait anxiety. *Psychological Reports, 79*(3 Pt 1), 809–810. doi: 10.2466/pr0.1996.79.3.809

Carmody, T. P., Vieten, C., & Astin, J. A. (2007). Negative affect, emotional acceptance, and smoking cessation. *Journal of Psychoactive Drugs, 39*(4), 499–508.

Center for Disease Control and Prevention. (2016). *Smoking and tobacco use.* Retrieved from https://www.cdc.gov/tobacco/data_statistics/fact_sheets/fast_facts/

Cepeda-Benito, A., & Ferrer, A. R. (2000). Smoking Consequences Questionnaire—Spanish. *Psychology of Addictive Behaviors, 3*, 219–230. doi: 10.1037//0893-

164X.14.3.219

Cheetham, A., Allen, N. B., Yücel, M., & Lubman, D. I. (2010). The role of affective dysregulation in drug addiction. *Clinical Psychology Review, 30*(6), 621–634. doi: 10.1016/j.cpr.2010.04.005

Cheng, S., & Mohammed T. L. (2015). Diffuse smoking-related lung disease: emphysema and interstitial lung disease. *Seminars Roentgenology, 50*(1), 16–22. doi: 10.1053/j.ro.2014.04.009

Christiansen, B. A., Smith, G. T., Roehling, P. V., & Goldman, M. S. (1989). Using alcohol expectancies to predict adolescent drinking behavior after one year. *Journal of Consulting and Clinical Psychology, 57*(1), 93–99. doi: 10.1037/0022-006X.57.1.93

Cho, H. J., Khang, Y. H., Jun, H. J., & Kawachi, I. (2008). Marital status and smoking in Korea: the influence of gender and age. *Social Science and Medicine, 66*(3), 609–619. doi: 10.1016/j.socscimed.2007.10.005

Clare, P. J., Bradford, D., Courtney R. J., Martire, K. A., & Mattick, R. P. (2014). The relationship between socioeconomic status and 'hardcore' smoking over time – greater accumulation of hardened smokers in low-SES than high-SES smokers. *Tobacco Control, 23*(E2), 89–97. doi: 10.1136/tobaccocontrol-2013-051436

Combs, J. L., Smith, G. T., Flory, K., Simmons, J. R., & Hill, K. K. (2010). The acquired preparedness model of risk for bulimic symptom development. *Psychology of Addictive Behaviors, 24*(30), 475–486. doi: 10.1037/a0018257

Combs, J. L., Spillane, N. S., Caudill, L. E., Stark, B., & Smith, G. T. (2012). The Acquired Preparedness Risk Model applied to smoking in 5th grade children. *Addictive Behaviors, 37*(3), 331–334. doi: 10.1016/j.addbeh.2011.11.005

Comeau, N., Stewart, S. H., & Loba, P. (2001). The relations of trait anxiety, anxiety sensitivity, and sensation seeking to adolescents' motivations for alcohol, cigarette, and marijuana use. *Addictive Behaviors, 26*(6), 803–825.

Conrad, K. M., Flay, B. R., & Hill, D. (1992). Why children start smoking cigarettes: predictors of onset. *British Journal of Addiction, 87*(12), 1711–1724. doi: 10.1111/j.1360-0443.1992.tb02684.x

Copeland, A. L., Brandon, T. H., & Quinn, E. P. (1995). The Smoking Consequences

Questionnaire-Adult: Measurement of smoking outcome expectancies of experienced smokers. *Psychological Assessment, 7*(4), 484–494. doi: 10.1037/1040-3590.7.4.484

Copeland, A. L., Diefendorff, J. M., Kendzor, D. E., Rash, C. J., Businelle, M. S., Patterson, S. M., … Williamson, D. A. (2007). Measurement of smoking outcome expectancies in children: The Smoking Consequences Questionnaire-Child. *Psychology of Addictive Behaviors, 21*(4), 469–477. doi: 10.1037/0893-164X.21.4.469

Costa, P. T., & McRae, R. R. (1992). *Revised NEO Personality Inventory (NEO-PI-R) and NEO Five-Factor Inventory (NEO-FFI) professional manual*. Odessa, Florida: Psychological Assessment Resources, Inc.

Covey, L. S., & Tam, D. (1990). Depressive mood, the single-parent home, and adolescent cigarette smoking. *American Journal of Public Health, 80*(11), 1330–1333.

Cyders, M. A., & Smith, G. T. (2008). Emotion-based dispositions to rash action: positive and negative urgency. *Psychological Bulletin, 134*(6), 807–828. doi: 10.1037/a0013341

Cyders, M. A., Smith, G. T., Spillane, N. S., Fischer, S., Annus, A. M., & Peterson, C. (2007). Integration of impulsivity and positive mood to predict risky behavior: development and validation of a measure of positive urgency. *Psychological Assessment, 19*(1), 107–118. doi: 10.1037/1040-3590.19.1.107

Deckman, T., & DeWall, C. N. (2011). Negative urgency and risky sexual behaviors: A clarification of the relationship between impulsivity and risky sexual behavior. *Personality and Individual Differences, 51*(5), 674–678. doi: 10.1016/j.paid.2011.06.004

Dereje, N., Abazinab, S., & Girma, A. (2012). Prevalence and predictors of cigarette smoking among adolescents of ethiopia: school based cross sectional survey. *Journal of Child & Adolescent Behavior, 3*(1), 1–8. doi:10.4172/2375-4494.1000182

DeSteno, D., Gross, J. J., & Kubzansky, L. (2013). Affective science and health: the importance of emotion and emotion regulation. *Health Psychology, 32*(5), 474–486. doi: 10.1037/a0030259

Diane, V., Ebert, S., & Ngamvitroj, A. (2005). Factors related to cigarette smoking initiation and use among college students. *Tobbaco Induced Diseases, 3*, 27–40. http://dx.doi.org/10.1186/1617-9625-3-1-27

Dir, A. L., Banks, D. E., Zapolski, T. C., McIntyre, E., & Hulvershorn, L. A. (2016). Negative urgency and emotion regulation predict positive smoking expectancies in non-smoking youth. *Addictive Behaviors, 58*, 47–52. doi: 10.1016/j.addbeh.2016.02.014

Doğan, D. G., & Ulukol, B. U. (2010). Ergenlerin sigara içmesini etkileyen faktörler ve sigara karşıtı iki eğitim modelinin etkinliği. *İnönü Üniversitesi Tıp Fakültesi Dergisi, 17*(3), 179–185.

Doran, N., Cook, J., McChargue, D., & Spring, B. (2009). Impulsivity and cigarette craving: differences across subtypes. *Psychopharmacology*, *207*(3), 365–373. doi:10.1007/s00213-009-1661-x

Doran, N., Khoddam, R., Sanders, P. E., Schweizer, C. A., Trim, R. S., & Myers, M. G. (2013). A prospective study of the acquired preparedness model: the effects of impulsivity and expectancies on smoking initiation in college students. *Psychology of Addictive Behaviors*, *27*(3), 714–722. doi: 10.1037/a0028988

Doran, N., Spring, B., McChargue, D., Pergadia, M., & Richmond, M. (2004). Impulsivity and relapse to cigarette smoking. *Nicotine and Tobacco Research*, *6*(4), 641–647. doi: 10.1080/14622200410001727939

Dvir, Y., Ford, J. D., Hill, M., & Frazier, J. A. (2014). Childhood maltreatment, emotional dysregulation, and psychiatric comorbidities. *Harvard Review of Psychiatry, 22*(3), 149–161. doi: 10.1097/HRP.0000000000000014

Ergüder, T., Soydal, T., Uğurlu, M., Çakır, B., & Warren C. W. (2006). Tobacco use among youth and related characteristics, Turkey. *Social and Preventive Medicine*, *51*(2), 91–98. doi: 10.1007/s00038-005-0020-x

Eriksen, M., Mackay, J., & Ross, H. (2012). *The tobacco atlas* (4th ed.). Atlanta, GA: World Lung Foundation.

Ertas, N. (2006). Factors associated with stages of cigarette smoking among Turkish youth. *Journal of Public Health, 17*(2), 155–161. doi: 10.1093/eurpub/ckl095

Espinoza, L. A., & Monge-Najera, J. (2013). Effect of marital status, gender and job

position in smoking behavior and cessation intent of staff members in a Central American public university. *Research Journal of the Costa Rican Distance Education University, 5*(1), 157–161.

Evenden, J. L. (1999). Varieties of impulsivity. *Psychopharmacology, 146*(4), 348–361.

Fagerström, K. O. (1978). Measuring degree of physical dependence to tobacco smoking with reference to individualization of treatment. *Addictive Behaviors, 3*(3– 4), 235–241. doi: 10.1016/0306-4603(78)90024-2

Fagerström, K. O., & Schneider, N. G. (1989). Measuring nicotine dependence: a review of the Fagerstrom Tolerance Questionnaire. *Journal of Behavioral Medicine, 12*(2), 159–182. doi: 10.1007/BF00846549

Farris, S. G., Brown, L. A., Goodwin, R. D., & Zvolensky, M. J. (2017). Panic attack history and smoking topography. *Drug and Alcohol Dependence, 171,* 84–90. doi: 10.1016/j.drugalcdep.2016.11.023

Ferrer, R. A., Green, P. A., & Barrett, L. F. (2015). Affective science perspectives on cancer control: strategically crafting a mutually beneficial research agenda. *Perspectives on Psychological Science, 10*(3), 328–345. doi: 10.1177/1745691615576755

Fischer, S., Settles, R., Collins, B., Gunn, R., & Smith, G. T. (2012). The role of negative urgency and expectancies in problem drinking and disordered eating: testing a model of comorbidity in pathological and at-risk samples. *Psychology of Addictive Behaviors, 26*(1), 112–123. doi: 10.1037/a0023460

Fischer, S., Smith, G., Annus, A., & Hendricks, M. (2007). The relationship of neuroticism and urgency to negative consequences of alcohol use in woman with bulimic symptoms. *Personality and Individual Differences, 43*(5), 1199–1209. doi:10.1016/j.paid.2007.03.011

Flay, B. R., Hu, B. R., & Richardson, J. (1988). Psychosocial predictors of different stages of cigarette smoking among high school students. *Preventive Medicine, 27*(5 Pt 3), A9–A18. doi: http://dx.doi.org/10.1006/pmed.1998.0380

Friedman-Wheeler, D. G., Ahrens, A. H., Haaga, D. A. F., McIntosh, E., & Thorndike, F. P. (2007). Depressive symptoms, depression proneness, and outcome expectancies for cigarette smoking. *Cognitive Therapy and*

Research, 31(4), 547–557. doi: 10.1007/s10608-006-9064-3

Fu, A. T., Ko, H. C., Wu, J. Y. W., Cherng, B. L., & Cheng, C. P. (2007). Impulsivity and expectancy in risk for alcohol use: Comparing male and female college students in Taiwan. *Addictive Behaviors, 32*(9), 1887–1896. doi: 10.1016/j.addbeh.2007.01.003

Fucito, L. M., Juliano, L. M., & Toll, B. A. (2010). Cognitive reappraisal and expressive suppression emotion regulation strategies in cigarette smokers. *Nicotine & Tobacco Research, 12*(11), 1156–1161. doi: 10.1093/ntr/ntq146

Gale, B. G. (2016). *Love in Vienna: The Sigmund Freud–Minna Bernays Affair.* California: Praeger.

Gençöz, T. (2000). Positive and Negative Affect Schedule: A study of validity and reliability. *Journal of Turkish Psychology, 15*(46), 19–28.

Genna, N. M. D., Goldschmidt, L., Day, N. L., & Cornelius, M. D. (2017). Maternal trajectories of cigarette use as a function of maternal age and race. *Addictive Behaviors, 65*, 33–39. doi: 10.1016/j.addbeh.2016.09.011

Gilbert, D. G., & Gilbert, B. O. (1995). Personality, psychopathology, and nicotine response as mediators of the genetics of smoking. *Behavioral Genetics, 25*(2), 133–147. doi: 10.1007/BF02196923

Ginley, M. K., Whelan, J. P., Relyea, G. E., Meyers, A. W., & Pearlson, G. D. (2015). Testing the acquired preparedness model: predicting college student gambling frequency and symptomatology. *Journal of Gambling Studies, 31*(3), 907–919. doi: 10.1007/s10899-014-9445-6

Goldman, M. S. (1989). Alcohol expectancies as cognitive-behavioral psychology: Theory and practice. In T. Loberg, G.A. Marlatt, P.E. Nathan, and W. Miller (Eds.), *Treatment of Addictive Behaviors* (pp. 11–30). Amsterdam: Swets.

Goldman, M. S. (2002). Expectancy and risk for alcoholism: the unfortunate exploitation of a fundamental characteristic of neurobehavioral adaptation. *Alcoholism: Clinical and Experimental Research, 26*(5), 737–746. doi: 10.1111/j.1530-0277.2002.tb02599.x

Goldman, M.S., Darkes, J., Reich, R.R., & Brandon, K.O. (2006). From DNA to conscious thought: the influence of anticipatory processes on human alcohol consumption. In M. Munafo & I.P. Albery (Eds.), *Cognition and Addiction*

(pp. 147–184). New York, NY: Oxford University Press.

Grant, B. F., Hasin, D. S., Chou, S. P., Stinson, F. S., & Dawson, D. A. (2004). Nicotine dependence and psychiatric disorders in the United States: results from the national epidemiologic survey on alcohol and related conditions. *Archives of General Psychiatry, 61*(11), 1107–1115. doi: 10.1001/archpsyc.61.11.1107

Gratz, K. L., & Roemer, L. (2004). Multidimensional assessment of emotion regulation and dysregulation: development, factor structure, and initial validation of the difficulties in Emotion Regulation Scale. *Journal of Psychopathology and Behavioral Assessment*, *26*(1), 41–54. doi: 10.1023/B:JOBA.0000007455.08539.94

Gross, J.J. (1998). The Emerging field of emotion regulation: an integrative review. *Review of General Psychology, 2*(3), 271–299. doi: 10.1037/1089-2680.2.3.271

Gross, J.J. (2002). Emotion regulation: Affective, cognitive, and social consequences**.** *Psychophysiology, 39*(3), 281–291. doi: 10.1017.S0048577201393198

Gross, J. J., & Jazaieri, H. (2014). Emotion, emotion regulation, and psychopathology an affective science perspective. *Clinical Psychological Science, 2*(4), 387–401. doi: 10.1177/2167702614536164

Haire-Joshu, D., Morgan, G., & Fisher, E. B. (1991). Determinants of cigarette smoking. *Clinics in Chest Medicine*, *12*(4), 711–725.

Hassoy, H., Ergin, I., Davas, A., Durusoy, R., & Karababa, A. O. (2011). Sağlık meslek yüksek okulu öğrencilerinde sigara, nargile, sarma tütün kullanımını etkileyen faktörlerin belirlenmesi ve öğrencilerin sigara, nargile, sarma tütüne başlama ve sürdürme konusundaki görüşler. *Solunum Dergisi*, *13*(2), 91–99. doi: 10.5505/solunum.2011.50490

Haustein, K. (2003). *Tobacco or health? Physiological & social damages caused by tobacco smoking.* Heidelberg: Springer Verlag.

Hayaki, J., Herman, D. S., Hagerty, C. E., de Dios, M. A., Anderson, B. J., & Stein, M. D. (2011). Expectancies and self-efficacy mediate the effects of impulsivity on marijuana use outcomes: an application of the acquired

preparedness model. *Addictive Behaviors, 36*(4), 389–396. doi: 10.1016/j.addbeh.2010.12.018

Hayes, A. F. (2013). *Introduction to mediation, moderation, and conditional process analysis.* New York, NY: The Guildford Press.

Heatherton, T. F., Kozlowski, L. T., Frecker R. C., & Fagerström, K. O. (1991). The Fagerström Test for Nicotine Dependence: a revision of the Fagerström Tolerance Questionnaire. *British Journal of Addiction, 86*(9), 1119–1127. doi: 10.1111/j.1360-0443.1991.tb01879.x

Heinz, A. J., Kassel, J. D., Berbaum, M., & Mermelstein, R. (2010). Adolescents' expectancies for smoking to regulate affect predict smoking behavior and nicotine dependence over time. *Drug and Alcohol Dependence, 111*(1-2), 128–135.

Hiemstra, M., Otten, R., de Leeuw, R. N. H., van Schayck, O. C., & Engels, R.C. (2011). The changing role of self-efficacy in adolescent smoking initiation. *The Journal of Adolescent Health, 48*(6), 597–603. doi: 10.1016/j.jadohealth.2010.09.011

Hiscock, R., Bauld, L., Amos, A., Fidler, J. A., & Munafo, M. (2012). Socioeconomic status and smoking: a review. *Annals of the New York Academy of Sciences, 1248,* 107–123. doi: 10.1111/j.1749-6632.2011.06202.x

IBM Corp. Released 2013. IBM SPSS Statistics for Windows, Version 22.0. Armonk, NY: IBM Corp.

Ikard, F. F., Green, D. E., & Horn, D. (1969). A scale to differentiate between types of smoking as related to the management of affect. *International Journal of the Addictions, 4*(4), 649−659. doi: 10.3109/10826086909062040

Javanbakht, A., Kim, P., Swain, J. E., Evans, G. W., Phan, K. L., & Liberzon, I. (2016). Sex-specific effects of childhood poverty on neurocircuitry of processing of emotional cues: a neuroimaging study. *Behavioral Sciences, 6*(4), 1–11. doi: 10.3390/bs6040028

Jeffries, S. K., Catley, D., Okuyemi, K. S., Nazir, N., McCarter, K. S., Grobe, J. E., & Ahluwalia, J. S. (2004). Use of a brief Smoking Consequences Questionnaire for Adults (SCQ-A) in African American smokers. *Psychology*

of Addictive Behaviors, 18(1), 74–77. doi: 10.1037/0893-164X.18.1.74

Jones, B. T., Corbin, W., & Fromme, K. (2001). A review of expectancy theory and alcohol consumption. *Addiction, 96*(1), 57–72. doi: 10.1080/09652140020016969

Jöreskog, K. G., & Sörbom, D. (2004). LISREL 8.8 for Windows [Computer Software]. Lincolnwood, IL: Scientific Software International, Inc.

Juliano, L. M., & Brandon, T. H. (2002). Effects of nicotine dose, instructional set, and outcome expectancies on the subjective effects of smoking in the presence of a stressor. *Journal of Abnormal Psychology, 111*(1), 88–97. doi: 10.1037//0021-843X.111.1.88

Kassel, J. D., Shiffman, S., Gnys, M. A., Paty, J., & Zettler-Segal, M. (1994). Psychosocial and personality differences in chippers and regular smokers. *Addictive Behaviors, 19*(5), 565–575. doi: 10.1016/0306-4603(94)90012-4

Kassel, J. D., Stroud, L. R., & Paronis, C. A. (2003). Smoking, stress, and negative affect: correlation, causation, and context across stages of smoking. *Psychological Bulletin, 129*(2), 270–304. doi: 10.1037/0033-2909.129.2.270

Kear, M. E. (2002). Psychosocial determinants of cigarette smoking among college students. *Journal of Community Health Nursing, 19*(4), 245–257. doi: 10.1207/S15327655JCHN1904_05

Kenford, S. L., Smith, S. S., Wetter, D. W., Jorenby, D. E., Fiore, M. C., & Baker, T. B. (2002). Predicting relapse back to smoking: contrasting affective and physical models of dependence. *Journal of Consulting and Clinical Psychology, 70*(1), 216–227.

Khan, R. J., Stewart, C. P., Davis, S. K., Harvey D. J., & Leistikow, B. N. (2015). The risk and burden of smoking related heart disease mortality among young people in the United States. *Tobacco Induced Diseases, 13*(16), 1–8. doi: 10.1186/s12971-015-0041-z

Khantzian, E. J. (1985). The self-medication hypothesis of addictive disorders: focus on heroin and cocaine dependence. *The American Journal of Psychiatry, 142*(11), 1259–1264. doi: 10.1176/ajp.142.11.1259

Kim, P., Evans, G. W., Angstadt, M., Ho, S. S., Sripada, C. S., Swain, J. E., … Phan, K. L. (2013). Effects of childhood poverty and chronic stress on emotion

regulatory brain function in adulthood. *The Proceedings of the National Academy of Sciences of the United States of America (PNAS), 110*(46), 18442–18447. doi: 10.1073/pnas.1308240110

Kober, H. (2014). Emotion regulation in substance use disorders. In James J. Gross (Eds.), *Handbook of Emotion Regulation* (pp. 428–446). New York, NY: The Guildford Press.

Koob, G. F., & Le Moal, M. (2008). Addiction and the brain antireward system. *Annual Review of Psychology, 59,* 29–53. doi: 10.1146/annurev.psych.59.103006.093548

Korte, K. J., Capron, D. W., Zvolensky, M., & Schmidt, N. B. (2013). The Fagerström test for nicotine dependence: do revisions in the item scoring enhance the psychometric properties? *Addictive Behaviors*, *38*(3), 1757–1763. doi: 10.1016/j.addbeh.2012.10.013

Kristjanssona, S. D., Pergadia, M. L., Agrawal, A., Lessov-Schlaggar, C. N., McCarthy, D. M., Piasecki, T. M., … Heath, A. C. (2011). Smoking outcome expectancies in young adult female smokers: Individual differences and associations with nicotine dependence in a genetically informative sample. *Drug and Alcohol Dependence, 116*(1–3), 37–44. doi: 10.1016/j.drugalcdep.2010.11.017

Leonardi-Bee, J., Jere, M. L., & Britton, J. (2011). Exposure to parental and sibling smoking and the risk of smoking uptake in childhood and adolescence: A systematic review and meta-analysis. *Thorax, 66,* 847–855. doi: http://dx.doi.org/10.1136/thx.2010.153379

Lerman, C., Caporaso, N. E., Audrain, J., Main, D., Boyd, N. R., & Shields, P. G. (2000). Interacting effects of the serotonin transporter gene and neuroticism in smoking practices and nicotine dependence. *Molecular Psychiatry, 5*(2), 189–192.

Lewis-Esquerre, J. M., Rodrigue, J. R., & Kahler, C. W. (2005). Development and validation of an adolescent smoking consequences questionnaire. *Nicotine and Tobacco Research, 7*(1), 81–90. doi: 10.1080/14622200412331328475

Liberzon, I., Ma, S. T., Okada, G., Shaun Ho, S., Swain, J. E., & Evans, G. W. (2015). Childhood poverty and recruitment of adult emotion regulatory

neurocircuitry. *Social Cognitive Affective Neuroscience, 10*(11), 1596–1606. doi: 10.1093/scan/nsv045

MacKinnon, D. P., Lockwood, C. M., Hoffmann, J. M., West, S. G., & Sheets, V. (2002). A comparison of methods to test the significance of mediation and other intervening variable effects. *Psychological Methods, 7*(1), 83–104.

MacKinnon, D. P., Warsi, G., & Dwyer, J. H. (1995). A simulation study of mediated effect measures. *Multivariate Behavioral Research, 30*(1), 41–62. doi: 10.1207/s15327906mbr3001_3

Mahabee-Gittens, E. M., Khoury, J. C., Huang, B., Dorn, L. D., Ammerman, R. T., & Gordon, J. S. (2011). The protective influence of family bonding on smoking initiation in adolescents by racial/ethnic and age subgroups. *Journal of Child and Adolescent Substance Abuse, 20*(3), 270–287. doi: 10.1080/1067828X.2011.581969

Marmorstein, N. R. (2013). Associations between dispositions to rash action and internalizing and externalizing symptoms in children. *Journal of Clinical Child & Adolescent Psychology, 42*(1), 131–138. doi: 10.1080/15374416.2012.734021

McChargue, D. E., Spring, B., Cook, J. W., & Neumann, C. A. (2004). Reinforcement expectations explain the relationship between depressive history and smoking status in college students. *Addictive Behaviors, 29*(5), 991–994. doi: 10.1016/j.addbeh.2004.02.048

McCrae, R. R., & Costa, P. T. (1990). *Personality in adulthood.* New York: Guilford.

McLaughlin, K. A., Hatzenbuehler M. L., Mennin, D. S., & Nolen-Hoeksema, S. (2011). Emotion dysregulation and adolescent psychopathology: a prospective study. *Behavior Research and Therapy, 49*(9), 544–554. doi: 10.1016/j.brat.2011.06.003

McMurran, M. (1994). *The Psychology of Addiction.* London: Taylor & Francis.

Ministry of Health of Turkey. (2010). *Global adult tobacco survey report.* Retrieved from http://www.who.int/tobacco/surveillance/en_tfi_gats_turkey_2009.pdf

Mitchell, S. H. (1999). Measures of impulsivity in cigarette smokers and non-smokers. *Psychopharmacology, 146*(4), 455–464.

Mitchell, S. H. (2004). Measuring impulsivity and modeling its association with cigarette smoking. *Behavioral and Cognitive Neuroscience Reviews, 3*(4), 261–275. doi: 10.1177/1534582305276838

Mwenifumbo, J. C. & Tyndale, R. T. (2010). DSM-IV, ICD-10 and FTND: Discordant tobacco dependence diagnoses in adult smokers. *Journal of Addiction Research & Therapy, 2*(1). doi: 10.4172/2155-6105.1000105

Myers, M. G., McCarthy, D. M., MacPherson, L., & Brown, S. A. (2003). Constructing a short form of the Smoking Consequences Questionnaire with adolescents and young adults. *Psychol Assess, 15*(2), 163–172.

National Institute on Drug Abuse (2016). *Research report series: Tobacco/nicotine.* Retrieved from https://www.drugabuse.gov/publications/research-reports/tobacco/letter-director

Nolen-Hoeksema, S. (2012). Emotion regulation and psychopathology: the role of gender. *Annual Review of Clinical.Psychology, 8*, 161–187. doi: 10.1146/annurev-clinpsy-032511-143109

Novak, S. P., & Clayton, R. R. (2001). The influence of school environment and self-regulation on transitions between stages of cigarette smoking: A multilevel analysis. *Healthy Psychology, 20*(3), 196–207.

Pang, R. D., Hom, M. S., Geary, B. A., Doran, N., Spillane, N. S., Guillot, C. R., … Leventhal, A. M. (2014). Relationships between trait urgency, smoking reinforcement expectancies, and nicotine dependence. *Journal of Addictive Diseases, 33*(2), 83–93. doi: 10.1080/10550887.2014.909695

Pedersen, W., & Soest, T. V. (2017). How is low parental socioeconomic status associated with future smoking and nicotine dependence in offspring? A population-based longitudinal 13-year follow-up. *Scandinavian Journal of Public Health, 45*(1), 16–24. doi: 10.1177/1403494816680800

Peto R., & Doll, R. (2005). The hazards of smoking and the benefits of stopping. In Novartis Foundation (Eds.), *Understanding Nicotine and Tobacco Addiction* (pp. 3–16). Hoboken (NJ): John Wiley & Sons.

Pinto, M. T., Pichon-Riviere, A., & Bardach, A. (2015). The burden of smoking-related diseases in Brazil: mortality, morbidity and costs. *Cadernos de Saúde Pública, 31*(6), 1283–1297. doi: 10.1590/0102-311X00192013

Prochaska, J. O., Velicer, W. F., Rossi, J. S., Goldstein, M. G., Marcus, B. H., Rakowski, W., … Rossi, S. R. (1994). Stages of change and decisional balance for 12 problem behaviors. *Health Psychology, 13*(1), 39–46. doi: 10.1037//0278-6133.13.1.39

Prochaska, J. O., & DiClemente, C. C. (1983). Stages and processes of self-change of smoking: Toward an integrative model of change. *Journal of Consulting and Clinical Psychology, 51*(3), 390–395. doi: 10.1037//0022-006X.51.3.390

Proctor, R. N. (2004). Tobacco and health. *The Journal of Philosophy, Science & Law, 4.* Retrieved from http://jpsl.org/archives/tobacco-and-health-expert-witness-report-filed-behalf-plaintiffs-united-states-america-plaintiff-v-philip-morris-inc-et-al-defen/

Radzius, A., Gallo, J. J., Epstein, D. H., Gorelick, D. A., Cadet, J. L., Uhl, G. E., … Moolchan, E. T. (2003). A factor analysis of the Fagerstrom Test for Nicotine Dependence (FTND). *Nicotine & Tobacco Research, 5*(2), 255–40.

Rash, C. J., & Copeland, A. L. (2008). The Brief Smoking Consequences Questionnaire – Adult (BSCQ-A): Development of a short form of the SCQ-A. *Nicotine and Tobacco Research, 10*(11), 1633–1643. doi: 10.1080/14622200802409990

Rugancı, R. N., & Gençöz, T. (2010). Psychometric properties of a Turkish version of the Difficulties in Emotion Regulation Scale. *Journal of Clinical Psychology, 66*(4), 442–455. doi: 10.1002/jclp.20665

Savaşır, I. (1994). Ölçek uyarlamasındaki sorunlar ve bazı çözüm yolları. *Türk Psikoloji Dergisi, 9*(33), 27–32.

Schepis, T. S., Desai, R. A., Smith, A. E., Cavallo, D. A., Liss, T. B., McFetridge, A., … Krishnan-Sarin, S. (2008). Impulsive sensation seeking, parental history of alcohol problems, and current alcohol and tobacco use in adolescents. *Journal of Addiction Medicine, 2*(4), 185–193.

Sheppes, G., Suri, G., & Gross, J. J. (2015). Emotion regulation and psychopathology. *Annual Review of Clinical Psychology, 11*, 379–405. doi: 10.1146/annurev-clinpsy-032814-112739

Sher, K. J. (2016). *The Oxford handbook of substance use and substance use disorders: two-volume set.* New York, NY: Oxford University Press.

Shiffman, S., Waters, A. J., & Hickcox, M. (2004). The Nicotine Dependence Syndrome Scale: A multidimensional measure of nicotine dependence. *Nicotine & Tobacco Research, 6*(2), 327–348. doi: 10.1080/1462220042000202481

Simons-Morton, B. G., Greene, W. H., & Gottlieb, N. H. (1995). *Introduction to health education and health promotion.* Prospect Heights, IL: Waveland Press.

Sjöberg, L., & Johnson, T. (1978). Trying to give up smoking: A study of volitional breakdown. *Addictive Behaviors, 3*(3-4), 149–164.

Slowick, G. (2013). *What is a smoking addiction?* Retrieved from http://yourmedicalsource.com/content/what-smoking-addiction

Smith, G. T., & Anderson, K. G. (2001). Adolescent risk for alcohol problems as acquired preparedness: A model and suggestions for intervention. In P. M. Monty, S. M. Colby, & T. A. O'Leary (Eds.), *Adolescents, alcohol, and substance abuse: reaching teens through brief interventions* (pp. 109–141). New York, NY: Guilford Press.

Smith, G. T., & Cyders, M. A. (2016). Integrating affect and impulsivity: The role of positive and negative urgency in substance use risk. *Drug and Alcohol Dependence, 163*(Suppl 1), S3–S12. doi: 10.1016/j.drugalcdep.2015.08.038.

Spillane, N. S., Cyders, M. A., & Maurelli, K. (2012). Negative urgency, problem drinking and negative alcohol expectancies among members from one First Nation: a moderated-mediation model. *Addictive Behaviors, 37*(11), 1285–1288. doi: 10.1016/j.addbeh.2012.06.007

Stautz, K., & Cooper, A. (2013). Impulsivity-related personality traits and adolescent alcohol use: a meta-analytic review. *Clinical Psychology Review, 33*(4), 574–592. doi: 10.1016/j.cpr.2013.03.003

Tellegen, A. (1982). *Multidimensional Personality Questionnaire manual.* Minneapolis, MN: University of Minnesota Press.

Thomas, J. L., Bronars, C. A., Stewart, D. W., Okuyemi, K. S., Befort, C. A., Nazir, N., … Ahluwalia, J. S. (2009). Psychometric properties of a Brief Smoking Consequences Questionnaire for Adults (SCQ-A) among African American light smokers. *Substance Abuse, 30*(1), 14–25. doi:

10.1080/08897070802606345

Thompson, R. A. (1994). Emotion regulation: a theme in search of definition. *Monographs of the Society for Research in Child Development, 59*(2/3), 25–52. doi: 10.1111/j.1540-5834.1994.tb01276.x

Tiffany, S. T. (1990). A cognitive model of drug urges and drug-use behavior: Role of automatic and nonautomatic processes. *Psychological Review, 97*(2), 147–168.

Turkish Statistical Institute. (2012). *The global adult tobacco survey*. Retrieved from http://www.tuik.gov.tr/PreHaberBultenleri.do?id=13142

United States of Department of Health and Human Services. (2014). *2014 Surgeon General's Report: The Health Consequences of Smoking—50 Years of Progress.* Retrieved from https://www.surgeongeneral.gov/library/reports/50-years-of-progress/full-report.pdf

Uysal, M. A., Kadakal, F., Karşidağ, C., Bayram, N. G., Uysal, O., & Yilmaz, V. (2004). Fagerstrom test for nicotine dependence: Reliability in a Turkish sample and factor analysis. *Journal of Tuberculosis and Thorax, 52*(2), 115–121.

Uysal, M. A., Öztuna, D., Bahadır, A., Görek-Dilektaşlı, A., Karşıdağ, Ç., Horoz, A., … İliaz, S. (2015). Psychometric properties of the Turkish version of the Fagerström test for nicotine dependence. *Tuberkuloz ve Toraks, 63*(4), 250–256.

Vangsness, L., Bry, B. H., & LaBouvie, E. W. (2005). Impulsivity, negative expectancies, and marijuana use: A test of the acquired preparedness model. *Addictive Behaviors, 30*(5), 1071–1076. doi: 10.1016/j.addbeh.2004.11.003

Velicer, W. F., DiClemente, C. C., Prochaska, J. O., & Brandenburg, N. (1985). Decisional balance measure for assessing and predicting smoking status. *Journal of Personality and Social Psychology, 48*(5), 1279–1289. doi: 10.1037/0022-3514.48.5.1279

Waters, W. E. (1971). Smoking and neuroticism. *British Journal of Preventive and Social Medicine, 25*(3), 162–164.

Watson, D., Clark, L. A., & Tellegen, A. (1988). Development and validation of brief measures of positive and negative affect: The PANAS scales. *Journal of*

Personality and Social Psychology, 54(6), 1063–1070. doi: 10.1037/0022-3514.54.6.1063

Weiss, J. W., Mouttapa, M., Chou, C. P., Nezami, E., Johnson, C. A., Palmer, P. H., … Unger, J. B. (2005). Hostility, depressive symptoms, and smoking in early adolescence. *Journal of Adolescence, 28,* 49–62. doi: 10.1016/j.adolescence.2004.03.009

Wetter, D. W., Kenford, S. L., Welsch, S. K., Smith, S. S., Fouladi, R. T., Fiore, M. C., … Baker, T. B. (2004). Prevalence and predictors of transitions in smoking behavior among college students. *Health Psychology, 23*(2), 168–177. doi: 10.1037/0278-6133.23.2.168

Wetter, D. W., Smith, S. S., Kenford, S. L., Jorenby, D. E., Fiore, M. C., Hurt, R. D., … Baker, T. B. (1994). Smoking Outcome Expectancies: Factor structure, predictive validity, and discriminant validity. *Journal of Abnormal Psychology, 103*(4), 801–811.

Whiteman, M. C., Fowkes, F. G., Deary, I. J., & Lee, A. J. (1997). Hostility, cigarette smoking and alcohol consumption in the general population. *Social Science & Medicine, 44*(8), 1089–1096. doi: 10.1016/S0277- 9536(96)00236-5

Whiteside, S. P., & Lynam, D. R. (2001). The Five Factor Model and impulsivity: Using a structural model of personality to understand impulsivity. *Personality and Individual Differences, 30*(4), 669–689. doi: 10.1016/S0191-8869(00)00064-7

Wills, T. A., Walker, C., Mendoza, D., & Ainette, M. G. (2006). Behavioral and emotional self-control: Relations to substance use in samples of middle and high school students. *Psychology of Addictive Behaviors, 20,* 265–278. doi: 10.1037/0893-164X.20.3.265

Wood, P. B., Cochran, J. K., Pfefferbaum, B., & Arneklev, B. J. (1995). Sensation-seeking and delinquent substance use: an extension of learning theory. *Journal of Drug Issues, 25*(1), 173–193. doi: 10.1177/002204269502500112

World Health Organization (1992). *International statistical classification of diseases and related health problems* (10th ed.). Washington, DC: World Health Organization.

World Health Organization (2015). The *WHO global report on trends in prevalence of tobacco smoking.* Retrieved from http://apps.who.int/iris/bitstream/10665/156262/1/9789241564922_eng.pdf

World Health Organization (2016). *Tobacco.* Retrieved from http://www.who.int/mediacentre/factsheets/fs339/en/

Wu, L., Winkler, M. H., Wieser, M. J., Andreatta, M., Li, Y., & Pauli, P. (2015). Emotion regulation in heavy smokers: experiential, expressive and physiological consequences of cognitive reappraisal. *Frontiers in Psychology, 6*(1555), 1–11. doi: 10.3389/fpsyg.2015.01555

Yalçınkaya-Alkar, Ö., & Karancı, A. N. (2007). What are the differences in decisional balance and self-efficacy between Turkish smokers in different stages of change?. *Addictive Behaviors, 32*(4), 836–849. doi: 10.1016/j.addbeh.2006.06.023

Yan, Y., Jacques-Tiura, A., Chen, X., Xie, N., Chen, J., Yang, N., … Macdonell, K. K. (2013). Application of the protection motivation theory in predicting cigarette smoking among adolescents in China. *Addictive Behaviors, 39*(1), 181–188. doi: 10.1016/j.addbeh.2013.09.027

Yargıç, İ., Ersoy, E., & Oflaz, S. B. (2011). Measuring impulsivity of psychiatric patients using UPPS impulsive behavior scale. *Clinical Psychopharmacology Bulletin, 21*(2), 139–146. doi: 10.5455/bcp.20110706024203

Yarış, S. (2010). *The mediating role of metacognition on the relationship among depression/anxiety/negative impact of life experiences and smoking dependence.* Unpublished master thesis, Middle East Technical University, Ankara.

Zapolski, T. C., Cyders, M. A., & Smith, G. T. (2009). Positive urgency predicts illegal drug use and risky sexual behavior. *Psychology of Addictive Behaviors, 23*(2), 348–354. doi: 10.1037/a0014684

Zeidi, I. M., Saffari, M., Chen, H., & Pakpour, A. H. (2014). Translation, reliability and validity of Iranian version of the Smoking Consequences Questionnaire (SCQ) among smokers. *Journal of Substance Use, 19*(5), 382–387. doi: 10.3109/14659891.2013.833

Zuckerman, M. (1994). *Behavioral expressions and biosocial bases of sensation*

seeking. New York: Cambridge University Press.

APPENDICES

APPENDIX A

DEMOGRAPHIC INFORMATION FORM (STUDY I)

Aşağıdaki formu kişisel bilgilerinize göre doğru olarak doldurunuz. Yanıtlar grup halinde değerlendirileceği için isim yazmanıza gerek yoktur. Lütfen her soruya yanıt veriniz. Tüm soruları yanıtladığınız için teşekkür ederiz.

1. **Cinsiyetiniz**:_____
2. **Yaşınız**:_____
3. **Eğitim durumunuz**:

    a) Okur-yazar değil
    b) Okur-yazar fakat herhangi bir okulu bitirmemiş
    c) İlkokul mezunu
    d) Ortaokul mezunu
    e) Lise mezunu
    f) Üniversite terk
    g) Üniversite önlisans mezunu
    h) Üniversite lisans mezunu
    ı) Yüksek lisans
    j) Doktora
    k) Diğer

4. **Mesleğiniz:**_____
5. **Medeni durumunuz**:

    a) Evli
    b) Bekâr
    c) Nişanlı
    d) Dul
    e) Boşanmış

6. **Kendiniz dâhil kardeş sayınızı belirtiniz: _____**

7. **Ailenizin kaçıncı çocuğusunuz**:_____

8. **Ailenizde sigara kullanımı var mı?**

a) Anne
b) Baba
c) Kardeşler
d) Eş
e) Diğer: _____

9. **Yakın arkadaşlarınızdan düzenli olarak sigara kullanan var mı?**

a) Evet
b) Hayır

10. **Ekonomik durumunuzu belirtiniz:**

a) Alt
b) Ortanın altı
c) Orta
d) Ortanın üstü
e) Üst

11. **Alkol kullanır mısınız?**

a) Evet
b) Hayır

12. **Eğer alkol kullanıyorsanız ne kadar sıklıkla alkol kullanırsınız?**

a) Ayda bir ya da daha az
b) Ayda iki ya da dört kez
c) Haftada iki ya da üç kez
d) Haftada dört ya da daha fazla

13. **Daha önce hiç sigarayı bırakmayı denediniz mi?**

a) Evet (Evet ise kaç kere denediğinizi belirtiniz_____)
b) Hayır

14. **Önümüzdeki 6 ay içerisinde sigarayı bırakmayı ciddi olarak düşünüyor musunuz?**

a) Evet
b) Hayır

15. Önümüzdeki 1 ay içerisinde sigarayı bırakmayı ciddi olarak düşünüyor musunuz?

a)Evet
b) Hayır

16. Son 6 ay içerisinde sigarayı tamamen bırakmayı denediniz mi

a) Evet (Evet ise kaç gün süreyle bıraktığınızı belirtiniz_____)
b) Hayır

17. Halen sigara içiyor musunuz?

a) Evet
b) Hayır (Hayır ise ne kadar süre önce bıraktığınızı belirtiniz_____)

APPENDIX B

DEMOGRAPHIC INFORMATION FORM (STUDY II)

Aşağıdaki formu kişisel bilgilerinize göre doğru olarak doldurunuz. Yanıtlar grup halinde değerlendirileceği için isim yazmanıza gerek yoktur. Lütfen her soruya yanıt veriniz. Tüm soruları yanıtladığınız için teşekkür ederiz.

1. **Cinsiyetiniz**:_____
2. **Yaşınız**:_____
3. **Eğitim durumunuz**:

   a) Okur-yazar değil
   b) İlkokul mezunu
   c) Ortaokul mezunu
   d) Lise mezunu
   e) Üniversite mezunu
   f) Yüksek lisans / doktora mezunu

4. **Medeni durumunuz**:

   a) Evli
   b) Bekâr
   c) Nişanlı
   d) Dul
   e) Boşanmış

5. **Kendiniz dâhil kardeş sayınızı belirtiniz: _____**

6. **Ekonomik durumunuzu belirtiniz:**

   a) Alt
   b) Ortanın altı
   c) Orta
   d) Ortanın üstü
   e) Üst

7. Ailenizde sigara kullanımı var mı?

a) Anne
b) Baba
c) Kardeşler
d) Eş
e) Diğer: _____

8. Yakın arkadaşlarınızdan düzenli olarak sigara kullanan var mı?

a) Evet
b) Hayır

9. Daha önce herhangi bir psikolojik hastalık tanısı aldınız mı?

a) Evet (Evet ise, aldığınız tanıyı yazınız _____)
b) Hayır

10. Daha önce herhangi bir fiziksel hastalık tanısı aldınız mı?

a) Evet (Evet ise, aldığınız tanıyı yazınız _____)
b) Hayır

11. Yaklaşık olarak ne kadar süredir sigara içiyorsunuz? (Ay ya da yıl olarak belirtiniz) _____ (ay/yıl)

12. Daha önce hiç sigarayı bırakmayı denediniz mi?

a) Evet (Evet ise kaç kere denediğinizi belirtiniz_____)
b) Hayır

13. Önümüzdeki 6 ay içerisinde sigarayı bırakmayı ciddi olarak düşünüyor musunuz?

a) Evet
b) Hayır

14. Önümüzdeki 1 ay içerisinde sigarayı bırakmayı ciddi olarak düşünüyor musunuz?

a) Evet
b) Hayır

15. Son 6 ay içerisinde sigarayı tamamen bırakmayı denediniz mi?

a) Evet (Evet ise kaç gün süreyle bıraktığınızı belirtiniz_____)
b) Hayır

16. Halen sigara içiyor musunuz?

a) Evet
b) Hayır (Hayır ise ne kadar süre önce bıraktığınızı belirtiniz_____)

APPENDIX C

BRIEF SMOKING CONSEQUENCES QUESTIONNAIRE – ADULT (BSCQ – A)

Bu ölçek insanların sigara içme ile ilgili beklentilerini ölçmek amacıyla tasarlanmıştır. Aşağıda sigara içme ile ilgili ifadelerin bir listesi yer almaktadır. Lütfen her bir ifadenin sigara içme ile ilgili beklentilerinize ne derece **UYGUN OLDUĞUNU** ya da **UYGUN OLMADIĞINI** değerlendiriniz. Eğer sonuç size **UYGUN** olarak gözüküyorsa, 5'ten 9'a kadar olan bir rakamı daire içine alınız. Örneğin, bir olasılığın gerçekleşmesi **tamamen uygun** gözüküyorsa, 9'u; **biraz uygun olmayan** bir olasılıksa 4'ü daire içine alınız.

←----------**UYGUN DEĞİL**----------X----------**UYGUN**----------→

0 **Hiç Uygun Değil**	**1** **Fazlasıyla Uygun Değil**	**2** **Çok Uygun Değil**	**3** **Oldukça Uygun Değil**	**4** **Biraz Uygun Değil**	**5** **Biraz Uygun**	**6** **Oldukça Uygun**	**7** **Çok Uygun**	**8** **Fazlasıyla Uygun**	**9** **Tamamen Uygun**

1. Sigara içtikten sonra boğazım yanar.	0	1	2	3	4	5	6	7	8	9
2. Sigara içmek nikotin "krizlerini" yatıştırır.	0	1	2	3	4	5	6	7	8	9
3. Öfkeli olduğumda, bir sigara beni sakinleştirir.	0	1	2	3	4	5	6	7	8	9
4. Yalnız olduğumda, bir sigara, zaman geçirmemde bana yardımcı olur.	0	1	2	3	4	5	6	7	8	9
5. Bir sigara içmek, beni enerjik yapar.	0	1	2	3	4	5	6	7	8	9
6. Sinirli hissettiğimde sigara içmek beni sakinleştirir.	0	1	2	3	4	5	6	7	8	9
7. Sıkıldığımda ve yorgun olduğumda sigara içmek bana enerji verir.	0	1	2	3	4	5	6	7	8	9
8. Sigaranın kokusundan ve tadından hoşlanırım.	0	1	2	3	4	5	6	7	8	9
9. Yapacak hiçbir şeyim yoksa sigara içmek zaman öldürmeme yardımcı olur.	0	1	2	3	4	5	6	7	8	9
10. Sigara içmek nikotin açlığımı giderir.	0	1	2	3	4	5	6	7	8	9

←----------**UYGUN DEĞİL**----------X----------**UYGUN**----------→

0 **Hiç Uygun Değil**	**1** **Fazlasıyla Uygun Değil**	**2** **Çok Uygun Değil**	**3** **Oldukça Uygun Değil**	**4** **Biraz Uygun Değil**	**5** **Biraz Uygun**	**6** **Oldukça Uygun**	**7** **Çok Uygun**	**8** **Fazlasıyla Uygun**	**9** **Tamamen Uygun**

11. Sigara içen insanlarla beraber olduğumda, kendimi bir grubun parçasıymış gibi hissederim.	0	1	2	3	4	5	6	7	8	9
12. Sigara içmek daha az çekici görünmeme yol açar.	0	1	2	3	4	5	6	7	8	9
13. Sigara içerek kalp hastalığına ve akciğer kanserine yakalanma riskini almış olurum.	0	1	2	3	4	5	6	7	8	9
14. Sigara içmek insanlarla geçirdiğim vakitten, daha fazla keyif almama yardımcı olur.	0	1	2	3	4	5	6	7	8	9
15. İnsanlar sigara içtiğimi görürlerse benimle ilgili olumsuz düşünürler.	0	1	2	3	4	5	6	7	8	9
16. Huzursuz hissettiğimde, bir sigara rahatlamama yardımcı olur.	0	1	2	3	4	5	6	7	8	9
17. Sigara içmek ağzımda ve boğazımda tahrişe neden olur.	0	1	2	3	4	5	6	7	8	9
18. Sigara içmek kilomu kontrol etmemde bana yardımcı olur.	0	1	2	3	4	5	6	7	8	9
19. Ne kadar çok sigara içersem sağlığımı o kadar çok riske atarım.	0	1	2	3	4	5	6	7	8	9
20. Sigara, yemem gerekenden daha fazla yememe engel olur.	0	1	2	3	4	5	6	7	8	9
21. Sigara içerken gülünç görünürüm.	0	1	2	3	4	5	6	7	8	9
22. Sigara içmek kilomu düşük tutar.	0	1	2	3	4	5	6	7	8	9
23. Sigara içtiğimdeki tat hoştur.	0	1	2	3	4	5	6	7	8	9
24. Sigara içerken aldığım tadı severim.	0	1	2	3	4	5	6	7	8	9
25. Elimde sigara varsa, insanlara karşı daha rahat hissederim.	0	1	2	3	4	5	6	7	8	9

APPENDIX D

DIFFICULTIES IN EMOTION REGULATION SCALE (DERS)

Aşağıda insanların duygularını kontrol etmekte kullandıkları bazı yöntemler verilmiştir. Lütfen her durumu dikkatlice okuyunuz ve her birinin sizin için ne kadar doğru olduğunu içtenlikle değerlendiriniz. Değerlendirmenizi uygun cevabın üzerine X koyarak işaretleyiniz.

1. Ne hissettiğim konusunda netimdir.				
○ Neredeyse Hiçbir zaman	○ Bazen	○ Yaklaşık Yarı yarıya	○ Çoğu zaman	○ Neredeyse Her zaman

2. Ne hissettiğimi dikkate alırım.				
○ Neredeyse Hiçbir zaman	○ Bazen	○ Yaklaşık Yarı yarıya	○ Çoğu zaman	○ Neredeyse Her zaman

3. Duygularım bana dayanılmaz ve kontrolsüz gelir.				
○ Neredeyse Hiçbir zaman	○ Bazen	○ Yaklaşık Yarı yarıya	○ Çoğu zaman	○ Neredeyse Her zaman

4. Ne hissettiğim konusunda net bir fikrim vardır.				
○ Neredeyse Hiçbir zaman	○ Bazen	○ Yaklaşık Yarı yarıya	○ Çoğu zaman	○ Neredeyse Her zaman

5. Ne hissettiğim konusunda net bir fikrim vardır.				
○ Neredeyse Hiçbir zaman	○ Bazen	○ Yaklaşık Yarı yarıya	○ Çoğu zaman	○ Neredeyse Her zaman

6. Ne hissettiğime dikkat ederim.				
○ Neredeyse Hiçbir zaman	○ Bazen	○ Yaklaşık Yarı yarıya	○ Çoğu zaman	○ Neredeyse Her zaman

7. Ne hissettiğimi tam olarak bilirim.				
○ Neredeyse Hiçbir zaman	○ Bazen	○ Yaklaşık Yarı yarıya	○ Çoğu zaman	○ Neredeyse Her zaman

8. Ne hissettiğimi önemserim.
○ Neredeyse Hiçbir zaman ○ Bazen ○ Yaklaşık Yarı yarıya ○ Çoğu zaman ○ Neredeyse Her zaman

9. Ne hissettiğim konusunda karmaşa yaşarım.
○ Neredeyse Hiçbir zaman ○ Bazen ○ Yaklaşık Yarı yarıya ○ Çoğu zaman ○ Neredeyse Her zaman

10. Kendimi kötü hissettiğimde, bu duygularımı kabul ederim.
○ Neredeyse Hiçbir zaman ○ Bazen ○ Yaklaşık Yarı yarıya ○ Çoğu zaman ○ Neredeyse Her zaman

11. Kendimi kötü hissettiğimde, böyle hissettiğim için kendime kızarım.
○ Neredeyse Hiçbir zaman ○ Bazen ○ Yaklaşık Yarı yarıya ○ Çoğu zaman ○ Neredeyse Her zaman

12. Kendimi kötü hissettiğimde, böyle hissettiğim için utanırım.
○ Neredeyse Hiçbir zaman ○ Bazen ○ Yaklaşık Yarı yarıya ○ Çoğu zaman ○ Neredeyse Her zaman

13. Kendimi kötü hissettiğimde, işlerimi yapmakta zorlanırım.
○ Neredeyse Hiçbir zaman ○ Bazen ○ Yaklaşık Yarı yarıya ○ Çoğu zaman ○ Neredeyse Her zaman

14. Kendimi kötü hissettiğimde, kontrolümü kaybederim.
○ Neredeyse Hiçbir zaman ○ Bazen ○ Yaklaşık Yarı yarıya ○ Çoğu zaman ○ Neredeyse Her zaman

15. Kendimi kötü hissettiğimde, uzun süre böyle kalacağıma inanırım.
○ Neredeyse Hiçbir zaman ○ Bazen ○ Yaklaşık Yarı yarıya ○ Çoğu zaman ○ Neredeyse Her zaman

16. Kendimi kötü hissettiğimde, sonuç olarak yoğun depresif duygular içinde olacağıma inanırım.
○ Neredeyse Hiçbir zaman ○ Bazen ○ Yaklaşık Yarı yarıya ○ Çoğu zaman ○ Neredeyse Her zaman

17. Kendimi kötü hissettiğimde, duygularımın yerinde ve önemli olduğuna inanırım.
○ Neredeyse Hiçbir zaman ○ Bazen ○ Yaklaşık Yarı yarıya ○ Çoğu zaman ○ Neredeyse Her zaman

18. Kendimi kötü hissettiğimde, başka şeylere odaklanmakta zorlanırım.

○ Neredeyse Hiçbir zaman ○ Bazen ○ Yaklaşık Yarı yarıya ○ Çoğu zaman ○ Neredeyse Her zaman

19. Kendimi kötü hissettiğimde, kendimi kontrolden çıkmış hissederim.

○ Neredeyse Hiçbir zaman ○ Bazen ○ Yaklaşık Yarı yarıya ○ Çoğu zaman ○ Neredeyse Her zaman

20. Kendimi kötü hissettiğimde, halen işlerimi sürdürebilirim.

○ Neredeyse Hiçbir zaman ○ Bazen ○ Yaklaşık Yarı yarıya ○ Çoğu zaman ○ Neredeyse Her zaman

21. Kendimi kötü hissettiğimde, bu duygumdan dolayı kendimden utanırım.

○ Neredeyse Hiçbir zaman ○ Bazen ○ Yaklaşık Yarı yarıya ○ Çoğu zaman ○ Neredeyse Her zaman

22. Kendimi kötü hissettiğimde, eninde sonunda kendimi daha iyi hissetmenin bir yolunu bulacağımı bilirim.

○ Neredeyse Hiçbir zaman ○ Bazen ○ Yaklaşık Yarı yarıya ○ Çoğu zaman ○ Neredeyse Her zaman

23. Kendimi kötü hissettiğimde, zayıf biri olduğum duygusuna kapılırım.

○ Neredeyse Hiçbir zaman ○ Bazen ○ Yaklaşık Yarı yarıya ○ Çoğu zaman ○ Neredeyse Her zaman

24. Kendimi kötü hissettiğimde, davranışlarımı kontrol altında tutabileceğimi hissederim.

○ Neredeyse Hiçbir zaman ○ Bazen ○ Yaklaşık Yarı yarıya ○ Çoğu zaman ○ Neredeyse Her zaman

25. Kendimi kötü hissettiğimde, böyle hissettiğim için suçluluk duyarım.

○ Neredeyse Hiçbir zaman ○ Bazen ○ Yaklaşık Yarı yarıya ○ Çoğu zaman ○ Neredeyse Her zaman

26. Kendimi kötü hissettiğimde, konsantre olmakta zorlanırım.

○ Neredeyse Hiçbir zaman ○ Bazen ○ Yaklaşık Yarı yarıya ○ Çoğu zaman ○ Neredeyse Her zaman

27. Kendimi kötü hissettiğimde, davranışlarımı kontrol etmekte zorlanırım.

○ Neredeyse Hiçbir zaman ○ Bazen ○ Yaklaşık Yarı yarıya ○ Çoğu zaman ○ Neredeyse Her zaman

28. Kendimi kötü hissettiğimde, daha iyi hissetmem için yapacağım hiç bir şey olmadığına inanırım.

○ Neredeyse Hiçbir zaman ○ Bazen ○ Yaklaşık Yarı yarıya ○ Çoğu zaman ○ Neredeyse Her zaman

29. Kendimi kötü hissettiğimde, böyle hissettiğim için kendimden rahatsız olurum.

○ Neredeyse Hiçbir zaman ○ Bazen ○ Yaklaşık Yarı yarıya ○ Çoğu zaman ○ Neredeyse Her zaman

30. Kendimi kötü hissettiğimde, kendim için çok fazla endişelenmeye başlarım.

○ Neredeyse Hiçbir zaman ○ Bazen ○ Yaklaşık Yarı yarıya ○ Çoğu zaman ○ Neredeyse Her zaman

31. Kendimi kötü hissettiğimde, kendimi bu duyguya bırakmaktan başka yapabileceğim bir şey olmadığına inanırım.

○ Neredeyse Hiçbir zaman ○ Bazen ○ Yaklaşık Yarı yarıya ○ Çoğu zaman ○ Neredeyse Her zaman

32. Kendimi kötü hissettiğimde, davranışlarım üzerindeki kontrolümü kaybederim.

○ Neredeyse Hiçbir zaman ○ Bazen ○ Yaklaşık Yarı yarıya ○ Çoğu zaman ○ Neredeyse Her zaman

33. Kendimi kötü hissettiğimde, başka bir şey düşünmekte zorlanırım.

○ Neredeyse Hiçbir zaman ○ Bazen ○ Yaklaşık Yarı yarıya ○ Çoğu zaman ○ Neredeyse Her zaman

34. Kendimi kötü hissettiğimde, duygumun gerçekte ne olduğunu anlamak için zaman ayırırım.

○ Neredeyse Hiçbir zaman ○ Bazen ○ Yaklaşık Yarı yarıya ○ Çoğu zaman ○ Neredeyse Her zaman

35. Kendimi kötü hissettiğimde, kendimi daha iyi hissetmem uzun zaman alır.

○ Neredeyse Hiçbir zaman ○ Bazen ○ Yaklaşık Yarı yarıya ○ Çoğu zaman ○ Neredeyse Her zaman

36. Kendimi kötü hissettiğimde, duygularım dayanılmaz olur.

○ Neredeyse Hiçbir zaman ○ Bazen ○ Yaklaşık Yarı yarıya ○ Çoğu zaman ○ Neredeyse Her zaman

APPENDIX E

UPPS IMPULSIVE BEHAVIOR SCALE – URGENCY DIMENSION

Aşağıda kişilerin durumlar karşısında gösterebileceği bazı davranışları tanımlayan ifadeler yer almaktadır. Lütfen her bir ifadeyi dikkatlice okuyup yandaki cevap bölümünde size en uygun gelen kutucuğun üzerine (X) işareti koyarak değerlendirin. Doğru ya da yanlış yanıt yoktur. Herhangi bir ifadenin üzerinde fazla zaman harcamadan, genel olarak nasıl hissettiğinizi gösteren yanıtı işaretleyin.

	Bana Hiç Uymuyor	Bana Biraz Uyuyor	Bana Oldukça Uyuyor	Bana Çok Uyuyor
1. Dürtülerimi kontrol etmede sorun yaşarım.	(1)	(2)	(3)	(4)
2. Şiddetli isteklerime direnç göstermede sorun yaşarım. (örneğin, yemek, sigara içmek vb.)	(1)	(2)	(3)	(4)
3. Kendimi çoğu kez, sonradan pişman olup da kurtulmak istediğim işlerin içine sokarım.	(1)	(2)	(3)	(4)
4. Kendimi kötü hissettiğimde, çoğu kez o anda iyi hissettiren fakat sonradan yaptığıma pişman olduğum şeyler yaparım.	(1)	(2)	(3)	(4)
5. Kendimi kötü hissettiğim bazı zamanlarda, kendimi kötü hissettirse bile yapmakta olduğum şeyi durduramam.	(1)	(2)	(3)	(4)
6. Üzgün olduğum zamanlarda çoğu kez düşünmeden hareket ederim.	(1)	(2)	(3)	(4)
7. Reddedildiğimi hissettiğim zamanlarda, çoğu kez sonradan pişman olduğum şeyler söylerim.	(1)	(2)	(3)	(4)
8. Duygularıma göre hareket etmemin önüne geçemiyorum.	(1)	(2)	(3)	(4)
9. Sorunlarla karşılaştığımda onları çoğu kez içinden çıkılmaz bir hale getiririm çünkü üzgün olduğum zamanlarda düşünmeden hareket ederim.	(1)	(2)	(3)	(4)
10. Bir tartışmanın en ateşli anında, çoğu kez sonradan pişman olduğum sözler söylerim.	(1)	(2)	(3)	(4)
11. Duygularımı her zaman kontrol altında tutmayı başarabilirim.	(1)	(2)	(3)	(4)

APPENDIX F

FAGERSTROM TEST FOR NICOTINE DEPENDENCE (FTND)

Aşağıda sigara içme alışkanlığınıza yönelik sorular vardır. Size uygun olan şıkkı işaretleyiniz. Lütfen her soruya yanıt veriniz.

1. İlk sigaranızı sabah uyandıktan ne kadar süre sonra içiyorsunuz?

    a. Uyandıktan sonraki ilk 5 dakika içinde
    b. 6-30 dakika içinde
    c. 31-60 dakika içinde
    d. Bir saatten fazla

2. Sigara içmenin yasak olduğu örneğin; otobüs, hastane, sinema gibi yerlerde bu yasağa uymakta zorlanıyor musunuz?

    a. Evet
    b. Hayır

3. Gün boyunca içtiğiniz bütün sigaralardan size en çok keyif vereni hangisidir?

    a. Sabah içtiğim ilk sigara
    b. Diğer herhangi bir zamanda içtiğim sigara

4. Günde ortalama kaç adet sigara içiyorsunuz? _____

5. Sabah uyanmayı izleyen ilk saatlerde, günün diğer saatlerine göre daha sık sigara içer misiniz?

    a. Evet
    b. Hayır

6. Günün büyük bölümünü yatakta geçirmenize neden olacak kadar hasta olsanız bile sigara içer misiniz?

    a. Evet
    b. Hayır

APPENDIX G

DECISIONAL BALANCE SCALE (DBS)

Aşağıda sigara içmenin bazı olumlu ve olumsuz yönleri sıralanmıştır. Lütfen her cümleyi dikkatle okuyup belirtilen cümleye ne derece katıldığınızı, parantez içine "X" işaretini koyarak belirtiniz ve lütfen hiçbir soruyu boş bırakmayınız.

1-Sigara içmek keyiflidir.

1( ) Hiç katılmıyorum 2( ) Katılmıyorum 3( ) Ne katılıyorum ne katılmıyorum
4( ) Katılıyorum 5( ) Tamamen katılıyorum

2- Bir süre sigara içmedikten sonra, içtiğim sigara kendimi çok iyi hissettiriyor.

1( ) Hiç katılmıyorum 2( ) Katılmıyorum 3( ) Ne katılıyorum ne katılmıyorum
4( ) Katılıyorum 5( ) Tamamen katılıyorum

3- Bazen sigara içmek veya bulmaya çalışmak zahmetlidir.

1( ) Hiç katılmıyorum 2( ) Katılmıyorum 3( ) Ne katılıyorum ne katılmıyorum
4( ) Katılıyorum 5( ) Tamamen katılıyorum

4- Sigara içme alışkanlığımın tutsağı olduğumu hissediyorum.

1( ) Hiç katılmıyorum 2( ) Katılmıyorum 3( ) Ne katılıyorum ne katılmıyorum
4( ) Katılıyorum 5( ) Tamamen katılıyorum

5- Sigara içtiğim zaman kendimi daha rahat ve daha keyifli hissediyorum.

1( ) Hiç katılmıyorum 2( ) Katılmıyorum 3( ) Ne katılıyorum ne katılmıyorum
4( ) Katılıyorum 5( ) Tamamen katılıyorum

6-Sigarayı bırakırsam diğer tiryakiler bunu kıskanacaktır.

1( ) Hiç katılmıyorum 2( ) Katılmıyorum 3( ) Ne katılıyorum ne katılmıyorum
4( ) Katılıyorum 5( ) Tamamen katılıyorum

7- Sigara içen kişi imajından hoşlanıyorum.

1( ) Hiç katılmıyorum 2( ) Katılmıyorum 3( ) Ne katılıyorum ne katılmıyorum
4( ) Katılıyorum 5( ) Tamamen katılıyorum

8- Sigara içmem diğer insanların da sağlığını etkiler.

1( ) Hiç katılmıyorum 2( ) Katılmıyorum 3( ) Ne katılıyorum ne katılmıyorum
4( ) Katılıyorum 5( ) Tamamen katılıyorum

9- Sigara içmeseydim şimdi daha enerjik olurdum.

1( ) Hiç katılmıyorum 2( ) Katılmıyorum 3( ) Ne katılıyorum ne katılmıyorum
4( ) Katılıyorum 5( ) Tamamen katılıyorum

10- Sigara içtiğim zaman sigara kullanan arkadaşlarım ve ailem tarafından daha fazla kabul gördüğümü hissediyorum.

1( ) Hiç katılmıyorum 2( ) Katılmıyorum 3( ) Ne katılıyorum ne katılmıyorum
4( ) Katılıyorum 5( ) Tamamen katılıyorum

11- Sigarayı bırakmaya çalışırsam büyük olasılıkla çabuk sinirlenen ve çevresine rahatsızlık veren biri olurum.

1( ) Hiç katılmıyorum 2( ) Katılmıyorum 3( ) Ne katılıyorum ne katılmıyorum
4( ) Katılıyorum 5( ) Tamamen katılıyorum

12- Sigara yüzünden hastalanırsam yakınlarım acı çekecektir.

1( ) Hiç katılmıyorum 2( ) Katılmıyorum 3( ) Ne katılıyorum ne katılmıyorum
4( ) Katılıyorum 5( ) Tamamen katılıyorum

13- Ailem ve arkadaşlarım mutlu bir çekilde sigara içmemi, mutsuz bjr şekilde sigarayi bırakmaya çalışmama tercih ederler.

1( ) Hiç katılmıyorum 2( ) Katılmıyorum 3( ) Ne katılıyorum ne katılmıyorum
4( ) Katılıyorum 5( ) Tamamen katılıyorum

14- Sigara içmeye devam edersem, bazı insanlar sigarayı bırakacak iradem olmadığını düşüneceklerdir.

1( ) Hiç katılmıyorum 2( ) Katılmıyorum 3( ) Ne katılıyorum ne katılmıyorum
4( ) Katılıyorum 5( ) Tamamen katılıyorum

15-Sigara sağlığıma zararlıdır.

1( ) Hiç katılmıyorum 2( ) Katılmıyorum 3( ) Ne katılıyorum ne katılmıyorum
4( ) Katılıyorum 5( ) Tamamen katılıyorum

16- Sigara alışkanlığından vazgeçemediğim için kendimden utanıyorum.

1( ) Hiç katılmıyorum 2( ) Katılmıyorum 3( ) Ne katılıyorum ne katılmıyorum
4( ) Katılıyorum 5( ) Tamamen katılıyorum

17- İçtiğim sigaranın dumanı ve kokusu çevremdeki insanları rahatsız eder.

1( ) Hiç katılmıyorum 2( ) Katılmıyorum 3( ) Ne katılıyorum ne katılmıyorum

4( ) Katılıyorum 5( ) Tamamen katılıyorum

18- Sigara ile ilgili uyarıları gözardı ettiğim için insanlar benim akılsız olduğumu düşünüyorlar.

1( ) Hiç katılmıyorum 2( ) Katılmıyorum 3( ) Ne katılıyorum ne katılmıyorum

4( ) Katılıyorum 5( ) Tamamen katılıyorum

19-Sigara içtiğim zaman kendimi daha çok seviyorum.

1( ) Hiç katılmıyorum 2( ) Katılmıyorum 3( ) Ne katılıyorum ne katılmıyorum

4( ) Katılıyorum 5( ) Tamamen katılıyorum

20- Sigara dikkatimi toplamama ve daha iyi çalışmama yardım ediyor.

1( ) Hiç katılmıyorum 2( ) Katılmıyorum 3( ) Ne katılıyorum ne katılmıyorum

4( ) Katılıyorum 5( ) Tamamen katılıyorum

21- Sigara gerginliği azaltır.

1( ) Hiç katılmıyorum 2( ) Katılmıyorum 3( ) Ne katılıyorum ne katılmıyorum

4( ) Katılıyorum 5( ) Tamamen katılıyorum

22- Yakınlarım sigara içmemi onaylamıyorlar.

1( ) Hiç katılmıyorum 2( ) Katılmıyorum 3( ) Ne katılıyorum ne katılmıyorum

4( ) Katılıyorum 5( ) Tamamen katılıyorum

23- Sigarayla ilgili uyarıları dikkate almadığım için pişmanım.

1( ) Hiç katılmıyorum 2( ) Katılmıyorum 3( ) Ne katılıyorum ne katılmıyorum

4( ) Katılıyorum 5( ) Tamamen katılıyorum

24- Sigara içmeye devam ederek kendi kararlarımı kendimin verdiğini hissediyorum.

1( ) Hiç katılmıyorum 2( ) Katılmıyorum 3( ) Ne katılıyorum ne katılmıyorum

4( ) Katılıyorum 5( ) Tamamen katılıyorum

APPENDIX H

POSITIVE AND NEGATIVE AFFECT SCHEDULE (PANAS)

Bu ölçek farklı duyguları tanımlayan bir takım sözcükler içermektedir. Geçtiğimiz hafta nasıl hissettiğinizi düşünüp her maddeyi okuyun. Uygun cevabı her maddenin yanına ayrılan yere puanları daire içine alarak işaretleyin. Cevaplarınızı verirken aşağıdaki puanları kullanın.

1. **Çok az veya hiç**
2. **Biraz**
3. **Ortalama**
4. **Oldukça**
5. **Çok fazla**

1) ilgili	1…….	2…….	3…….	4…….	5…….
2) sıkıntılı	1…….	2…….	3…….	4…….	5…….
3) heyecanlı	1…….	2…….	3…….	4…….	5…….
4) mutsuz	1…….	2…….	3…….	4…….	5…….
5) güçlü	1…….	2…….	3…….	4…….	5…….
6) suçlu	1…….	2…….	3…….	4…….	5…….
7) ürkmüş	1…….	2…….	3…….	4…….	5…….
8) düşmanca	1…….	2…….	3…….	4…….	5…….
9) hevesli	1…….	2…….	3…….	4…….	5…….
10) gururlu	1…….	2…….	3…….	4…….	5…….
11) asabi	1…….	2…….	3…….	4…….	5…….
12) uyanık (dikkati açık)	1…….	2…….	3…….	4…….	5…….
13) utanmış	1…….	2…….	3…….	4…….	5…….
14) ilhamlı (yaratıcı düşüncelerle dolu)	1…….	2…….	3…….	4…….	5…….
15) sinirli	1…….	2…….	3…….	4…….	5…….
16) kararlı	1…….	2…….	3…….	4…….	5…….
17) dikkatli	1…….	2…….	3…….	4…….	5…….
18) tedirgin	1…….	2…….	3…….	4…….	5…….
19) aktif	1…….	2…….	3…….	4…….	5…….
20) korkmuş	1…….	2…….	3…….	4…….	5…….

APPENDIX I. THESIS PHOTOCOPYING PERMISSION FORM

TEZ FOTOKOPİ İZİN FORMU

ENSTİTÜ

Fen Bilimleri Enstitüsü [ ]

Sosyal Bilimler Enstitüsü [X]

YAZARIN

Soyadı : SÜSEN

Adı : YANKI

Bölümü : PSİKOLOJİ

TEZİN ADI (İngilizce) : THE ROLE OF AFFECT-RELATED SMOKING OUTCOME EXPECTANCIES IN RELATIONS BETWEEN EMOTION DYSREGULATION/NEGATIVE URGENCY AND SMOKING DEPENDENCE

TEZİN TÜRÜ : Yüksek Lisans [X] Doktora [ ]

1. Tezimin tamamından kaynak gösterilmek şartıyla fotokopi alınabilir. [ ]
2. Tezimin içindekiler sayfası, özet, indeks sayfalarından ve/veya bir bölümünden kaynak gösterilmek şartıyla fotokopi alınabilir. [ ]
3. Tezimden bir (1) yıl süreyle fotokopi alınamaz. [ ]

TEZİN KÜTÜPHANEYE TESLİM TARİHİ: