IBN HALDUN UNIVERSITY
SCHOOL OF GRADUATE STUDIES
DEPARTMENT OF COUNSELING PSYCHOLOGY

MASTER THESIS

AN EXAMINATION OF RISK FACTORS THAT PREDICT ADOLESCENT SMOKING IN TURKEY

ALI CISSEY USMAN

THESIS SUPERVISOR

PROF. SEFA BULUT

ISTANBUL, 2021

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by

ALI CISSEY USMAN

A thesis submitted to the School of Graduate Studies in partial fulfillment of the requirements for the degree of Master of Arts in Counseling Psychology

THESIS SUPERVISOR

PROF. SEFA BULUT

ISTANBUL, 2021

APPROVAL PAGE

This is to certify that we have read this thesis and that in our opinion it is fully adequate, in scope and quality, as a thesis for the degree of Master of Arts in Counseling Psychology

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Title - Name Surname	Opinion	Signature
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This is to confirm that this thesis complies with all the standards set by the School of Graduate Studies of Ibn Haldun University.

Date of Submission Seal/Signature

ACADEMIC HONESTY ATTESTATION

I hereby declare that all information in this document 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.

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ÖZ

TÜRKİYE'DE ERGENLERDE SİGARA İÇME DAVRANIŞINI YORDAYAN RİSK FAKTÖRLERİNİN İNCELENMESİ

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Eylül 2021, 105 sayfa

Sigara içen yetişkinlerin çoğu ergenlik döneminde başlamıştır, bu yaşta başlayanlar ise sigarayı bırakmakta daha fazla sorun yaşamaya eğilimlidir. Çocukluk ve ergenlik yıllarında sigara içmek, solunum ve akciğer sorunları gibi ciddi sağlık sorunlarının yanı sıra fiziksel uygunluk kaybı ile ilişkilidir. Küresel olarak, 15 ve üzeri yaştaki 1,3 milyar kişi sigara içmekte olup, sigaraya bağlı hastalıklarla ilgili küresel ve yerel harcamalar sırasıyla 467 milyar dolar ve 25 milyar dolar bulmuştur. Bu bağlamda bu tez çalışması, Türkiye'de ergenlerin sigara içme davranışlarını yordayan aile, kişisel ve sosyal risk faktörlerini araştırmaya hedeflemiştir. Çalışma özellikle, çocuk-ebeveyn ilişkileri, ebeveynlerin eğitim düzeyi, akademik başarı algısı, akran ilişki baskıları, öğretmen-öğrenci ilişkileri, cinsiyet ve bunların ergen içiciliği ile ilişkisini incelemek için, Bağcılar'da Anadolu lisesi, İmam Hatip lisesi ve Meslek Lisesi'nden 751 lise öğrencisi arasından 2019 yılında toplanan bir arşiv kullanılmıştır. İlgi değişkenleri analiz etmek için Spearman korelasyon katsayısı ve ki-kare bağımsızlık testi kullanıldı. Tüm değişkenler arasında, sonuçlar çocuk-ebeveyn ilişkileri, akademik başarı, öğretmen-öğrenci ilişkileri, akran ilişkileri, cinsiyet ve ergen sigara içmesi arasında bir ilişki buldu. Daha belirgin olarak, çocuk-anne ilişkileri ve akademik başarı algısı, meslek lisesinde ergen sigara içme ile ilişkili bulunurken, İmam Hatip lisesinde öğretmen-öğrenci ilişkileri ve cinsiyet ergen sigara içme ile ilişkili bulunmuştur. Anadolu lisesinde ergen sigara içimi ile ilişkili bulunan tek değişken akran ilişkileri baskıları olduğu anlaşılmıştır.

Anahtar Kelimeler: Aile Faktörleri, Akademik Faktörler, Bağcılar, Ergen Sigara İçme, Kişisel Faktörler, Sosyal Faktörler.

ABSTRACT

AN EXAMINATION OF RISK FACTORS THAT PREDICT ADOLESCENT SMOKING IN TURKEY

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Most adult smokers started smoking during adolescence and those who started at that age are more prone to have trouble quitting. Smoking during childhood and teenage years is associated with serious health problems, such as respiratory and lung issues, as well as a loss of physical fitness. Globally, 1.3 billion aged 15 and above are smokers, and the global and local expenditure associated with smoking-related illness amount to $467 billion and $25 billion respectively. Against this background, the thesis is concerned with investigating family, personal and social risk factors that predict adolescent smoking behaviors in Turkey. Specifically, to investigated child-parent relationships, educational level of parents, perception of academic success, peer relationships pressures, teacher-student relationships, gender, and their association with adolescent smoking using an archive that was collected in 2019 among 751 high school students from Anadolu high school, Imam Hatip high school and Vocational high school in Bağcılar. The Spearman correlation coefficient and the chi-square test of independence were conducted to analyze the variables of interest.

Of all the variables of interest, the results found an association between child-parent relationships, academic success, teacher-student relationships, peer relationships, gender, and adolescent smoking. More specifically, child-mother relationships and perception of academic success were found to be associated with adolescent smoking in vocational high school, whereas teacher-student relationships, and gender were found to be associated with adolescent smoking in Imam Hatip high school. In

Anadolu high school, the only variable that was found to be associated with adolescent smoking was peer relationships pressures.

Keywords: Academic Factors, Adolescent Smoking, Bağcılar, Family Factors, Personal Factors; Social Factors.

DEDICATION

I dedicate this work to the will of Almighty and to all those who are committed to finding solutions to drug abuse and illicit drug use among adolescents all over the world.

ACKNOWLEDGEMENT

First and foremost, I am extremely grateful to the will of Almighty Allah and the support of my able family who have seen me through to this point. I would like to also express my gratitude to my supervisor and lecturer Prof. Dr. Sefa Bulut and Asst Prof. Dr. Thseen Nazir for their useful comments, remarks, and engagement through my learning process as a master student and completing this master's thesis. Finally, I would like to extend my heartfelt thanks to my friends; for their brotherly support, encouragement, and advice that I could not forget.

Ali Cissey Usman

ISTANBUL, 2021

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X^2	Chi-square Coefficient
Rho	Spearman correlation coefficient

CHAPTER I

INTRODUCTION

1.1 Background of the Study

Even though small amounts of nicotine were found in certain old-grown cultural plants in human remains in the Eastern world and Africa, not until 6000 BCE, no ancient human settlement habitually use tobacco except in the tropical Americas (Borio, 2001). In that continent, by 1 CE, experts believe that tobacco was almost everywhere and the American people started using tobacco in various ways, including smoking, chewing, and perhaps hallucinogenic enemas (Borio, 2001).

Since then, tobacco products, mainly cigarettes, have grown rapidly over the centuries. Today, global cigarette production seems to have leveled out over the last decades. It is estimated that 6.5 trillion cigarettes are sold worldwide each year, which corresponds to around 18 billion cigarettes a day (Terry, 2020). In Turkey, reports suggest that 74696 metric tons of tobacco were produced in 2014, from which 159.91 billion cigarettes were produced in 2016 (Drope et al., 2018). This turnover and rapid increase in production make the industry one of the lucrative industries of the world, but which makes its boatload of money largely from the poorest people in the world (Terry, 2020). As facts suggest, out of the 1.3 billion tobacco users in the world, over 80% live in low- and middle-income countries (WHO, 2020).

Report on smoking, indicate that the overall average cigarette consumption was around 5.5 trillion cigarettes per year in 2002 (MacKay & Eriksen, 2002), which translates to almost 3 cigarettes per day for each man, woman, and child of the world. Other reports such as the National Institute on Drug Abuse (NIDA) estimates that approximately one-fourth of the general population uses tobacco products, with cigarette smoking constituting 19.4% (NIDA. 2020), while the National Survey on Drug Use and Health (NSDUH) in 2016 argued that a total of 63.4 million individuals aged 12 and above are monthly tobacco users, along with a sum of 51.3 million cigarette smokers (NSDUH, 2017). Global smoking is also projected to increase largely over 1.6 billion

by 2025 (World Bank, 2001), making it a habit that has become a key fundamental concern for nations of the world. It is a product that no country of the world can claim immense abstinence and self-denial from as it is one of the most addictive unhealthy substances. Any experience with it strongly predicts who will become a well-established user of the product (Doubeni, Reed, & DiFranza, 2010).

Amongst all age groups, people who start smoking during adolescence are much more inclined to become addicted, to advance as daily smoking or smoke into adulthood and become massive cigarette smokers (Chassin, Presson, Pitts, & Sherman, 2000; Chen, & Millar,1998). Some finding suggests that the human body immediately develops nicotine dependence symptoms after smoking initiation, even well before the emergence of habitual daily smoking (DiFranza, et al., 2007; O'Loughlin, Bancej, Gervais, Meshefedjian, & Tremblay, 2006). Meaning, most adolescents are more likely to lose their autonomy over cigarettes within a day to 2 trials.

Moreover, because of withdrawal symptoms and failed cessation attempts, early nicotine symptoms have been shown to be a risk factor for future cigarette smoking in a long-term longitudinal study (DiFranza, et al., 2007). In light of all these concerns, various-demand reduction and other initiatives have been implemented that has led to a general decline in smoking across all age groups in recent times. However, despite these initiatives, thousands of adolescents continue to smoke cigarettes every month. For example, according to Miech et al. (2017), in a NIDA-sponsored project, an estimated 4.7 million middle and high school students use tobacco monthly in 2015. In 2017, Monitoring the Future Survey among many countries suggests that 9.7% grade 12 are regular monthly cigarette smokers (Miech et al. 2017). Whereas in 2012, the National Youth Tobacco Survey (NYTS) found that 41.9% of adolescents across nations are classical nicotine dependent as 20.8% of these users reported wanting cigarettes within 30 minutes of waking (Apelberg, et al., 2014). In Turkey, it is estimated that more than 41.4% of males and 16.3% of females aged 15 and above smoke on a daily basis than even the average in high human development index (HDI) countries in 2015 (Drope et al., 2018). Among the aged 10 – 14 years, more than 3.7% of boys and 1.8% of girls smoke on daily basis compared to the same age group on average in other HDI countries in 2015 (Drope et al., 2018).

It is therefore important to note that across all adult daily smokers, 90% started primarily before the age of 18 (US Department of Health & Human Services, 2014; Saddleson, et al., 2016; Yürekli, et al., 2010). Making the initiation and the use of tobacco and cigarettes at an early age a growing concern for nations, notably those with a relatively large proportion of young people (Yürekli, et al., 2010). In Turkey, for example, the addictive nature of cigarettes has reached epidemic proportions. Cigarette consumption in Turkey is thought to have increased dramatically in comparison to other countries. In 2017, reports from the Turkish Ministry of Health suggest that regular smoking in men and women stood between 35.9% - 40.1%, and 10.8% - 13.3% respectively. Furthermore, Turkey was ranked third in the world in terms of the number of people over the age of 15 who smoke cigarettes in 2016 (Turkish Ministry of Health, 2016). Whereas more than 23.6% of the country's population of over age 15 in 2018 were estimated to be current cigarette smokers (Turkstat, 2018). Exposure to nicotine during adolescence is a fundamental major concern due to the fact the brain is still at its developmental stage. Therefore, intake of nicotine negatively affects the brain's reward system and regions that regulate emotional and cognitive functions (Smith et al., 2015). These facts highlight the critical importance of targeting adolescents and youth tobacco users, precisely cigarettes as the risk of early smoking cannot be overemphasized.

1.1.1 Smoking/Addiction Scenario in Turkey

Research on smoking among the Turkish population has received a lot of attention in recent years, not only because of the country's increasing smoking trend but also possibly because of the future health dangers and the environmental pollution it causes. Cigarette stubs are estimated to account for 73% of all waste dumped into the country's seas (Cetinkaya, 2019). Whereas according to the 2009 Global Adult Tobacco Survey (GAT) report in Turkey, 31.3 % (47.9 % of males and 15.2 % of females) of the Turkish population aged 15 and above are regular cigarette smokers in 2008 (Yürekli, et al., 2010). This implies that relying on the country's 55 million population at the time, approximately 15 million Turkish citizens were regular cigarette smokers in 2008. In the same year, according to Yürekli, et al., (2010), the Centers for Disease Control and Prevention's global youth tobacco surveillance report from 2000 to 2007 indicates that nearly half of Turkish adults are regular smokers, with 47.9 % among males and one in every six among females.

Similarly, per the Global Adult Tobacco Survey Turkey Report (2010), 31.2 % of adults aged 15 and above were current cigarette smokers. This includes approximately 12 million men and 4 million women. On daily smoking, the report further suggested that 11 million men and 3 million women in 2010 smoke on daily basis with most smoking more than half a pack (11 cigarettes) per day. However, 15.5 % of all those who smoke were reported to be smoking more than 20 cigarettes daily. In other reports, the National Household Survey in 2003 revealed that 33.8 % of Turkish adults aged 18 and above smoked on a daily and regular basis (Research, 2006). However, men were found to have a higher rate (52.9 %) than women (19.5 %). The study also found that smoking rates are higher in cities in central and western Turkey than in cities in Southern Turkey (Yürekli, et al., 2010). On that note, a cross-sectional observational study with the objectives of evaluating the prevalence of smoking in outdoor areas in Istanbul, Ankara, and Izmir, Kaplan, et al., (2019) observed that outdoor smoking in the above cities were 3.7% around school areas and 90% in open market areas. Along with 95.6 % ashtrays being found around hospitals, 92.% in shopping malls, and 90.9% in universities. Whereas 100 %, 96 %, 95.5 %, and 93.3 % of cigarette butts were frequently visible around open market areas, shopping malls, universities, and parks, respectively.

By the same token, the 2009 Global Adult Tabacco Survey Report in Turkey revealed that smoking prevalence in Turkey is significantly higher in urban areas (33 %) when compared to rural areas (27.2 %). Gender-wise, female smoking prevalence is much higher among urban females (18.7 %) than rural females (7.2 %), but both urban (47.8 %) and rural (48.1 %) smoking among males was found to be significantly high. However, according to the same report, rural smokers smoke (18 cigarettes) possibly a bit more cigarettes daily compared to urban smokers (16.5 cigarettes). In addition, the number of cigarettes consumed daily in the two populations was discovered to increase with age. Not until age 65 years, adults aged 45 to 64 years were found to smoke close to one pack of cigarettes daily. Even though most parents would want their children to grow up healthy, happy, and substance-free, previous studies in Turkey indicate that smoking is prevalent among key individuals who children can look up to as role models in societies. For example, in a collaborative work by WHO that falls within the framework of the Global Tobacco Control Initiative with the Ministry of Health and the Tobacco and Alcohol Market Regulatory Authority in

Turkey, it was indicated that in 59.9 % - 81.5 % of homes in Turkey, at least one family member would be found to be a regular cigarette smoker and in most cases, it is often the father (Bilir, et al., 2009). Likewise, studies also revealed that close to 90% of smokers in various respected occupations smoke mostly at home 60 – 95 % or at work 50 – 85 % (Bilir, et al., 2009). The significant danger to this habit is that most often smoke in front of their children or minors who may interpret the act as acceptable and healthy.

Among occupations with significant smokers, Bilir, et al., (2009) suggested that 34 % of artists, 21 % Physicians, 12 % Sportsmen, 19 % Journalists, and 8 % of Teachers light up their first cigarette before breakfast, while 2 % of Artists, 10 % Physicians, 9 % Journalists, 8 % Sportsmen, and 10 % Teachers chain smoke. To further buttress the prevalence of smoking among individuals in key respected occupations in Turkey, a study to ascertain the frequency of smoking among physicians working in the Medicine Faculty at the University of Meram in Selçuk suggest that 28.7 % had smoked at some point in their professional lives, along with 9.9 % former smokers. Likewise, the majority reporting smokers among their key family remembers and close friends (Marakoğlu, et al., 2006). Similarly, in a collaborative research with WHO, the Ministry of Health and the Turkish Society of Public Health Specialists reported that current smoking prevalence among general health practitioners was around 39.4 %, 39.4 % among specialist physicians, 43.4 % among health technicians, and 40.7 % among nurses and midwives.

As to teachers smoking prevalence in Turkey, a study in Şanlıurfa to investigate the attitudes of teachers who smoke in terms of their status as role models to school students revealed that out of 546 teachers, 206 (37.07 %) were regular cigarette smokers (Ozbas, 2019). In Ayten (2016), a study with 347 teachers in 8 high schools and their equivalents in the city of Çanakkale in western Turkey also found the rate of smoking among male and female teachers to be 33 % and 31.1 % respectively. Whereas, Aydın, et al., (2011) also found the rate of current teachers smoking prevalence to be 27.6 %. In Kayser among 21 schools, a survey involving 860 primary school teachers to evaluate their behaviors and opinions on cigarette smoking, the result revealed that 31.5 % of them were smokers, 54.2 % smoked more than 11 cigarettes per day, 83.8 % have been smoking for more than six years while 93.7 % smoke in the school areas (Shepherd, & Sungur, 2013).

It is important to note, however, that teachers and professionals in the aforementioned profession have always served as role models for children and adolescents. More importantly, teachers play important roles in adolescent tobacco control and prevention because they are respected by students, and they influence the evolution aspect of students and adolescents. Therefore, teachers and key professional individuals who have direct and indirect daily interaction with students and adolescents, these young adults turn to imitate their lifestyle without knowing the future consequences. In that view, studies have shown that children and adolescents whose parents or teachers smoke in their presence turn to take the habit to begin smoking (Coşkun, et al., 2010: Ünlü, et al., 2002). This may have translated as to why adolescent and adult smoking in Turkey is often considered to be at its pandemic stage. Even before considering the situation of adolescent smoking in Turkey, studies examining passive smoking in Turkey suggest that among 188 school children, parental self-report revealed that 72.3 % of children come from homes with cigarette smokers, just as how 34.6 % are regularly exposed to daily passive smoking (Boyaci, et al., 2006). Moreover, after examining urine cotinine levels of such students, there was evidence to suggest that 76 % were exposed to passive smoking. Similarly, a study involving 347 primary grade 3 – 5 students between the ages of 9 – 11 years revealed that (208) 59.9 % were constantly being exposed to environmental tobacco smoking (Ekerbiçer, et al., 2007).

On the other hand, among Turkish adolescents, quite a few previous studies have found concerning trends and scenarios of adolescent smoking in the country. In an attempt to investigate the prevalence of smoking and its determinants among fourth and fifth-year students at Cukurova University in Southern Turkey, Akpinar, Yoldaşcan, and Saatçi (2006) discovered that among 2200 participants, smoking prevalence ranged between 26.6% to 43.7%, and smoking behaviors were found to increase from the ages of 13 and 17 years, as well as if either adolescent best friend or family member smokes. Erguder et al., (2008) suggest that among Turkish adolescents aged 13 – 15 years, 3 in every 10 (26.3 %) students ever smoked cigarettes (boys 31.7 % and girls 19.7 %). Out of the ever-smoked students, 30.7 % started smoking before the age of 10 years (34.9 % among boys and 23.7 % among girls). The findings also revealed that 3.4 % were current smokers, and one in every ten (13.1 %) were tobacco addicts who craved cigarettes first thing in the morning. Among 16,000 students aged 13 – 15 years, a

national wide Global Youth Tobacco Survey in 2003 also revealed that 7 % (8.2 % among boys and 5.3 % among girls) of adolescents were liable to start smoking during the next year (Global Adult Tobacco Survey, 2010). Going by this figure to date approximately the number of current adolescent smokers in Turkey could be estimated to be more than 77 %, that is if the rate is assumed to be doubling yearly.

Furthermore, smoking prevalence among young adults aged 25 to 44 has been reported to be significantly higher, in the region of 40% (Yürekli et al., 2010). However, in terms of whether educational attainment influences smoking, those with some form of secondary school education had a smoking prevalence of 43 %, and those with some form of high school education had a smoking prevalence of 40 %, compared to 13 % among uneducated young adults and 31 % among those with primary education (Yürekli et al., 2010). More recently, in the quest to determine the prevalence of cigarette smoking and hookah use among grade 10 students in Istanbul, the lifetime prevalence of cigarette smoking was reported as 24.4%, while a few times a month use was found to be 2.7 %, and several times a week and daily use was reported to be 1.8 % and 5.6 %, respectively (Evren, et al., 2014). In Ankara, an extension of a cross-sectional study conducted among 311 boys and 396 girls students with an average age of 15 years revealed that 48.2 % boys and 35.1 % girls have smoked at some point in their lives, while last 30 days prevalence of cigarette use were reported to be 19.6 % for boys and 6 % for girls (Oztekin, et al., 2021). Similarly, in a study conducted among grade 5, 6, 7, and 8 students in western Turkey, it was discovered that 52.8 % of those who perceived the benefits of smoking were smokers (Ayar, et al., 2019). With all of this insightful representation of the smoking situation in Turkey, it is no surprise that more than 100,000 people die in the country each year as a result of the consequences of smoking, with the number expected to rise to 240, 000 by 2030 if the current trend continues (TURKSTAT, 2016).

1.2 General Statement of the Problem

The economic cost of smoking is substantial. It includes healthcare costs for treatments as well as the loss of human capital as a result of redirecting household income that could have been used for food, shelter, etc. (WHO, 2020). Globally, the total health expenditure associated with smoking-related illnesses amounts to $467 billion in 2012 (Goodchild, Nargis, & d'Espaignet, 2018). In the same year, the total cost of smoking from health expenditure and productivity loss also amounted to $1852 billion

(Goodchild, Nargis, & d'Espaignet, 2018). These insightful figures represent almost 2% of the annual gross domestic product (GDP) of the world, with almost 40% of this cost occurring in developing countries (Goodchild, Nargis, & d'Espaignet, 2018).

In the United States, smoking-related illnesses cost upwards of $300 billion a year. These include around $170 billion in smoking-related healthcare costs and much more than $156 billion in productivity losses due to direct and indirect smoking (US Department of Health and Human Services. 2014; Xu, et al., 2015). In Turkey, despite major gains and legislative efforts to combat smoking, smoking habits are still subject to heavy economic and productivity tolls. In Drope et al., (2018), the total economic cost of smoking equates to 41494 million Lira. Also, in a web news report by the Turkish news site Daily Sabah (2019), the total annual expenditure on smoking amounted to $25 billion. All these figures included direct and indirect smoking-related healthcare costs and productivity loss. In addition, government data on the number of cigarettes and the amount of money spent on the consumption of cigarettes in Turkey have been estimated to be about 1 trillion cigarettes and about $154.1 billion over the last decade, respectively (Daily Sabah, 2018). This could be due to the fact that almost 6.00 Lira and 150.00 Lira are spent on a daily and monthly basis on smoking per smoker in 2013, respectively (GATS, 2013).

On the other hand, widespread smoking is also associated with the loss of lives due to smoking-related diseases. Between 1900 - 1999, tobacco-related diseases accounted for “just” 100 million deaths (Mackay, Eriksen, & Eriksen, 2002). Just might sound very little considering the current number of estimated and projected tobacco-related illness and annual deaths. In Turkey for instance, according to the Turkish Ministry of Health in 2000, out of the 5 million patients hospitalized, 20% had health concerns relating to the use of tobacco (Yürekli, et al., 2010). Besides, 52% of the total hospital death in the same year was associated with tobacco-related diseases (Yürekli, et al., 2010). In the same vein, the Turkish Ministry of health in 2003 further attributed 54,699 death to the use of tobacco products, with 97% of this tobacco death affecting men compared to women (Yürekli, et al., 2010). Currently, in Turkey, 30% and 6% of deaths are associated with cigarette smoking in men and women respectively (Tobacco Atlas, 2011), whereas globally, smoking is responsible for over 7 million deaths annually (WHO, 2017). This figure is however projected to escalate to over 8 million

deaths globally by 2030 if the current pattern of smoking doesn't change (WHO, 2011). Going by these figures, smoking and tobacco-related diseases cause one death every five seconds, and it is expected to kill nearly 1 billion people at the end of the 21st century. But why are there so many tobacco-related deaths?

The principal reason is that many people smoke and smoking is associated with multitudes of health challenges. China for example alone has 300 million smokers (Warner, 2005) and almost 30% of Turkey's total population consumes cigarettes (GATS, 2013). Whereas lung cancer has been confirmed over 50 years ago to be caused by cigarette smoking (US Department of Health and Human Services, 2004) as well as tracheal, and bronchus diseases (Yürekli, et al., 2010). Since then, other diseases have been added to the list of diseases associated with smoking and second-hand smoking. According to the United States Department of Health and Human Services (2014), the majority of smoking-related deaths are linked to cancer, heart disease, lung disease, stroke, chronic obstructive pulmonary disease (COPD), diabetes, tuberculosis, and the immune system problems.

Furthermore, smoking during adolescence is also associated with immediate and long-term consequences. These include health challenges such as reduced physical fitness, associated with reduced lung function and growth leading to shortness of breath, coughing and wheezing, early heart-related diseases, as a result of damaged heart and blood vessels, poor oral and skin health leading to yellow teeth, bad breath and early skin wrinkling (Larry, 2015). And most importantly addiction to smoking as its often takes hold during adolescence (SAMHSA, 2014). For this reason, previous studies have attempted to understand the mode and situations that lead to adolescent smoking initiation.

Studies suggest that young smokers start smoking on average before the age of 10.7 (Mackay, Eriksen, & Eriksen, 2002), and the younger the age of initiation, the greater the chances of daily smoking habits (Reidpath, Davey, Kadirvelu, Soyiri, & Allotey, 2014), heavy smoking (Hwang, & Park, 2014) and difficult to quit (Wilkinson, Schabath, Prokhorov, & Spitz, 2007). An overwhelming number of situations explain why an adolescent picks up a cigarette in the first place. According to the American Lung Association (2020), these situations include, parental smoking, peer pressure-associated with friend's encouragement to try or to keep smoking, and as a means of

rebellion or in an attempt to show independence. On parental smoking, Mayhew, Flay, and Mott (2000) believes that home remains the first learning classroom for children and adolescents, so children and adolescents learn smoking habits by imitating parents. While peer pressure is manifested based on brainwashing in an attempt to fit into a group or class of certain adolescents (Bulut, Usman & Nazir, 2020).

All these aforementioned staggering facts constitute the background, and motivation for a research study on the subject. And it is also important to note that on every cigarette smoked, at least 5-11 minutes of the smoker's life is cut (Martin, 2020). Therefore, over a long period, that can drastically reduce life expectancy extremely close to 12 or more years. These associated dangers of the problem call for a need to examine risk factors that facilitate the likelihood of early cigarette use. The ability to regularly identify groups of risk factors that influence early smoking could be useful in informing intervention and prevention initiatives and thus curb adolescent smoking.

1.3 Aims and Objective

The rationale for this thesis comes from the increasing prevalence of smoking among adolescents in Turkey. For example, it is estimated that 24 % of boys and 11.9 % of high school girls aged 17 and above are regular cigarette smokers (Göktalay et al., 2020). Moreover, in an attempt to make contributions by identifying and analyzing risk factors that influence adolescent smoking in a country that straddles the line between developed and developing nations.

This study aims to analyze the risk factors that influence adolescent smoking. Based on these, the primary objectives of this thesis are:

1. To measure the relationship between child-parent relationship and adolescent smoking.
2. To measure the relationship between the parental level of education and adolescent smoking.
3. To measure the relationship between adolescent perception of academic success and adolescent smoking.
4. To measure the relationship between teacher-student relationship and adolescent smoking.
5. To measure the relationship between peer pressure and adolescent smoking.

6. To measure the relationship between gender and adolescent smoking.

This will help in understanding the current challenges on the subject, as well as contribute to policies and interventions aimed at curbing early smoking.

1.4 Hypotheses

It is hypothesized that:

1. There is no significant relationship between child-parent relationships and adolescent smoking.
2. There is no significant relationship between the high educational achievement of parents and adolescent smoking.
3. There is no significant relationship between Adolescent negative perception of the level of academic success and adolescent smoking.
4. There is no significant relationship between negative teacher-student relationships and adolescent smoking.
5. There is no significant relationship between Negative adolescent peer relationships and adolescent smoking.
6. There is no significant relationship between gender and adolescent smoking.

1.5 Terminology

Risk factors that predict adolescent smoking in Turkey constitute the main working definition of the thesis. Other subterms and phrases that are also worth considering are smoking prevalence, young people, young adults, youth, adolescents, teenagers, and smoking.

In the current thesis, Risk factors that predict adolescent smoking in Turkey constitute the factors that the researcher considers as paramount in influencing adolescent smoking behavior. These factors include child-parent relationship, parent educational achievement, adolescent perceived academic success, teacher-student relationship, peer pressure, and gender.

Similarly, the terms 'young people,' 'young adults,' 'youth,' 'adolescents' and 'teenagers' are being used synonymously in the thesis to basis points to persons 21 years of age and below. Whereas smoking is defined as habitual inhalation of certain or different types of burnt plants, precisely Tobacco (Sweanor, Henningfield, Hilton & Ann Rose, 2019).

1.6 Structure of the Study

The thesis is divided into five chapters and is defined as follows:

Chapter one introduces the study and gives an overview of the topic issue and the justification for the study. The chapter also sets out the study objectives, significance, assumptions, terminology used in the study and the research hypotheses. Chapter two offers a thorough review of the relevant literature on adolescent smoking. Essentially, looking at possible risk factors that predict adolescent smoking, and the theoretical framework that underpins the main study. Whereas chapter three gives comprehensive information of the data source, the data population, variables studied, the preliminary test to determine whether the data set met the requirement of the test intended, and the method used in the investigation. The chapter also discusses and presents key findings and their importance and the limitations of the study. Finally, chapters four and five pertain to the study 'adolescent smoking'. Results of the study are provided in two parts: chapter four highlights key findings along with the outcomes of hypotheses, while chapter five discusses the outcome and draws upon the literature to explain findings. The chapter then concludes by analyzing the implication of the study in the subject area.

CHAPTER II

LITERATURE REVIEW

2.1 Introduction

Understanding why an adolescent experiments with smoking is crucial in an attempt to control adolescent cigarette use. This chapter provides an extensive literature review both globally and within Turkey concerning the current state of findings regarding risk factors that pushes adolescent toward cigarette smoking.

2.2 Adolescent Smoking Prevalence and Initiation

Past evidence suggests that the age at which an adolescent starts to smoke is an important indicator in the determination of possible addiction, cessation, and health risks (Unger, & Chen, 1999). For example, in Breslau and Peterson's (1996), study with adolescents in Michigan, those who started smoking at age 13 and below were reported as twice as likely than those who started smoking after age 17 to remain smokers throughout adulthood. A similar finding has also been reported as early age smoking was associated with later nicotine dependence (DeBry, & Tiffany, 2008). In Turkey, with 30% of the population under the age of 15, and 33% of boys and 22% of girls trying tobacco products, specifically cigarettes, before the age of 10, future tobacco-related diseases and deaths are predicted to hit the country (Yürekli, et al., 2010).

For these reasons, the age at which an individual first uses a cigarette is of symbolic significance that determines the life-long event to be followed. Moreover, the prevalence of smoking in any population largely depends on the frequent rate of smoking initiation. Thus, curbing out the trends rate of smoking initiation is of useful importance in any primary prevention strategies.

2.2.1 Age of Smoking Initiation

Largely, most adult smokers started smoking before the age of 18. However, the trend varied considerably around the world. In several European nations, more than 70% of

current and former smokers began smoking daily before the age of 18 (Filippidis, Agaku, & Vardavas, 2015). These European nations included: Northern Europe (Denmark, Ireland, United Kingdom, Latvia, Lithuania, Estonia, Finland), Western Europe (France, Belgium, Austria, Germany, the Netherlands, Luxembourg, Sweden), Eastern Europe (Slovakia, Czech Republic, Hungary, Poland, Bulgaria, Romania) and Southern Europe (Greece, Italy, Malta, Portugal, Slovenia, Spain, Cyprus). On average, the age of regular smoking onset in these countries was reported to be around 16.6 years, ranging between 15.8 to 18.8 years (Filippidis, Agaku, & Vardavas, 2015).

Other studies have also reported varying findings as to the age at which smokers start smoking across these European nations. As per the 2015 Eurobarometer special report, on average, the regular smoking onset in Europe is 17.6, with around one in every five people who smoke smoking regularly around age 15 and below. Going by the 2015 ESPAD report, over one in every five adolescents had smoked at the age of 13 and below. However, the magnitudes were reported to be 45% in Lithuania and 46 % in Estonia, and around 9-13 % in Malta, Macedonia, Iceland, and Norway (Kraus, & Nociar, 2016). Interestingly, when these trends are compared to findings in Turkey and other parts of the world, bearly are significant differences noticed.

In Turkey, 75% of current smokers started smoking before the age of 20 (Cetinkaya, & Marquez, 2017). In most cases, those within the age basket of 15-19 are often considered as the most vulnerable because they account for close to 48% of those who start smoking, while it is believed that one in every four smokers in Turkey started smoking between the ages of 10 - 14 (Cetinkaya, & Marquez, 2017). Before age 14, evidence suggests that boys are more likely to smoke than girls, whereas, after age 14, girls are consistently at risk of smoking initiation (Cetinkaya, & Marquez, 2017). Inline and contrary to some of these findings, the Turkish health statistics yearbook 2016 suggest that 47.8% of the Turkish smoking population started smoking between the ages of 15-19, followed by 23.1% among age 10-14 and 4.5% among aged 10 and below (Berrak, Soytutan, Tugcan, & Cemil, 2016).

In the United State, the mean age of early smoking was found to be around 8.5 but ranging between 6 – 11 years (Ahmed et al., 2004). Generally, in the US smoking increases significantly as a child progressively gets older. People smoke less around age 13-15 than around 15-19 and in that order (Richardson, et al., 2009). Among

Jordanians, the reported age of smoking onset was estimated to range from 10 - 12, with a large majority smoking more than 1 packet per week at the age of 12 (Al-Sheyab et al., 2014). Whereas in China, the mean age of smoking initiation was estimated at 21 years, but with a large number of smokers starting early before that age (Zhang et al., 2013).

2.2.2 Adolescent Smoking Prevalence

Worldwide, approximately 24 million or 7% aged 13–15 smoked cigarettes between 2000–2017 (WHO, 2018). Except findings from the Eastern Mediterranean Region where the rate of prevalence was reported as 7.4%, the prevalence rate among aged 13-15 boys who smoked were between 9-10%, Whereas, in the same age group, the smoking prevalence rate for girls in the Americas (9.7%) and European regions (8.6%) was significantly higher compared to other regions (WHO, 2018). The trend in these findings indicates that smoking prevalence between age 14 and below has decreased significantly when compared to past reports in 2015 when the global prevalence of under-age smoking was estimated to be 8-21% among boys and 2-17% among girls (WHO, 2015).

Nevertheless, the World Health Organization narrative indicates that the world is still far from achieving its relative 30% reduction in smoking prevalence by 2025 even though massive progress has been made (WHO, 2018). To some experts, this is solely due to the fact that most individual countries are still pushing below their weight as far as adolescents' smoking prevalence is a concern. For instance, with regards to availability and access to tobacco products by aged 15 and 16 years students, higher figures are still reported in Austria (79%), Liechtenstein (77%), and Denmark (76%) according to the ESPAD report in 2015 (Kraus, & Nociar, 2016). The same report further testifies that adolescents perceived availability of tobacco based on gender is slightly at par, as 62% was reported for boys and 60% for girls. In other studies, 10% of boys and 14% of girls among second-grade high school students in Sweden reported regular daily smoking, along with 16% of boys and 19% of girls being intermittent smokers (Leifman, 2013; Romelsjö, Allebeck, Andréasson, & Leifman, 2012). Most significant, 19% of these smokers started before the age of 14 (Romelsjö, Allebeck, Andréasson, & Leifman, 2012). The same trend is typically applicable to findings in Canada. As of 2012, smoking prevalence among Canadian adolescents aged 15 – 19 was estimated to be in the region of 7% (93,000) for aged 15 – 17, and 11% (233,000)

for aged 15 – 19, with at least 4% of aged 15 – 17 and 7% of aged 15 – 19 smoking on daily bases (Health Canada, 2012). In the same survey, among daily smoking adolescents aged 15 – 19, an average of 11.1 cigarettes are smoked per day. All of this implies that while measures are being taken to reduce adolescents' access to tobacco, the products are still accessible and in use by adolescents.

In Turkey, despite smoking been banned in government offices, bars, restaurants, public places, schools, etc., the overall smoking prevalence for both males and females aged 15 and above was estimated to be approximately 30.5% (Özer et al., 2018). Among adolescents, reports from the Turkish Health Statistics yearbooks suggest that daily smoking prevalence among aged 15 – 24 stood at (Male, 27.1%, Female, 6.1%) in 2010, (Male, 24.1, Female, 4.6%) in 2012, (Male, 31.4, Female, 5.7%) in 2014 (Berrak, Soytutan, Tugcan, & Cemil, 2016), and (Male, 28.2%, Female, 7.8%) in 2016 (Berrak, Soytutan, Asiye, & Tugcan, 2018). Surprisingly, when these figures are compared to findings from the international community, daily adolescents smoking is extremely high in Turkey in 2017. Among Turkish adolescents, daily smoking stood at (Male, 28%, Female 8%) compared to Norway (Male, 3%, Female, below 1%), UK (Male, 14%, Female 19%), Italy (Male, 18%, Female, 15%), German (Male, 14%, Female, 11%), and Spain (Male, 18%, Female, 14%) (Berrak, Soytutan, Asiye, & Tugcan, 2018).

However other individual studies within Turkey have also reported varying prevalence with regards to adolescent smoking in the past years. Some reporting higher figures while others reported moderate and low prevalence of adolescent smoking. One of such studies is a study by Golbasi et al., (2011) in an attempt to determine smoking prevalence among grade 9, 10, and 11 adolescents in Sivas. From a sample of 1050 students from 6 schools, 30 days occasional and daily smoking prevalence was reported to be 20.4% with a mean age of 16 years. Furthermore, in Sirnak, one of the border-gates often regarded as the gateway for the smuggling of illegal tobacco into Turkey, out of 600 elementary school-age students aged 6 – 14, 48% were found to be tobacco users of any form (Suat, Hikmet, Ahmet, & Cahit, 2017). The study further indicated that 86% of these tobacco users found no difficulty obtaining or buying cigarettes. Whereas in 2017, the Global Youth Tobacco Survey (GYTS) in Turkey found the prevalence of adolescent cigarette smoking to be 7.7% (Male, 9.9%, Female

5.3%), along with 17.9% (Male, 23.2%, Female, 12.1%) current smokers of any tobacco product with cigarette included (GYTS Turkey, 2017).

To give another perspective, all these figures on the prevalence of adolescent and underage smoking in Turkey surpass the recent trends of adolescent smoking in the United State. In the US, daily cigarette smoking among grade 12 students in recent years has declined drastically from its peak of 24.6% to 3.5% in 2018 (Miech et al., 2019), even though past evidence suggest that the prevalence of smoking increases with age in the US (Richardson et al., 2009; ONS Statistics on smoking, 2006). This may be attributed to the primary intervention strategies in place in those places and the regular studies that make recommendations on curbing adolescent smoking. For instance, in some of those countries strategies to curb adolescent smoking have centered on school-based interventions, policy changes, and mass social media campaigns on the possible dangers of smoking among adults and most importantly among adolescents (The United States. Public Health Service, 2012). To some extent all these strategies to curb adolescent smoking have focused on self-efficacy – that is, strengthening adolescent belief to refuse tobacco offers, attitudes, and perception towards the social norms of smoking as well as positive behavioral skills such as the ability to negotiate all the negative that leads to the uptake of tobacco among adolescents. On that note, evidence suggests that interventions that are aimed at targeting the above constructs from the perspectives of cognitive-behavioral viewpoint reduce adolescents' view of tobacco use (Duncan, et al., 2018). This, therefore, does not mean that efforts are not made to reduce adolescent smoking in Turkey but little is known as to whether such interventions have yielded positive results or are capable of reducing smoking in general in the future.

2.3 Theoretical Framework of Adolescent Smoking

Several theories have emanated as to what causes adolescent smoking. With this, adolescent smoking has become avoidable. However, these theories have continuously created dilemmas in prevention approaches due to their multiplicity. Although there are several shared similarities across these theories, at the same time there are also distinct differences that each theory considers to be critical. These differences are solely due to different ideas that are used to explain the same variables. Therefore, a

critical examination of adolescent smoking needs to explore and select theories that best explain the underpinning behavior of interest.

2.3.1 Stress-Coping Model

Stress-coping theory, a theory proposed by Lazarus and Folkman (1984), is a standard framework as to how people adapt to the challenges of life. By definition, stress occurs in situations where an individual perceives or believes that environmental demands exceed the availability of resources at his or her disposal. In this regard according to stress-coping theory, the individual makes an assessment and appraisal of the situation from which a coping mechanism that is capable of alleviating the problem or situation is chosen. In Wills, and Filer (1996), they attested the fact that stress-coping theory has stimulated a large amount of research in social and clinical psychology over the years which has eventually led to its development. To them, one of the major developments of the stress-coping theory is the understanding that people's actual methods of coping with stress, problems, and challenges are not always effective. This means that when exposed to stress, the possibility of adopting a maladaptive coping mechanism is high due to emotional-focused coping or reasoning. These maladaptive methods may include withdrawal, wishful thinking, denial, a sense of helplessness, and, most importantly, distancing oneself from intuitions of the problem.

This, therefore, is the meeting point where stress-coping theory germinates as a construct that best explains risk factors that influence adolescent smoking. First, life stress is proposed as a risk factor for substance use, followed by the proposition that substances themselves have a coping function (Wills, & Filer 1996). During adolescence, an individual is constantly exposed to stressors of various kinds. In an examination of the relationship between stress and social status; measured by parental education level and school social status; measured by high school grades, high school standing, and being respected around the school environment, it was observed that adolescents with low school grades and social status were more likely to smoke compared to others (Finkelstein et al., 2006). It was therefore concluded that higher stress and lower social status increase the risk of smoking in adolescents.

In addition, in a study to examine the effects of smoking on perceived levels of stress and coping among school-going adolescents, the result indicated that current smokers are considerably more likely to have higher levels of perceived stress than non-

smokers (Naquin & Gilbert, 1996). Per the variables in this study, 'parent-child relationship,' 'parental level of education,' 'academic success,' 'gender,' 'teacher-student relationship,' and 'peer relationship,' are critical and potential stressors that can lead adolescents to smoke as a means of self-help and coping. With parent-child, teacher-student, and peer-to-peer relationships, the proposition is that any negative outcome in these relationships will lead to the manifestation of stress leading to ill-adapted coping, which in most cases will be smoking. As for academic success, gender, and parental level of education, they manifest stress in different magnitudes. For example, during adolescence, young people are expected to keep up with certain academic standards, while those from low-educated parents may feel that their social statuses are relatively low compared to others. As far as gender is concerned, research has consistently shown that gender plays a role in coping with or managing stress. For males, research has demonstrated that they are more prone to maladaptive coping compared to females (Gentry et al., 2007).

From this theoretical framework, this study can draw up a conceptual model and structure that illustrate the relationships and the influences that exist between the independent variable and the dependent variable. We conceptualized 6 independent variables under 3 key structures with each having an equal magnitude of eliciting stress that will lead to smoking.

2.3.2 Conceptualize Framework

From figure 2.3.2.1 below, the 6 variables from which the hypothesis of this study is formed was broadly grouped into 3 groups to present a clear understanding of the relationship between the independent variables and the dependent variable. Family factors were defined as the whole network of relationships that exist between a child and the parents, as well as the education levels of parents. Personal factors per the framework of this thesis were defined based on adolescent gender and perceptions of whether an individual is doing well academically or not. Whereas social factors were solely social relationships that exist between peers in school as well as their relationships with teachers.

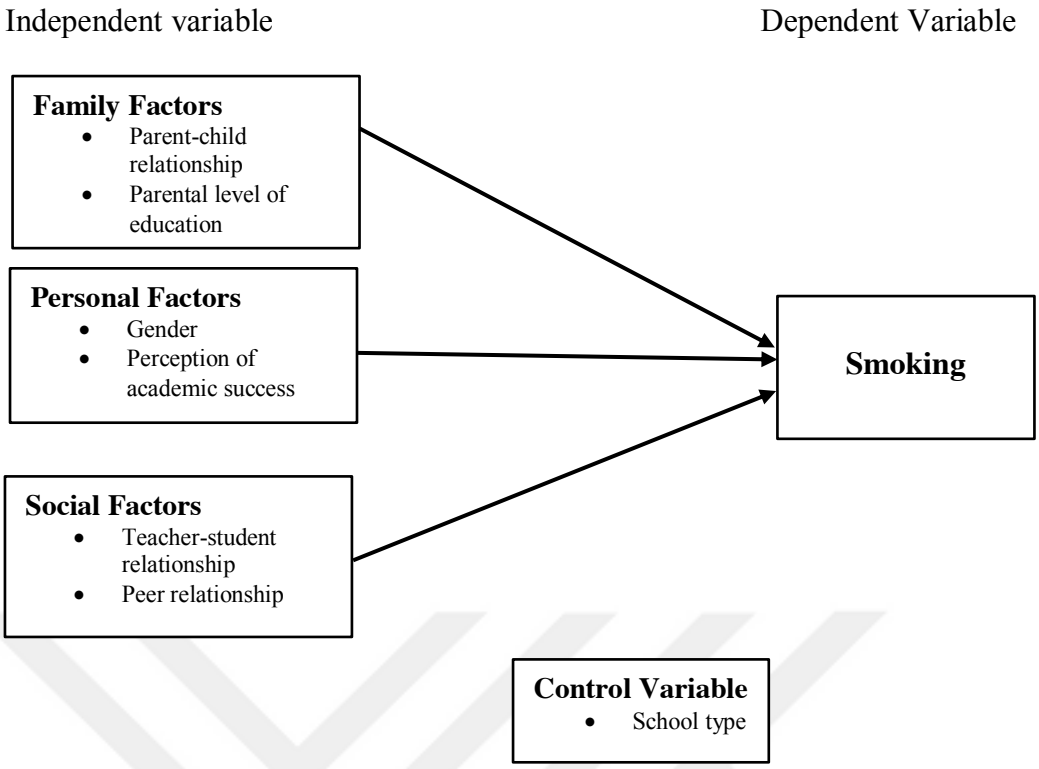

Figure 2.3.2.1 Conceptualize Framework

2.4 Risk Factors in Adolescent Smoking

Cigarette smoking continues to pose a significant threat to the long-term health of the world's youth population. Over the years a wide range of predictors and possible risk factors have been examined in numerous studies and review papers. In the majority of those studies, smoking among adolescents is often regarded as a developmental phenomenon that is mostly influenced by personal, social, and family factors (e.g Leonardi-Bee, Jere, & Britton, 2011).

2.4.1 Family Risk Factors

A wide amount of literature exists on families and their significance on adolescent's developmental outcomes. Families often serve as a key socializing force in which they not only offer guidance for children, but also provide influence and support as a child pilot on the path to independence (Brown, & Rinelli, 2010). This suggests that family structure is central to adolescent health and well-being. Despite the dynamic nature of family structures, previous studies on family risk factors on adolescent smoking mostly have been the comparison of only those in two-versus one-parent families (Oman et al., 2007; Kirby, 2002). For example, a study examining the association

between family structure and smoking, (DeLeire & Kalil, 2002; Du, Palmer, Sakuma, Blake, & Johnson, 2015) found that adolescents who lived in single-parent families, stepfamilies, or cohabiting families are more likely to smoke compared to those in two biological coupled parent families.

However, a study by Du, Palmer, Sakuma, Blake, and Johnson (2015), showed that male adolescents residing in step-parent families were more likely to smoke than females while female adolescents residing in unmarried single-parent families were more likely to smoke than males in Hawaii, United States. The indication in this study is that remarriage might just have a major influence on adolescent smoking just as parental divorce, and living with a single parent. All this may result in decreased parent-child attachment and a likelihood of hanging out with smoking peers. Other studies have established that family relationship quality such as positive parental monitoring and support, joint parental-child activities, parental affection, quality of communication, parent-child closeness, and the use of positive reinforcement are important factors that prevent early smoking initiation (Hill et al., 2005; Darling and Cumsille 2003; Skinner, Haggerty, & Catalano, 2009).

Another key important risk factor that past research on the topic has considered is smoking within peer families. In Darling and Cumsille (2003), Hill et al., (2005), and Tobler et al., (2009), Parents and sibling's substance use behavior, as well as permissive family expectations regarding substance use, have all been reported as significant determinants in early adolescent smoking. While other studies have emphasized the importance of the adolescent environment and how its co-help in substance use. In the United States, for instance, research has shown that adolescents growing up in disadvantaged neighborhoods are more likely to drop out of school (Wodtke, Harding & Elwet, 2011), which in return exposes them to deviant behaviors such as smoking (Jackson, Denny, & Ameratunga, 2014; Mathur, Erickson, Stigler, Forster, & Finnegan, 2013). This means that adolescents who live in socioeconomically deprived neighborhoods are more likely to smoke compared to those in more socioeconomically privileged neighborhoods. However, to understand the effect of a neighborhood on adolescent smoking, (Wodtke, Harding & Elwet, 2011) emphasized the importance of taking into account the length of time adolescents are subjected to the disadvantaged neighborhood.

As a result, a large number of previous studies on risk factors that influence adolescent smoking have focused on family sociodemographic factors such as income. However, findings on family sociodemographic factors are one area that has consistently produced contradictory results in several studies (Patrick, Wightman, Schoeni, & Schulenberg, 2012; Devenish, Hooley, & Mellor, 2017). Although previous studies have found higher smoking rates in many low-income adults, the extent to which it affects adolescent smoking remains unknown (Hiscock et al. 2012). Moreover, multiple studies examining the relationship between family income and adolescent substance use have generated a range of results, ranging from positive, negative, and zero income effects on adolescent substance use (Hanson and Chen 2007).

Furthermore, to date, a considerable amount of literature has also examined the independent effects of parental educational attainment status on adolescents smoking. While other studies reported no link between parental educational attainment and adolescent smoking, others opposingly continued to find a link between parental educational attainment and adolescent smoking. For instance, in Kuntz, & Lampert, 2013), a study in Germany to examine the role of parental educational difference on adolescent smoking, the finding revealed that the risk of adolescent smoking is influenced by their own educational level rather than that of their parents. Similarly, in other studies with Norwegian (Kvaavik et al., 2012) and the Netherlands (Huisman, van de Werfhorst, & Monshouwer, 2012) adolescent groups in an attempt to directly compare the impact of parental educational attainment and adolescent educational achievement, the result revealed that parental educational status seems to be less strongly linked to adolescent smoking.

In contrast to these findings, a study in the Czech Republic among adolescents reported a link between parental educational attainment and adolescent smoking. The study's findings revealed that parental education significantly influences the exposure of adolescents to smoking, with the higher educational attainment of mothers reported to negate adolescents smoking decisions (Žaloudíková, Hrubá, & Samara, 2012). In line with these observations, studies in Turkey have identified not only smoking within the family and family income but also parental educational level as risk factors influencing adolescent smoking (e.g., Bülbül, & Odaci, 2018; Kaya, & Ünalan, 2010; Ertas, 2007; Can et al., 2009).

Despite all of these findings on family factors that might influence adolescent smoking, what has emerged in the literature is the consistent contradictory nature of reports. An explanation for this is the fact that adolescence itself is characterized by the importance of the growing environment, other peers, and the youth culture which affect adolescents across all family structures (Havas, Bosma, Spreeuwenberg, & Feron, 2010). Moreover, if parental education is a useful preventive measure in adolescent smoking, then adolescent smoking should be moderate or minimal in countries with higher literacy rates. For instance, according to (UNESCO, 2013), Turkey has a literacy rate of 94.1 among those aged 15 and above from 1985 – 1994, and it is ranked among the top 50 but parental education levels are consistently reported as causation factors that influence adolescent smoking. This inconsistency may be as a result of the neglect of powerful impacts of the type of school adolescents attend and the lack of comparison if there are any statistical differences based on school types.

Generally, all high schools in Turkey are classified as Imam Hatip Schools, Vocational Schools, and Anadolu Schools. In a comparison of smoking prevalence in these schools with the exception of Imam Hatip Schools, a cross-sectional study in Düzce found that the prevalence of smoking was 1.951 times higher in girls' vocational high school than those in Anatolian high schools (Akkuş et al., 2017). While those studying at industrial vocational high schools were found to be 0.596 times less likely than those in Anatolian high schools to smoke. In general, it was also reported that students who perceived their academic achievement to be weak compared to others, or those who had received disciplinary punishment, or those who were frequently absent from school, or had friends who smoke or use other substances were more likely to smoke. In Imam Hatip schools, based on the narratives of Akpinar (2007), even though smoking is prohibited and students are constantly expected to live by the teaching of Islam, there are elements to believe that smoking is prevalent among students. To further stress the effect of school type, an investigation to determine smoking among middle- and high-school students in Ankara showed that school type seems to affect the smoking behavior of students in general (Özcan, & Özcan, 2002). The effect was found to be evident in all schools except religious-based schools like Imam Hatip. From the findings, being in Anatolian high schools decreases the likelihood of smoking by .38 times, compared to a private high school. While, being a student in

industrial, girls', and vocational high schools increase the likelihood of smoking by 1.6, 2.4, and 2.7 times respectively compared to being a student in private high schools.

It is from assumptions that this thesis hypothesized a relationship between certain family factors such as parent-child relationship and parental education level as risk factors of adolescent smoking but to control for the effect of school type.

2.4.2 Personal Risk Factors

Personal risk factors are individual factors that influence adolescent smoking. While most studies have emphasized on perceived health consequences of smoking (Arnett, 2000; Krosnick et al, 2006; Amrock, & Weitzman, 2015) and functional meanings of smoking (Rodriguez, Romer, Audrain-McGovern, 2007), others have identified risk factors such as adolescent normative beliefs, and expectation (Otten et al., 2007), school truancy (Markham et al., 2008; Yu, Hahm, & Vaughn, 2010), demographic factor such as gender and age (Global Youth Tabacco Survey Collaborative Group, 2002; Babaoglu et al., 2017), and ethnicity (Hoffman, Sussman, Unger, & Valente, 2006) among others as personal factors that play entangling roles to influence whether an adolescent smokes or not.

On perceived health consequences, functional meaning, and normative beliefs of smoking, a study by Amrock, and Weitzman (2015) with National Youth Tobacco Survey data from the United State revealed adolescents constantly hold the belief that intermittent smoking causes little or no harm. Whereas, a study conducted in a large city in Nepal to examine the perceived risks and benefits of smoking among adolescents found that the risk of smoking behaviors increased with adolescent participants who believed smoking was enjoyable, helps in dealing with problems or stress, and serves as a means of relaxation (Aryal, & Bhatta, 2015). In addition, recent studies have also emphasized the relationship between academic performance and adolescent smoking. For instance, weak academic performance was reported to be associated with a high risk of adolescent smoking (Babaoglu et al., 2017; Flay, Petraitis, Hu, 1999; Pennanen, 2012), smoking initiation, frequent smoking, and less likelihood to quit smoking (Go, Tucker, Green, Pollard, & Kennedy, 2012; Kinnunen et al., 2016; Kuntz & Lampert, 2013; Mercken, Snijders, Steglich, & de Vries, 2009).

Similarly, among Turkish adolescents, a study to evaluate the respective importance of certain sociodemographic factors on smoking status in high schools, findings

revealed that students with good academic performance and good school social environment are more likely to stop or not smoking compared to others (Özge et al., 2006). Although it is difficult to understand the association between academic success and smoking, weak performing adolescents are likely to feel be marginalized by teachers and their better peers (Elstad, 2010). Meaning such students are typically less likely to receive emotional, academic, and social support from others, making them prone to cluster in groups to engage in various forms of deviant behaviors such as smoking as a means of creating some form of identity for themselves (Chen & Hsiao, 2009). However, studies conducted in Turkey with adolescents have shown that their problems varied largely in accordance to their family, school, and friend's social support environment (Kulaksızoğlu, 2000). Not to forget it has been proposed that children develop within the context of the system of relationships that they form with their environment. Bronfenbrenner's ecological system theory, for example, defines the complex layers of the environment, each of which has an adverse impact on a child's development (Ryan, 2001). This theory has however been renamed in recent times as "bioecological systems theory" in order to emphasize that a child's own biology is the primary environment reinforcing their development (Ryan, 2001). That is, a child is developed through an interaction between his immediate family and community environment, and the societal landscape. Therefore, changes and conflict in any of these ripples the total development of the child. To understand the totality of what influences adolescent smoking, we must therefore not only look at the child and his or her immediate environment such as the home, but also the interaction between the child and the broader environment.

As to whether there are significant discrepancies based on the perceived level of social support systems among types of high schools in Turkey, a study conducted by Mengi (2011), suggested that students from Vocational High Schools perceived higher teachers' social support compared to students from other schools. Whereas a study by Uyan (2014), suggested otherwise, as social support was perceived higher among students in Anatolian High School. Regardless of these findings, social support is important for high school students otherwise, lack of it especially on the part of weaker students could lead to clustering to engage in deviant behaviors for the clustering of adolescents has been a practice throughout adolescence. Not only do they tend to create and sustain friendships with adolescents with similar academic success (Huang, Soto,

Fujimoto, & Valente, 2014; Schaefer, Haas, & Bishop, 2012; Woolf, Potts, Patel, & MCManus, 2012), but also with others who have similar smoking habits (Go et al., 2012; Schaefer et al., 2012). This suggests that distress of any sort is capable of driving adolescents into deviant behaviors. Adolescents experience stress when they perceive that the demands of certain circumstances are greater than the resources available to address them (Kristensen, Schaefer, & Busnello, 2010). With time, this transforms itself into the feeling of a lack of accomplishment as the literature suggested a positive correlation between academic stress and perceived academic success and achievement.

If this is the case, it could be proposed that academic success, quality of peer, teacher-student relationships are potential risk factors worth investigating, but with an attempt to control the effect of the type of school adolescents attend. The justification behind this is that different types of schools have different norms, academic success criteria, and, most importantly, prescribed rules and regulations that govern peer and teacher-student relationships.

2.4.3 Social Risk Factors

When it comes to social risk factors that influence smoking among adolescents, smoking in groups is one of the widely cited risk factors and it continues to be the most predictable social risk factor that influences adolescent smoking (Hoffman, Sussman, Unger, and Valente, 2006; Derzon and Lipsey, 1999). Most precisely, the number of adolescent friends who are smokers (Joung, Han, Park, & Ryu, 2016; Scalici, & Schulz, 2017; Hoffman et al., 2006; Erbaydar et al., 2005; Tyas, & Pederson, 1998). However, findings regarding the magnitude of the risk and how this dynamic evolves differed widely. The most intriguing observations are that culture influence how much of an influence an adolescent have over their friends.

In a study by the University of Pennsylvania, (2017) with data from 16 collectivistic and individualistic countries, findings showed that adolescents in collectivistic culture are more likely to influence peers around them compared to those in an individualistic culture. In addition, it was also discovered that in most collectivist countries, adolescents who have smoking peers are 4.3 times more likely to start smoking than those who do not have smoking peers. By contrast, in most individualistic countries, peers were found to influence adolescent smoking but not to the same extent as reported in collectivistic countries. As a result of these insightful findings, along with

the persistent association of peer influence with adolescent smoking, past studies have reported a link between certain adolescent relationship dynamics and smoking. These relationship dynamics included peer friendship quality, social status, and best friends or partners' influence on smoking (Kobus, 2003; Ennett et al., 2008).

In Turkey, a study conducted by Ertas (2007) with data from the Global Youth Tobacco Survey (GYTS) obtained from 15197 youth reported that adolescent smoking is mostly influenced by exposure to parent, teacher, and peer smoking. However, little is known whether an adolescent's relationship with his or her teacher has an impact on smoking initiation or prevention (Erick, & Smith, 2013). Nonetheless, the social cognitive theory has long emphasized the significance of social influence and how learning is a dynamic and reciprocal interaction influenced by the environment (Bandura, 1986). Going by this theory, acceptance or approval of smoking attitudes by teachers, friends, and other key significant individuals around the school environment is likely to increase the likelihood of smoking. For this reason, schools have long been regarded as an important setting for the implementation of many smoking cessation programs (Reid, McNeill, Glynn, 1995; Das, et al., 2016).

With the majority of studies on teachers' influences on adolescent smoking focusing on their smoking status and how it influences adolescents to smoke (e.g., Roohafza et al., 2014; Zhang et al., 2014; Nikaj et al., 2016), it is equally essential to examine the relationships that exist between teachers and students and the role it plays in their smoking initiation.

2.4.4 Other Factors Influencing Adolescent Smoking

In several studies, findings have suggested a link between psychological factors and adolescent smoking. In China, a study showed that anxiety, hostility, and depressive symptoms were significant associated with the risk of lifetime smoking among adolescents in grade 11 from seven large Chinese cities (Weiss et al., 2008). Also, Harakeh, Scholte, de Vries, & Engels, (2006) found out that adolescents aged 13 – 17 in Holland with personality traits such as extraversion, agreeableness, conscientiousness, and emotional stability were all associated with adolescent smoking. However, no indication was found for birth order and its link to adolescent smoking. But other studies like that of Argys, Rees, Averett, & Witoonchart (2006)

suggest a link between birth order and general substance use, as middleborns and last borns were found to be prone to substance use compared to firstborns.

In Bernstein et al. (2014), certain aspects of hostility like aggressive responding were reported to be likely risk factors for early adolescent smoking. Moreover, in a study to investigate the association between alcohol and tobacco use, and physical aggression among aged 14 – 16 in Hungary, both alcohol use and smoking were additively found to be associated with physical aggression (Matuszka, Bácskai, Czobor, & Gerevich, 2017). The link between aggression and smoking, therefore, pinpoints the use of alcohol and tobacco by adolescents to further reinforce their aggressive behaviors. But the association has been found to vary largely based on sociocultural factors and gender (Mercado-Crespo, & Mbah, 2013). For instance, a study result among Korean adolescents shows that physical aggression was only associated with alcohol use among boys, and smoking among girls (Chun, J., & Chung, 2013). Whereas a study among adolescents in California found no differences between both genders as physical and relational aggression were found to predict subsequent alcohol use and smoking (Skara, et al., 2008).

Several research studies have also found pathways in which race and ethnicity influence adolescent smoking. To a large extent, most of these racial and ethnic patterns of smoking have all been linked to acculturation. With most being influenced by racial or ethnic discrimination, ethnic identity confusion, and conflicting cultural norms. Across adolescent immigrant groups in the US, smoking was found to have increased due to acculturation of the host ways of life and discrimination (Bethel, & Schenker, 2005; Cao et al., 2007).

2.4.5 Urban Environment and Adolescent Smoking

To the best of our knowledge, the vast majority of studies on geographical disparities in adolescent smoking have always compared adolescents within major cities. However, few studies in the international literature have compared adolescent smoking in urban and rural centers. One of such study was a study by (Idris et al., 2007). Regardless of age, the study found differences in smoking prevalence between urban and non-urban areas in six western European countries and reported that in urban areas, smoking was more prevalent compared to rural areas as a result of urbanization (Idris et al., 2007). Similarly, as a result of constant exposure to print and media advert on

tobacco, a study among adolescents aged 11 – 17 in the United States, suggested that exposure to tobacco advertisement in urban cities is a significant predictor of adolescent smoking (Pesko, & Robarts, 2017), even though tobacco advertising on television, magazine, and billboard are prohibited.

Contrary to this finding, after attesting to the fact that adolescent smoking in rural and urban areas has declined in recent years in the United States, reduction in adolescent smoking in rural areas were found to tail behind the reduction in urban areas (Ziller, Lenardson, Paluso, Talbot, and Daley (2019). To bolster this point, the Center for Behavioral Health Statistics and Quality (CBHSQ, 2016) observed that in 2016, smoking rates among rural adolescents were higher than those in urban areas. Most explanations for why adolescents in rural areas smoke more have always focused on the fact that tobacco products are easily accessible in those areas (Warren, Smalley, & Barefoot, 2015), and the fact that most tobacco prevention and cessation programs have always targeted youth in urban areas (Doogan et al., 2017).

2.6 Efforts and Achievement in Adolescent Smoking Prevention and Reduction

For several years, it was assumed that educating people about the dangers of smoking would be sufficient to create a sense of abstinence. Today, not only are the majority of smokers aware of the health risks associated with smoking, but they are also aware of the purchasing power parity it has on health care. This, along with other factors, has resulted in a massive global effort to improve tobacco control. Recent efforts by governments around the world, civil organizations, and the international community have resulted in a slight decrease in tobacco consumption. However, in countries with younger populations, smoking prevalence among such group continue to grow (Drope et al., 2018).

Despite the challenges, significant progress has been made in the fight against worldwide adolescent tobacco use in recent years. For example, graphic pack warnings are now in place throughout Europe, and statistics show that more than twice as many smokers were protected in 2015 (World Health Organization, 2017). Recent increases in tobacco taxes have also reduced smoking among global adolescents by up to 10% (World Health Organization, 2017). In India, given that more than 47% of current smokers planned to quit smoking (Global Adult Tobacco Survey India, 2010), a countrywide tobacco cessation program was launched in 2016. According to findings,

more than 40% of tobacco users called the quitline and signed up for a cessation program (Dutt, 2017). Similarly, due to the cessation program and other measures taken in India, the factsheets according to the Global Adult Tobacco Survey (GATS-2 India, 2017), also suggests that tobacco prevalence has declined drastically across all age group.

Currently, the burden of tobacco consumption and related health costs in Turkey has resulted in the implementation of massive legislative and regulatory measures to reduce tobacco use over the years. Within the umbrella of the Turkish government, the ministry of health, ministry of interior affairs, universities, and NGOs have worked together to constantly monitor the trends of tobacco use. As a result, smoking is prohibited in most public places, workplaces, while the advertisement and promotion of tobacco are constantly heavily regulated, and tobacco products are packed and well labeled with health warnings, and quit hotline information (WHO Report on Global Tobacco Epidemic, 2019).

2.7 Summary of Literature

A large part of the literature incorporates numerous factors such as family, social, personal, environmental, and other psychological that influence adolescent smoking. Within the family, shreds of evidence link smoking within the family, parental education and economic status, parent-child relationship qualities, parental supervision, and views on smoking as potential risk factors that could lead to adolescent smoking. All these risk factors are reported in international studies and studies within Turkey.

In recent times, gender has continuously been linked with adolescent smoking onset. Such differences suggest that boys are more likely to smoking compared to girls. However, such differences have greatly narrowed in recent times. Although in most societies, boys are still more likely than girls to smoke, but gender only influences the age of onset as boys are reported to start smoking during the early stage of adolescence while girls start smoking almost around late adolescence. In general, adolescents academic performance, class of friends, school engagement, social environment, type of school, access to tobacco products, subjective views of tobacco, stress, personality type, and family demographic factors such as living with a biological parent for foster

parents were all suggested by the literature as key critical risk factors that influence adolescents of all age to smoke.

Other parts of the literature suggest that adolescent smoking prevalence is still a major concern across many countries of the world, most especially among low-income countries and those with populations that are largely made up of young adults. Across Asia and Europe, the literature suggests a higher smoking prevalence among Turkish adolescents when compared to other countries. However, mainstream strategies have been put in place in an attempt to reduce adolescent smoking. For example, graphic pack warnings are now in place throughout Europe. In India and Turkey, quit-smoking hotlines are made available which seems to be helping, massive legislative and regulatory measures are currently in place in Turkey to reduces adolescent access to tobacco products. Some of these regulations include a smoking prohibition in most public places, workplaces, while the advertisement and promotion of tobacco are constantly heavily regulated, and tobacco products are packed and well labeled with health warnings.

CHAPTER III

METHODOLOGY

3.1 Introduction

A research methodology is a systematic way of solving a research problem (Kothari, 2004). It can be thought of as a science that studies how research is conducted. This chapter gives an introduction to the methodology used throughout the study to achieve all the objectives outlined in Chapter 1. The chapter is divided into five sections. The first three sections identify the data sources used and the rationales. Whereas the last two sections, however, consider variable definitions, and the relevant analysis performed to achieve the aims and objectives of the study.

3.2 Study Design

The arrangement of conditions that constitutes how data is collected and analyzed in a manner that aims at giving relevance to the research purpose is what is termed as a "research design". The research design is, therefore, the conceptual structure or the blueprint within which research is conducted (Kothari, 2004). The current study involved the analysis of a subset of a large cross-sectional archival survey data (A Questionnaire For High School Students On Cigarette-Alcohol-Substance Use) that was collected in 2018 among high school students in Bağcılar, Istanbul by the Bağcılar Guidance Research Center and Prof. Dr. Sefa Bulut. The instrument used in the data collection was designed by the faculty members of Ibn Haldun University departments of Guidance and Counseling. The general purpose of the data collection was to examine the number of smokers and alcohol users in Turkish high schools and to determine the prevalence rate and whether there is a relationship between gender and smoking and alcohol use. Other reasons included increasing awareness of adolescent smoking and alcohol use.

In general, archival data can be defined as any type of previously collected information that is used to answer questions about psychological phenomena (Jones, 2010).

Archival data are therefore used by scientists and researchers from different interdisciplinary fields, including those that are either closely related to or far from psychology (Jones, 2010). According to Jones (2010), the naïve may believe that using archival data means avoiding the steps and stress of data collection, but finding a data set and truly understanding and preparing it to serve the purpose of a study require immense amounts of inventiveness and time. The explanation for adopting the data set for this study is that it is readily available, it has a pre-established degree of validity and reliability that need not be re-examined and most significantly it contains variables that relate to the aims and objectives of the current study. In Kothari (2004), it was opined that once a secondary source of data is intended to be used for a study, its reliability must be ascertained, and this can be done by finding out 1) who collected the data, 2) what were the sources of data, 3) where it was collected, 4) what time was it collected, 5) was there any bias, 6) what level of accuracy was desired, and 7) was it achieved? All these important critical submissions were considered before settling on the use of the archival data.

3.3 The Questionnaire For High School Students On Cigarette-Alcohol-Substance Use

The development of the Questionnaire For High School Students On Cigarette-Alcohol-Substance Use was guided by a comprehensive review of empirical and theoretical studies in Turkey on adolescent smoking and alcohol use. It should also be noted that key details such as the definition of target respondents, methods of reaching target respondents, decisions on questions content, decisions on questions wording, and questions length were also given adequate importance before finally deciding on the survey form in order to meet the survey's objectives. On the definition of target respondents, the researchers decided to design the questionnaire to take into account key characteristics of high school students within the Turkish educational system.

Whereas the decision on question content, and lengths were guided by critically evaluating their contribution towards the research objectives. For example, no questions were included in the final form unless the data it gives is directly use in testing one or more hypotheses. In all the questionnaire consist of 55-items divided into 3 sections: demographic details, alcohol and cigarette use, and substance use. Only

demographic variables and variables that relate to adolescent smoking would be used for this research.

3.4 Sample

In the quest to select the ideal district and the high schools within the district from which to collect the data used in this study, the researchers used random sampling and purposive sampling. A random sampling method is a technique in which each sample has an equal chance of being selected. This sampling technique is intended to provide an unbiased representation of the entire population. A purposive sample, on the other hand, is a judgmental and selective sampling in which the researcher uses their discretion in selecting members of the population to partake in a survey. Furthermore, in a purposive sampling study, the researcher is expected to have foreknowledge of their study purpose in order to accurately select eligible participants.

For the data collection, the researchers first used purposive sampling to define the population of interest and the district from which to collect the data. Bağcılar was chosen for the study because the district constitutes one of the most prominent districts in Istanbul with the third-highest population. It is also located on the European side of Istanbul with a population of 720,000 people (Orak, & Solakoglu, 2017). Furthermore, previous studies on substance use in Istanbul suggest that the most predominant substance in use in Bağcılar district is cigarettes (Evcin, 2014). Whereas random sampling was used to select high schools within Bağcılar from which the data was collected. The central point behind this is to ensure that the data collected from the sample is a close match to that of the entire population. Therefore, all high schools in the study district had an equal chance of being selected

3.4.1 Demographic Characteristics of Sample

In total, the sample has 751 counts. From the total count of 751, 358 (47.7%) were male and 393 (52.3%) were female. On the distribution of sample based on school type, 251 (33.4%) were students from Anadolu high schools, 108 (14.4%) from Imam Hatip high schools, and 392 (52.2%) from Vocational high schools. In those schools, 159 (21.2%) were current smokers, 49 (6.5%) were former smokers (stopped) and 543 (72.3%) have never smoked. This low number of smokers in the study area may be a result of the fact that individuals turn to modify an aspect of their behavior upon the awareness of being observed (McCarney et al., 2007). With regards to the residents'

distribution of respondents, a large portion of them were residents of Bağcılar 553 (73.6%) and 198 (26.4%) being residents of districts outside Bağcılar. On age distribution, 9 (1.2%) were 17 years, 562 (74.8%) 18 years, 154 (20.5%) 19 years and 26 (3.5%) 20 years.

Table 3.4. 1 Characteristic of the sample (N= 751)

Characteristics	N	%
Sex		
Male	358	47.7
Female	393	52.3
School Type		
Anadolu	251	33.4
Imam Hatip	108	14.4
Vocational School	392	52.2
Smoking Status		
Yes	159	21.2
No	543	72.3
Stopped	49	6.5
Residents		
Bağcılar	553	73.6
Outside Bağcılar	198	26.4
Age		
17	9	1.2
18	562	74.8
19	154	20.5
20	26	3.5

3.5 Data Collection Procedures

Before the Questionnaire For High School Students On Cigarette-Alcohol-Substance use was used to collect data from the target respondents, ethical approval for the data collection was obtained from the appropriate authorities. The sample of school types (Anadolu, Imam Hatip, and Vocational Schools) from which data was collected from students was drawn randomly from all the available schools in Bağcılar**,** Istanbul. In

those selected schools, students' participation in the data collection was made voluntarily. Those interested in participation were presented with information and consent letters before being instructed to complete the questionnaire. Giesler (2005) believes that by using this method of data collection, students will not feel coerced to take part, and many could be reached. Students were equally informed and assured that their responses will be confidentially handled. For the purpose of confidentiality, they were all to fold and put their questionnaires into an envelope after responding to the questionnaire in such a way that no one could see their answers.

Student participates were deem eligible for inclusion in the data collection if they were between the ages of 16 – 20 years at the time of the survey. This age range was relevant because it constituted the age groups reported with immense use of substances in Turkey (see Drope et al., 2018; Golbasi et al., 2011). Moreover, the same age group would also allow for a massive representation of a large high school student sample. In all, a maximum sample size of 751 respondents was obtained from the data collection which represented close to 100% of the intended proposed sample size. This included 251 students from Anadolu high schools, 108 from Iman Hatip high schools, and 392 from Vocational high schools.

3.6 Variable Definition

For the current study, variables are classified as dependent, independent, and control variables. Adolescent smoking status (yes, no, or stopped) constituted the dependent variable, whereas the independent variables included: parent-child relationship, parental level of education, adolescent perception of academic success, gender, teacher-student relationship, and peer pressure.

Also, in the current study, school type was treated as a control variable because it is hypothesized that a relative relationship exists between child-parent relationship, parental level of education, adolescent perception of academic success, teacher-student relationship, peer pressure, and school type.

Table 3.6. 1 Variable Definitions

Variables	Variable Classification	Definition	Measurement
Child-mother relationship	Independent	How a child get along with his or her mother	Self-report survey questionnaire
Child-father relationship	Independent	How a child get along with his or her father	Self-report survey questionnaire
Educational level of mother	Independent	Educational achievement of mother	Self-report survey questionnaire
Educational level of father	Independent	Educational achievement of father	Self-report survey questionnaire
Perception of academic success	Independent	How an adolescent perceived his or her academic success	Self-report survey questionnaire
Teacher-student relationship	Independent	How a student get along with his or her teachers	Self-report survey questionnaire
Peer pressure	Independent	How a student get along with his or her friends in school	Self-report survey questionnaire
Gender	Independent	Male and female	Self-report survey questionnaire
Smoking Status	Dependent	Whether currently smoking, stopped or never smoked	Self-report survey questionnaire
School Type	Control	Anadolu, Imam Hatip or Vacational School	Self-report survey questionnaire

3.6 Analyses

All analyses for this study were conducted using SPSS version 26. First, a preliminary analysis was performed to determine whether the sample data was drawn from a normally distributed population. This then paved the way to adopt a nonparametric technique in the data analysis since the data were not normally distributed. Non-parametric techniques do not assume population parameters and therefore do not make use of the distribution parameters (Kothari, 2004). In other words, in non-parametric or distribution-free techniques, we do not assume that the data set is normally distributed or the mean score of all the distribution is a certain value.

In all, cross-tabulation, Spearman correlation, and chi-square (goodness of fit) tests were performed. Cross tabulation is a quantitative method for analyzing the relationship between multiple categorical variables. The purpose of the use of cross-tabulation is to compare variables by showing a table with classes of one variable as the rows and the others as columns (Pontius & Cheuk, 2006). Spearman correlation coefficient is a nonparametric distribution-free test that measures the strength of an association between variables. It was used because the study aimed at measuring the relationship between variables as well as since the Pearson correlation coefficient is undesirable due to the nature of the data. Similarly, the Chi-square goodness of fit test was also performed to check and decide whether the data values fit the idea of the study model.

CHAPTER IV

FINDINGS AND RESULTS

4.1 Introduction

This chapter presents the findings and the results in relation to the framework and the study questions. Therefore, the data generated and findings of the study were present in a way that answers the research hypothesis. Accordingly, it was divided into two broad sections: initial preliminary test and background information and findings of the study under the headings of the research hypothesis.

4.2 Normality Test

Normality tests are used to determine whether or not a data set is normally distributed. The assessment of the normality of the data is a prerequisite for the statistical test used in this current study. In both the Kolmogorov-Smirnov test as well as Shapiro-Wilk test, the null hypothesis is that the population is normally distributed. As a rule of thumb, thus, if the p-value is < 0.05, the null hypothesis is rejected. From the normality test below *(table 4.2.1)* both the Kolmogorov-Smirnov test and Shapiro-Wilk test results show evidence that all the data tested are not normally distributed as all have significance values less than .05.

Table 4.2.1 Tests of Normality

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
Variables	**Statistic**	**df**	**Sig.**	**Statistic**	**df**	**Sig.**
School Type	.337	751	.000	.708	751	.000
Education level of mother	.287	751	.000	.865	751	.000
Education level of father	.250	751	.000	.849	751	.000
Child-mother relationship	.323	751	.000	.703	751	.000

Table 4.2.2 Continued

Child-father relationship	.250	751	.000	.779	751	.000
Perception of academic success	.190	751	.000	.913	751	.000
Peer-relationship	.394	751	.000	.646	751	.000
Teacher-student relationship	.240	751	.000	.815	751	.000
Gender	.353	751	.000	.636	751	.000

a. Lilliefors Significance Correction

4.3 Nonparametric Correlation

The Spearman correlation coefficient is used to determine whether or not there is an association between variables by measuring the strength and direction of the association. From the correlation table *(Table 4.3.1)* above on the relationship between child-mother and adolescent smoking, no significant relationship was found between the two variables, rho = .036, n = 751, *p-value* =.331. However, a significant positive relationship was found between child-father relationship and smoking (rho = .148, n = 751, *p-value* =.000). On the effect of parental educational achievement and smoking, no significant relationship was found between the educational level of mother and adolescent smoking (rho = .013, n = 751, *p-value* =.714) likewise that of the father (rho = .044, n = 751, *p-value* =.223). As for the perception of academic success and adolescent smoking, a negative significant relationship was found between the two variables, rho = -.096, n = 751, *p-value* =.008. In the same vein, a negative significant relationship was also found between the teacher-student relationship and adolescent smoking (rho = -.134, n = 751, *p-value* =.000). Concerning peer pressure and adolescent smoking, a positive significant relationship was found between the two variables, rho = .094, n = 751, *p-value* =.010, whereas no significant relationship was found between gender and adolescent smoking (rho = -.071, n = 751, *p-value* =.053).

Table 4.3.1 Nonparametric Correlation Between Variables

Spearman's rho			Smoking Status
	School Type	Correlation Coefficient	-.010
		Sig. (2-tailed)	.777
		N	751
	Education level of mother	Correlation Coefficient	.013
		Sig. (2-tailed)	.714
		N	751
	Education level of father	Correlation Coefficient	.044
		Sig. (2-tailed)	.223
		N	751
	Child-mother relationship	Correlation Coefficient	.036
		Sig. (2-tailed)	.331
		N	751
	Child-father relationship	Correlation Coefficient	.148**
		Sig. (2-tailed)	.000
		N	751
	Perception of academic success	Correlation Coefficient	-.096**
		Sig. (2-tailed)	.008
		N	751
	Peer-relationship	Correlation Coefficient	.094**
		Sig. (2-tailed)	.010
		N	751
	Teacher-student relation	Correlation Coefficient	-.134**
		Sig. (2-tailed)	.000
		N	751
	Gender	Correlation Coefficient	-.071
		Sig. (2-tailed)	.053
		N	751

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

4.4 Hypothesis 1: There is no significant relationship between child-parent relationships and adolescent smoking.

This research hypothesis seeks to find out if the relationship quality between child-mother and child-father explains adolescent smoking. It is hypothesized that there is no significant relationship between child-parent relationships and adolescent smoking.

4.4.1 Child-Mother Relationship And Smoking

From the nonparametric correlation between variables *(Table 4.3.1)* above on the relationship between child-mother and adolescent smoking, no significant relationship was found between the two variables, rho = .036, n = 751, *p-value* =.331. It is hypothesized that there is no significant relationship between child-mother relationships and adolescent smoking. From the Chi-Square Test of Independence *(Table 4.4.1)* below with references to the school types, from a general perspective, there is a significant association between the child-mother relationship and adolescent smoking ($X^2(8) = 15.523$, $p = .50$). However, with importance to the school types, Anadolu high school ($X^2(8) = 12.423$, $p = .133$), Imam Hatip high school ($X^2(8) = 7.121$, $p = .524$), and Vocational high school ($X^2(8) = 17.744$, $p = .023$), suggest that at .05 significance level, there is an association between child-mother relationship and smoking in vocational high school, whereas no association was found between child-mother relationship and smoking in both Anadolu and Imam Hatip high school. Hence, we reject the hypothesis 'there is no significant relationship between child-mother relationship and adolescent smoking. However, this hypothesis is applicable when considering all schools as one irrespective of type.

Table 4.4.1 Child-Mother Relationship * Adolescent Smoking Chi-Square Test of Independence

Chi-Square Tests				
School Type		Value	df	Asymptotic Significance (2-sided)
Anadolu	Pearson Chi-Square	12.423[b]	8	.133
	Likelihood Ratio	11.033	8	.200
	Linear-by-Linear Association	6.678	1	.010
	N of Valid Cases	251		
Imam Hatip	Pearson Chi-Square	7.121[c]	8	.524
	Likelihood Ratio	5.933	8	.655
	Linear-by-Linear Association	2.822	1	.093
	N of Valid Cases	108		
Vocational high school	Pearson Chi-Square	17.744[d]	8	.023
	Likelihood Ratio	15.465	8	.051
	Linear-by-Linear Association	.000	1	.998
	N of Valid Cases	392		
Total	Pearson Chi-Square	15.523[a]	8	.050
	Likelihood Ratio	13.525	8	.095
	Linear-by-Linear Association	1.047	1	.306
	N of Valid Cases	751		

a. 5 cells (3.0%) have expected count less than 5.
b. 5 cells (3.3%) have expected count less than 5.
c. 11 cells (18.3%) have expected count less than 5.
d. 6 cells (9.0%) have expected count less than 5.

4.4.2 Child-Father Relationship And Smoking

From the nonparametric correlation between variables *(Table 4.3.1)* above between child-father and smoking, a positive relationship was found between the two variables, rho = .148, n = 751, *p-value* =.000. Moreover, from the Chi-Square Test of

Independence *(Table 4.4.2)* below, from a general perspective irrespective of school type, there is a significant association between child-father relationship and adolescent smoking ($X^2(8) = 62.777$, $p = .000$). Similarly, with reference to school type, Anadolu high school ($X^2(8) = 21.241$, $p = .007$), Imam Hatip high school ($X^2(8) = 30.965$, $p = .000$), and Vocational high school ($X^2(8) = 30.804$, $p = .000$), suggest that at .05 significance level, there is an association between child-father relationship and smoking in all the three school. Therefore, the hypothesis 'there is no significant relationship between child-father relationships and adolescent smoking' is rejected.

Table 4.4.2 Child-Father Relationship * Adolescent Smoking Chi-Square Test of Independence

Chi-Square Tests				
School Type		Value	df	Asymptotic Significance (2-sided)
Anadolu	Pearson Chi-Square	21.241[b]	8	.007
	Likelihood Ratio	20.551	8	.008
	Linear-by-Linear Association	9.509	1	.002
	N of Valid Cases	251		
Imam Hatip	Pearson Chi-Square	30.965[c]	8	.000
	Likelihood Ratio	28.735	8	.000
	Linear-by-Linear Association	4.350	1	.037
	N of Valid Cases	108		
Vocational high school	Pearson Chi-Square	30.804[d]	8	.000
	Likelihood Ratio	28.268	8	.000
	Linear-by-Linear Association	6.225	1	.013
	N of Valid Cases	392		
Total	Pearson Chi-Square	62.777[a]	8	.000
	Likelihood Ratio	57.545	8	.000
	Linear-by-Linear Association	18.759	1	.000
	N of Valid Cases	751		

a. 3 cells (5.0%) have expected count less than 5.
b. 7 cells (11.7%) have expected count less than 5.
c. 10 cells (15.7%) have expected count less than 5.
d. 4 cells (6.7%) have expected count less than 5.

4.5 Hypothesis 2: There is no significant relationship between high educational achievement of parents and adolescent smoking.

This research hypothesis aims to find out if the educational level of parents influences smoking. It is hypothesized that there is no significant relationship between the high educational achievement of parents and adolescent smoking.

4.5.1 Educational Level of Mother And Smoking

From the nonparametric correlation between variables *(Table 4.3.1)* above on the relationship between the educational level of mother and adolescent smoking, no significant relationship was found between the two variables, rho = .013, n = 751, *p-value* =.714. Similarly, from the Chi-Square Test of Independence *(Table 4.5.1)* below, irrespective of school type there is no evidence to suggest a significant association between the educational level of mother and adolescent smoking ($X^2(8) = 6.418$, $p = .600$). Moreover, concerning school types, Anadolu high school ($X^2(8) = 13.127$, $p = .108$), Imam Hatip high school ($X^2(8) = 12.075$, $p = .148$), and Vocational high school ($X^2(8) = 6.988$, $p = .538$), suggest that at .05 significance level, there is no evidence to suggest an association between the educational level of mother and adolescent smoking in all the three school type. Hence, we accept the hypothesis 'there is no significant relationship between the high educational achievement of mother and adolescent smoking'.

Table 4.5.1 Educational Achievement of Mother * Adolescent Smoking Chi-Square Test of Independence

Chi-Square Tests				
School Type		Value	df	Asymptotic Significance (2-sided)
Anadolu	Pearson Chi-Square	13.127[b]	8	.108
	Likelihood Ratio	12.323	8	.137
	Linear-by-Linear Association	.039	1	.843
	N of Valid Cases	251		
Imam Hatip	Pearson Chi-Square	12.075[c]	8	.148
	Likelihood Ratio	15.016	8	.059
	Linear-by-Linear Association	.126	1	.722
	N of Valid Cases	108		
Vocational high school	Pearson Chi-Square	6.988[d]	8	.538
	Likelihood Ratio	6.332	8	.610
	Linear-by-Linear Association	1.973	1	.160
	N of Valid Cases	392		
Total	Pearson Chi-Square	6.418[a]	8	.600
	Likelihood Ratio	6.087	8	.638
	Linear-by-Linear Association	.490	1	.484
	N of Valid Cases	751		

a. 3 cells (20.0%) have expected count less than 5.
b. 6 cells (19.0%) have expected count less than 5.
c. 10 cells (13.7%) have expected count less than 5.
d. 5 cells (16.3%) have expected count less than 5.

4.5.2 Educational Level of Father And Smoking

From the nonparametric correlation between variables *(Table 4.3.1)* on the relationship between the educational level of father and adolescent smoking, no significant relationship was found between the two variables, rho = .044, n = 751, *p-value* =.223. Similarly, from the Chi-Square Test of Independence *(Table 4.5.2)* below, irrespective

of school type, there is no evidence to suggest a significant association between the educational level of father and adolescent smoking ($X^2(8) = 3.747$, $p = .879$). Just as no enough evidence to suggest an association between the educational level of father and adolescent smoking in all the three schools, Anadolu high school ($X^2(8) = 3.261$, $p = .917$), Imam Hatip high school ($X^2(8) = 5.415$, $p = .712$), and Vocational high school ($X^2(8) = 4.117$, $p = .846$). Therefore, we accept the hypothesis 'there is no significant relationship between the high educational achievement of father and adolescent smoking'.

Table 4.5. 2 Educational Achievement of Father * Adolescent Smoking Chi-Square Test of Independence

Chi-Square Tests				
School Type		Value	df	Asymptotic Significance (2-sided)
Anadolu	Pearson Chi-Square	3.261[b]	8	.917
	Likelihood Ratio	3.199	8	.921
	Linear-by-Linear Association	.685	1	.408
	N of Valid Cases	251		
Imam Hatip	Pearson Chi-Square	5.415[c]	8	.712
	Likelihood Ratio	7.062	8	.530
	Linear-by-Linear Association	.851	1	.356
	N of Valid Cases	108		
Vocational high school	Pearson Chi-Square	4.117[d]	8	.846
	Likelihood Ratio	4.743	8	.785
	Linear-by-Linear Association	.411	1	.521
	N of Valid Cases	392		
Total	Pearson Chi-Square	3.747[a]	8	.879
	Likelihood Ratio	3.729	8	.881
	Linear-by-Linear Association	1.609	1	.205
	N of Valid Cases	751		

a. 3 cells (20.0%) have expected count less than 5.
b. 8 cells (17.0%) have expected count less than 5.
c. 9 cells (19.7%) have expected count less than 5.
d. 5 cells (13.3%) have expected count less than 5.

4.6 Hypothesis 3: There is no significant relationship between adolescent negative perception of level of academic success and adolescent smoking.

This research hypothesis seeks to find out whether the perception of academic success influences smoking. It is hypothesized that there is no significant relationship between adolescent negative perception of level of academic success and smoking.

From the nonparametric correlation between variables *(Table 4.3.1)* above on the relationship between the perception of academic success and adolescent smoking, a negative significant relationship was found between the two variables, rho = -.096, n = 751, *p-value* =.008. Similarly, from the Chi-Square Test of Independence *(Table 4.6.1)* below, irrespective of school type, there is significant evidence to suggest an association between perception of academic success and adolescent smoking ($X^2(8) = 21.335$ $p = .006$). However, with reference to school types, Anadolu high school ($X^2(8) = 8.570$, $p = .380$), Imam Hatip high school ($X^2(8) = 11.028$, $p = .200$), and Vocational high school ($X^2(8) = 21.483$, $p = .006$), suggest that at .05 significance level, only in vocational high school was there a significant association between perception of academic success and adolescent smoking. Thus, we reject the hypothesis that 'there is no significant relationship between adolescent negative perception of level of academic success and smoking'. This hypothesis is however applicable when all the school types are viewed as one and not applicable to Anadolu and Imam Hatip high schools when viewed separately.

Table 4.6. 1 Perception of Academic Success * Adolescent Smoking Chi-Square Test of Independence

Chi-Square Tests				
School Type		Value	df	Asymptotic Significance (2-sided)
Anadolu	Pearson Chi-Square	8.570[b]	8	.380
	Likelihood Ratio	9.416	8	.308
	Linear-by-Linear Association	2.248	1	.134
	N of Valid Cases	251		
Imam Hatip	Pearson Chi-Square	11.028[c]	8	.200
	Likelihood Ratio	9.887	8	.273
	Linear-by-Linear Association	2.132	1	.144
	N of Valid Cases	108		
Vocational high school	Pearson Chi-Square	21.483[d]	8	.006
	Likelihood Ratio	20.747	8	.008
	Linear-by-Linear Association	2.481	1	.115
	N of Valid Cases	392		
Total	Pearson Chi-Square	21.335[a]	8	.006
	Likelihood Ratio	20.343	8	.009
	Linear-by-Linear Association	6.593	1	.010
	N of Valid Cases	751		

a. 1 cells (6.7%) have expected count less than 5.
b. 5 cells (15.0%) have expected count less than 5.
c. 8 cells (19.0%) have expected count less than 5.
d. 2 cells (13.3%) have expected count less than 5.

4.7 Hypothesis 4: There is no significant relationship between negative teacher-student relationships and adolescent smoking.

This research hypothesis seeks to find out whether teacher-student relationships influence adolescent smoking. It is hypothesized that there is no significant relationship between negative teacher-student relationships and adolescent smoking.

From the nonparametric correlation between variables *(Table 4.3.1)* above on the relationship between teacher-student relationship and adolescent smoking, a negative significant relationship was found between the two variables, rho = -.134, n = 751, *p-value* =.000. Similarly, from the Chi-Square Test of Independence *(Table 4.7.1)* below, irrespective of school type, there is evidence to suggest a significant association between teacher-student relationship adolescent smoking ($X^2(8) = 26.036$, $p = .001$). However, with reference to the school type, Anadolu high school ($X^2(8) = 8.628$, $p = .375$), Imam Hatip high school ($X^2(8) = 28.241$, $p = .000$), and Vocational high school ($X^2(8) = 12.197$, $p = .143$), suggest that at .05 significance level, only in Imam Hatip was there a significant association between teacher-student relationship and adolescent smoking. Hence, we reject the hypothesis that 'there is no significant relationship between negative teacher-student relationships and adolescent smoking'. This is however applicable when all the school types are considered as one and not applicable when considered separately as the hypothesis does not apply to Anadolu and Vocational high schools.

Table 4.7.1 Teacher-Student Relationship * Adolescent Smoking Chi-Square Test of Independence

Chi-Square Tests				
School Type		Value	df	Asymptotic Significance (2-sided)
Anadolu	Pearson Chi-Square	8.628[b]	8	.375
	Likelihood Ratio	8.172	8	.417
	Linear-by-Linear Association	5.649	1	.017
	N of Valid Cases	251		
Imam Hatip	Pearson Chi-Square	28.241[c]	8	.000
	Likelihood Ratio	25.815	8	.001
	Linear-by-Linear Association	4.059	1	.044
	N of Valid Cases	108		
Vocational high school	Pearson Chi-Square	12.197[d]	8	.143
	Likelihood Ratio	12.162	8	.144
	Linear-by-Linear Association	4.106	1	.043
	N of Valid Cases	392		
Total	Pearson Chi-Square	26.036[a]	8	.001
	Likelihood Ratio	25.363	8	.001
	Linear-by-Linear Association	12.636	1	.000
	N of Valid Cases	751		

a. 1 cells (6.7%) have expected count less than 5.
b. 5 cells (16.0%) have expected count less than 5.
c. 8 cells (20.0%) have expected count less than 5.
d. 3 cells (20.0%) have expected count less than 5.

4.8 Hypothesis 5: There is no significant relationship between negative adolescent peer relationships and adolescent smoking.

This research hypothesis seeks to find out whether peer pressure influences smoking. It is hypothesized that there is no significant relationship between negative adolescent

peer relationships and smoking. From the nonparametric correlation between variables (**Table 4.3.1)** above on the relationship between peer pressure and adolescent smoking, a positive significant relationship was found between the two variables, rho = .094, n = 751, *p-value* =.010. Similarly, from the Chi-Square Test of Independence *(Table 4.8.1)* below, irrespective of school type, there is evidence to suggest a significant association between peer pressure and adolescent smoking ($X^2(8) = 15.614$, $p = .048$). However, with reference to the school type, Anadolu high school ($X^2(8) = 19.284$, $p = .013$), Imam Hatip high school ($X^2(8) = 6.632$, $p = .577$), and Vocational high school ($X^2(8) = 5.587$, $p = .692$), suggest that at .05 significance level, only in Anadolu was there a significant association between peer pressure and adolescent smoking. Therefore, we reject the hypothesis that 'there is no significant relationship between negative adolescent peer relationships and smoking'. This is however applicable when we consider all the school types as one but not when we consider them separately.

Table 4.8. 1 Peer Pressure * Adolescent Smoking Chi-Square Test of Independence

Chi-Square Tests				
School Type		Value	df	Asymptotic Significance (2-sided)
Anadolu	Pearson Chi-Square	19.284[b]	8	.013
	Likelihood Ratio	13.851	8	.086
	Linear-by-Linear Association	4.416	1	.036
	N of Valid Cases	251		
Imam Hatip	Pearson Chi-Square	6.632[c]	8	.577
	Likelihood Ratio	8.326	8	.402
	Linear-by-Linear Association	2.380	1	.123
	N of Valid Cases	108		
Vocational high school	Pearson Chi-Square	5.587[d]	8	.693
	Likelihood Ratio	8.652	8	.373
	Linear-by-Linear Association	2.265	1	.132
	N of Valid Cases	392		
Total	Pearson Chi-Square	15.614[a]	8	.048
	Likelihood Ratio	19.215	8	.014
	Linear-by-Linear Association	8.083	1	.004
	N of Valid Cases	751		

a. 3 cells (20.0%) have expected count less than 5.
b. 6 cells (19.0%) have expected count less than 5.
c. 11 cells (20.0%) have expected count less than 5.
d. 6 cells (9.0%) have expected count less than 5.

4.9 Hypothesis 6: There is no significant relationship between gender and adolescent smoking.

This research hypothesis seeks to find out whether gender influences smoking. It is hypothesized that there is no significant relationship between gender and adolescent smoking. From the nonparametric correlation between variables *(Table 4.3.1)* above

on the relationship between gender and adolescent smoking, no significant relationship was found between the two variables, rho = -.071, n = 751, *p-value* =.053. However, from the chi-square test of independence *(Table 4.9.1)* below, irrespective of school type there is evidence to suggest a significant association between gender and adolescent smoking ($X^2(8) = 7.162$, $p = .028$). But with reference to school type, Anadolu high school ($X^2(8) = 3.263$, $p = .196$), Imam Hatip high school ($X^2(8) = 12.963$, $p = .002$), and Vocational high school ($X^2(8) = .344$, $p = .842$), suggest that at .05 significance level, only in Imam Hatip was there a significant association between gender and adolescent smoking. Hence, going by the chi-square test of independence result, we reject the hypothesis that 'there is no significant relationship between gender and adolescent smoking'. However, this hypothesis is only applicable when all the school types are viewed as one and in Iman Hatip high schools.

Table 4.9.1 Gender * Adolescent Smoking Chi-Square Test of Independence

Chi-Square Tests				
School Type		Value	df	Asymptotic Significance (2-sided)
Anadolu	Pearson Chi-Square	3.263[b]	2	.196
	Likelihood Ratio	3.266	2	.195
	Linear-by-Linear Association	1.290	1	.256
	N of Valid Cases	251		
Imam Hatip	Pearson Chi-Square	12.963[c]	2	.002
	Likelihood Ratio	14.617	2	.001
	Linear-by-Linear Association	6.159	1	.013
	N of Valid Cases	108		
Vocational high school	Pearson Chi-Square	.344[d]	2	.842
	Likelihood Ratio	.343	2	.842
	Linear-by-Linear Association	.198	1	.656
	N of Valid Cases	392		
Total	Pearson Chi-Square	7.162[a]	2	.028
	Likelihood Ratio	7.165	2	.028
	Linear-by-Linear Association	3.293	1	.070
	N of Valid Cases	751		

a. 0 cells (0.0%) have expected count less than 5.
b. 0 cells (0.0%) have expected count less than 5.
c. 2 cells (20.0%) have expected count less than 5.
d. 0 cells (0.0%) have expected count less than 5.

4.10 Model Summary for Adolescent Smoking

The Chi-Square Goodness of Fit Test was performed to find out whether the data set fit the described and proposed model in the current study. From the Chi-Square Goodness of Fit *(Table 4.10.1)* below, to understand the risk factors associated with adolescent smoking, a researcher needs to consider all the variables in the model except gender. Gender is the only non-significant variable in determining adolescent smoking. In short, you being a male or female has nothing to do with your smoking tendency. However, the educational level of your parents, the kind of relationship adolescents share with their parents, their perception of academic success, and the kind of relationship they share with their teacher have a lot of influence on their smoking behavior.

Table 4.10.1 Model Summary For Adolescent Smoking Chi-Square Goodness of Fit Test

Test Statistics			
	Chi-Square	df	Asymp. Sig.
School Type	161.100[a]	2	.000
Education level of mother	486.916[b]	4	.000
Education level of father	428.980[b]	4	.000
Smoking Status	537.406[a]	2	.000
Child-mother relationship	821.403[b]	4	.000
Child-father relationship	444.133[b]	4	.000
Perception of academic success	199.033[b]	4	.000
Peer pressure	1074.080[b]	4	.000
Teacher-Student relationship	274.120[b]	4	.000
Gender	1.631[c]	1	.202

a. 0 cells (.0%) have expected frequencies less than 5. The minimum expected cell frequency is 250.3
b. 0 cells (.0%) have expected frequencies less than 5. The minimum expected cell frequency is 150.2
c. 0 cells (.0%) have expected frequencies less than 5. The minimum expected cell frequency is 375.5

4.11 Summary of Findings on Adolescent Smoking

From the Summary of findings on Adolescent Smoking *(Table 4.11.1)* below, all the actual findings of the study supported the expected outcomes according to the literature except on child-parental relationship and adolescent smoking and gender. Precisely, no significant relationship was found between child-mother relationship and adolescent smoking, same as the influence of parental educational achievement and adolescent smoking. However, on child-father relationships, negative perception of level of academic success, negative teacher-student relationships, negative adolescent peer relationships, and gender, a significant relationship was found between these variables and adolescent smoking.

Table 4.11.1 Summary of Findings On Adolescent Smoking

Hypothesis	Expected Outcome	Actual Outcome	Approval or Disapproval
There is no significant relationship between child-mother relationships and adolescent smoking.	_	+	Not Supported
There is no significant relationship between child-father relationships and adolescent smoking.	+	_	Not Supported
There is no significant relationship between the high educational achievement of mothers and adolescent smoking.	+	+	Supported
There is no significant relationship between the high educational achievement of fathers and adolescent smoking.	+	+	Supported

Table 4.11.2 Continued

There is no significant relationship between Adolescent negative perception of the level of academic success and smoking.	_	_	**Supported**
There is no significant relationship between negative teacher-student relationships and smoking.	_	_	Supported
There is no significant relationship between Negative adolescent peer relationships and smoking.	_	_	Supported
There is no significant relationship between gender and adolescent smoking.	+	_	Not Supported

CHAPTER V

DISCUSSION OF FINDINGS, AND CONCLUSION

This chapter discusses the major findings reported in Chapter four concerning the risk factors that predict adolescent smoking. To provide possible explanations for the study's findings, the discussion also draws on the literature reviewed in chapter two, as well as knowledge from other relevant areas and studies. Furthermore, the chapter concludes by considering the limitation, and the implications of the study's findings and suggests possible ways in curbing adolescent smoking in the study area.

5.1 Major Findings: Risk Factors In Adolescent Smoking

5.1.1 There is no significant relationship between child-parent relationships and adolescent smoking.

The findings of this study on child-parent relationships and how they influence adolescent smoking behavior revealed that both the quality of child-mother relationships and the quality of child-father relationships is a risk factor that could predict adolescent smoking. More precisely, on child-father relationships and adolescent smoking, the relationship was found to be positive. Meaning as the relationship between a child and father becomes cordial or warm, an adolescent is more likely to smoke compared to situations whereby the two struggle to get along. As to how child-parent relationships predicted adolescent smoking in the three types of schools, an association was found between child-mother relationships and adolescents in only Turkish Vocational High Schools. However, regardless of school types, an association was found between child-father relationships and adolescent smoking in all three types of schools.

These findings extensively show how relationships within the family affect children, in particular, the extent to which how negative or positive child-parent relationship is linked to children behavior outcomes. As to why child-parent relationship predicts adolescent smoking in Turkey, the explanation may be to the importance of family in the Turkish culture. In the context of family formation and parent-child relationships, particularly in the training of children in Turkey, parents play a central and crucial role in the life of any young Turkish. Usually, the Turkish family is typically characterized

by role differences. The father is the head of the family and his instructions and orders are often not discussed, and at the same time, he is expected to represent the family in front of other families. As for mothers, their roles are to support, respect, and obey their husbands as well as do housework and parenting. For that reason, according to Fethiye (2021), the honor of the man and his family which includes the child in Turkey is dependent on how the woman behaves and watches over the house. This is because the physical care of all members of the family largely demands on the woman. In terms of child-parent relationships, the Turkish family social context is based on close ties and interdependence instead of individualism. For example, most adolescents (60.9 %) over the age of 18 in Turkey continue to live in the same homes with their parents, which is widely accepted (Palut, 2009). In a similar vein, Mocan-Aydin (2000) supported the viewpoint by stating that in the Turkish family system, the emotional dependency of children is typically urged and it is perceived as being a good son or daughter. This implies that emotional relatedness and conformity are common expectations of parents from their children in Turkey. Moreover, as fathers are expected to make restrictive rules as well as outline accepted and unaccepted behaviors for children to follow, failure in this regard by maintaining an over-friendly relationship with children is likely to lead to substance use as children may end up over-relying on friends for rules and orders. On the path of mothers, as there is often a greater intimate relationship between mothers and children compared to fathers and children, the failures of mothers to provide supportive environments in situations where fathers are overly authoritative with their strict rules may contribute to children's struggles in obeying and abiding by rules, which may eventually to lead to substance use in order to overcome parental stress.

When comparing this study's findings with other studies, in a previous study of students from Trabzon's Science high schools, Anatolian high schools, Technical schools, and Normal programmed schools, nonsmokers' perceptions of family control and unity-solidarity were found to be higher than smokers' (Yazici, 2008). Meaning smoking attitudes of adolescents are brought to light by the relationship they share with their parents. Furthermore, other studies conducted among college students in Turkey have uncovered a link between a lack of family support and adolescent smoking. To be more specific, among Trakya University's Faculty of Health Sciences students in Edirne, the finding of the study suggested a link between lack of family

support and smoking (Semerci et al., 2018). Whereas a more recent study in Ankara, on the other hand also emphasized how parental democratic attitudes protect against adolescent smoking behaviors especially among school-aged children (Oztekin et al., 2021).

All these findings among studies in Turkey further buttresses other international studies that established that family relationship quality such as positive parental monitoring and support, joint child-parent activities and closeness, and the use of positive reinforcement are important factors in preventing adolescent smoking initiation (e.g Skinner, Haggerty, & Catalano, 2009; Darling and Cumsille 2003). In a study with Native American, African American, and Asian American students in the United States, strict family monitoring and strong family bonding reduced the risk of daily smoking among adolescents aged 10 to 21 (Hill et al., 2005). Besides in Darling and Cumsille (2003), permissive family expectations regarding substance use were also reported as significant determinants in early adolescent smoking.

5.1.2 There is no significant relationship between high educational achievement of parents and adolescent smoking.

Generally, even though parents' social status is an important factor associated with negative adolescent behaviors, results on the relationship between the parental level of education and adolescent smoking show that parental level of education is not a predictive factor in determining adolescent smoking in the study area. Specifically, regardless of the type of school adolescents' attention, their smoking behavior is never a determinant of how formally educated or uneducated their parents are. These insightful findings may be a reflection of the fact that Turkey has a literacy rate of 94.1 among those aged 15 and above from 1985 – 1994 (UNESCO, 2013). Thus, the parents of those adolescents in the study may fall among those captured with higher literacy rates between 1985 – 1994. This further implies that parental level of education is not an idea predictive factor in determining adolescent smoking among populations with higher literacy rates.

However, these findings are contrary to other previous studies that found a link between the parental level of education and adolescents smoking in Turkey. According to the findings of a study conducted by Bülbül and Odaci (2018) to examine substance abuse among students attending various high schools in Turkey's Black Sea region,

adolescents' tendency to use substances is worsened by their parents' social and economic situation. This may be that those parents in question were over-reliant on their work-life, and as a result neglect the emotional support and guidance their children need to form healthy habits. In addition, the study of Kaya, and Ünalan, (2010) attest that smoking among Turkish adolescents at least once during adolescence is related to the low education level of parents, whereas boys with lower educated mothers were found to smoke compared to other boys with higher educated mothers. While on girls, those with higher-level educated mothers were reported to be likely to smoke compared to those with lower educated mothers (Erbaydar, 2005). One plausible explanation for this finding is that educated mothers may smoke in front of their daughters, causing those daughters to imitate and replicate those lifestyles in their absence. In Žaloudíková et al., (2012), a study in the Czech Republic among adolescents also reported a link between parental educational attainment and adolescent smoking. But the study never specified if the link between the educational achievement of parents and adolescent smoking was positive or negative. Contrary to findings in support of the link between parental educational level and adolescent smoking, a study conducted by Kuntz, and Lampert (2013) in Germany to examine the role of parental educational difference on adolescent smoking, the finding revealed that the risk of adolescent smoking is influenced by their own educational level rather than that of their parents. Similarly, in Norwegian (Kvaavik et al., 2012) and the Netherlands (Huisman et al., 2012) to compare the influence of parental educational attainment and adolescent educational achievement on adolescent smoking, the result revealed that parental educational status seems to be less strongly linked to adolescent smoking. But past studies in Turkey seems to find a link between the educational level of parents and adolescent smoking. However, the impact of this link largely depends on gender, as low mother education is an ideal predictor of the boy child's smoking habits, whereas high education attainment of mothers predicts the tendencies of the girl child to use tobacco. This implies that as the educational outcomes of women are improving in many parts of the world including Turkey, smoking among adolescent girls in Turkey is expected to surpass that of boys in the near future.

5.1.3 There is no significant relationship between adolescent negative perception of level of academic success and adolescent smoking.

The understanding of negative perceptions of academic success and how they influence behaviors is that they evolve gradually, eventually leading to maladaptive behaviors. Emanating from the study findings, a negative relationship was found between perceptions of academic success and smoking. This means that low academic performing adolescents, or those who believe they are performing poorly academically, are more likely to smoke than high academic performing adolescents. This result is a further reflection of past follow-up studies in Turkey that emphasized the relationship between academic performance and adolescent smoking. For instance, in Babaoglu et al., (2017) study with Ahi Evran University College students, and Yorulmaz et al., (2002) study with middle and high school students in Edirne found that weak academic performing students have higher tendencies to smoke compared to those with good academic grades. Karaçam and Totan (2014), as well as Yalçın et al., (2009), stated that high academic achieving students avoid smoking or smoke less than low academic achieving students. On the effort of school type and how it influences academic success and smoking, the current study revealed that among adolescents attending Anadolu, Imam Hatip and Vocational high schools, those attending Vocational high schools are at risk of smoking due to their academic success compared to others. In another way, perception of academic success was found to predict adolescent smoking only in Vocational high schools but not in Anadolu or Imam Hatip high schools.

This demonstrates the effects of school structures, curriculum, academic performance, and grading of students in all these school types, as Anadolu high schools are mostly graded higher followed by Imam Hatip high schools and vocational high schools. Meaning students in Anadolu high schools are more likely to perceive themselves as high academic achievers compared to their mates in Imam Hatip high schools and Vocational high schools. In a comparison of smoking prevalence in these schools, a study in Düzce found that the prevalence of smoking was 1.951 times higher in girls' vocational high school than those in Anatolian high schools (Akkuş et al., 2017). Furthermore, among middle- and high-school students in Ankara, school type was reported to affect the smoking behavior of students in general (Özcan, & Özcan, 2002)

as being in Anatolian high schools decreases the likelihood of smoking by 0.38 times, compared to other schools.

5.1.4 There is no significant relationship between negative teacher-student relationships and adolescent smoking.

Students' relationships with teachers have positive and long-lasting implications for both academic performance and behavior development. Besides, students with close and supportive relationships with their teachers outperform those with conflicting relationships with their teachers in terms of academic achievement and avoidance of negative behaviors. In line with this, the current study found a negative significant relationship between teacher-student relationships and adolescent smoking. More precisely, how conflicting such a relationship is adequately predicts smoking behaviors of adolescents. In other past studies in Turkey, Can et al., (2009) study's among high school students in Trabzon emphasized the importance of students developing better relationships with teachers and parents in order to protect them from smoking. Similarly, a systematic review examining the hypothesis that schools contribute to adolescent smoking reports that school disengagement due to several reasons surrounding poor teacher-student relationships contributes to adolescents smoking (Fletcher, 2008). This is because of the influence teachers have on students' behavior development, teachers can help prevent adolescents from smoking through the maintenance of a supportive school environment, reinforcement of school rules on smoking, and developing personal interest in students who smoke (Roohafza et al., 2014).

Despite the importance of teachers maintaining a supportive relationship with their students in order to prevent smoking, it is also important to understand that a positive and supportive relationship between a teacher and a student can lead to adolescents smoking, especially if the teacher smokes. Teachers' attitudes toward smoking influence students' perceptions of smoking and may play an important role in controlling adolescent smoking (Rakete et al., 2010). In Turkey, a study conducted by Ertas (2007) with data from the Global Youth Tobacco Survey (GYTS) obtained from 15197 youths reported that adolescent smoking is mostly influenced by exposure to parent, teacher, and peer smoking. Within the present study, findings on teacher-student relationships and how they influence adolescent smoking in the different

school types show that teacher-student relationship is likely to influence adolescent smoking in Imam Hatip than Anadolu and Vocational high schools. The possible explanation for this may be that students in Imam Hatip high schools are expected to meet their teachers' emotional, academic, and religious expectations. Thus, falling short in these expectations may leads to maladaptive smoking behaviors. Moreover, students in those schools are more likely to lack teachers' social support. On this, the study of Mengi (2011) in Turkey, suggested that students from Vocational high schools perceived higher teachers' social support compared to students from other schools. Whereas a study by Uyan (2014) in Turkey suggested otherwise, as social support was perceived higher among students in Anatolian High School compared to other schools. This means that students at Imam Hatip High School do not receive emotional or social support from their teachers. To bolster this point, according to the findings of a qualitative study titled "A Qualitative Research on the Problems and Expectations of Imam Hatip Secondary School Students (The Case of Istanbul Province)," the main expectation of students attending Iman Hatip high schools is to receive emotional support from their teachers (Ahmet, 2020). More specifically, they expect their teachers to be more interested in their affairs, as well as school administrators being less hostile toward them.

5.1.5 There is no significant relationship between Negative adolescent peer relationships and adolescent smoking.

The quality of friendships that adolescents share with other peers is central to their smoking behaviors. Most often, adolescents' smoking habits are influenced in various ways by their peers' smoking habits. These ways may be due to others smoking, struggling to get along with peer relationships, and the expectations of such relationships. From this perspective, the findings of this study support other previous studies that found a link between peer relationships and adolescent smoking. For example, a study to evaluate the role of perceived social competence on youth smoking in Edirne, Turkey (Semerci et al., 2018). In that study, the findings revealed that most students started smoking due to peer pressure, and stress. Also, Karaçam and Totan's (2014) study in Turkey among university students reported that students smoke when they feel insecure, lonely, or angry with their social relationships with their peers. In most cases, peer pressure makes adolescents feel as if they are being pulled in a direction that is difficult to resist. On that note, Mpousiou et al., (2018) study among

high school students in Athens supported the idea that there is an association between the day that adolescents smoke more and the quality of friendship and attitude they receive from their friends during that period.

Note to forget the direction of the relationship found in the current study between peer pressure and adolescent smoking was positive. This implies that adolescents are more likely to smoke when they share a high interpersonal closeness or relationships with other peers. One reason could be that in peer groups, the emphasis is placed on group goals rather than individual needs. That is, in order for a nonsmoker to maintain a relationship with a group of smokers, he or she must accept the group smoking behaviors or risk losing the opportunity to be a part of the group.

Furthermore, the current study discovered that peer pressure influences the smoking habits of students in Anadolu high schools compared to those in Imam Hatip and Vocational high schools. This could be due to the characteristics nature and the academic competitive relationship among students in those schools as the schools and the students in those schools are considered as the best in Turkey. First and foremost, Anadolu High Schools are designed to prepare students for higher education based on their abilities, achievements, and interests, as well as to learn foreign languages that can lead to scientific research and innovation. Moreover, the schools are often regarded as the schools with the highest number of graduates entering Turkish universities. In this direction there is a perception that vocational schools are not preferred by successful or brilliant students (Demir, 2017), while Imam Hatip schools are mostly preferred by students with strong religious backgrounds. It, therefore, makes sense to assume that in situations where there is academic competition among students, such as Anadolu high schools, there is the possibility for psychological bullying, and this implies that students that are victims of bullying are more likely to use substances with the belief of overcoming the stress of bullying. As such according to the Organization for Economic Co-operation and Development (OECD) Programme for International Student Assessment (PISA) 2018, students in multi-program Anadolu and vocational high schools in Turkey are more prone to be bullied than students in other school types and other OECD countries (Ölmez, 2021).

5.1.6 There is no significant relationship between gender and adolescent smoking.

Concerning gender, past local and international studies, have supported the idea that gender influences adolescent smoking (eg, Global Youth Tabacco Survey Collaborative Group, 2002). Furthermore, in a study with 755 adolescents aged 14 – 19 years from New Jersey, West Virginia, North Carolina, Florida, and Wisconsin, Branstetter et al. (2012) discovered that male adolescents have lower withdrawal desires and are less likely to quit smoking in situations where their friends smoke. In Turkey, a study with 1082 students at a university in central Turkey's Health School and Physical Education and Sports School found that the prevalence of smoking among adolescents was related to sex, classroom, grade, and age (Babaoglu et al., 2017). While Talay and Altin's (2008) study in Eyup, Istanbul to determine the influence of smoking habits and education of family, parents, type of school, and gender on adolescent smoking discovered that smoking is more prevalent among boys than girls. In all the above studies, boys were found to smoke more or to have a greater proclivity to smoke than girls. The study findings also attest gender influences adolescent smoking.

This fact demonstrates gender sensitivity in terms of factors that influence adolescent smoking. Mostly, factors that motivate smoking differs for both genders. Smoking habits among girls are mostly influenced by tobacco marketing, globalization, and urbanization (Kilic & Ozturk, 2014), while boys may be mostly influenced by peer pressure and the belief that smoking helps to overcome stress. In those schools under the present study, gender was only found to influence adolescent smoking in Imam Hatip high school compared to Anadolu and Vocational high schools. This implies that gender plays a significant role in influencing adolescents smoking in Imam Hatip high schools compared to Anadolu high school and Vocation high schools. That is being a male or female in Imam Hatip increases your chances of smoking compared to Anadolu and Vocational high schools. This finding contradicts Talay and Altin (2008) that found a large gender disparity among adolescent smokers in vocational high schools compare to others school types in Turkey. To a large extent, the finding of the present study as to why gender influences adolescent smoking in Imam Hatip reflects the cultural diversity in those schools. Students in Anadolu and Vocational are expected to be open to mingling with other opposite-sex friends and teachers, whereas

students in Imam Hatip may be restricted from benefiting from such relationships due to religious considerations. Thus, when their same-sex friends and teacher are unable to assist them in stressful situations, this may lead them to smoke.

5.2 Conclusion and Recommendation

The aforementioned findings and discussion on risk factors that predict adolescent smoking provide a comprehensive understanding of risk factors that should be considered when addressing adolescent smoking behaviors. Clearly, this thesis revealed that there is an association between certain family, social and personal factors and adolescent smoking. Mostly, child-mother relationships were found to predict adolescent smoking, especially among students attending Turkish Vocational high schools. Whereas irrespective of the school adolescents attend child-father relationships is a risk that that leads to smoking during adolescence. The implication of this is that the family environment has a significant influence on the development of healthy adolescent behaviors. It is therefore critical for parents to maintain supportive connectedness, cohesive family relationships with their children, as well a parenting style that promotes the development of desired adolescent social behaviors. Maintaining supportive family connectedness in some way is typical of the traditional Turkish family system, as families are defined by group ties, loyalty, interdependence, and accountability. Even in some families, parental goals include nurturing children with the expectation that they will care for them when they are older.

However, recent narratives have indicated a shift in which parents are putting more effort into nurturing their children. Turkish parents' socialization goals in big cities in recent times have shifted in accordance with their educational background and social status. High-educated or well-to-do parents continue to value their children's autonomy, whereas low-educated parents value interdependence and obedience. This implies that well-to-do or well-educated families are more likely to leave critical child decisions on their children's weak shoulders, and as a result, these children are more likely to rely on friends for modeling of behaviors. Therefore, this is a call for parents to make effort to balance their social status demand and the demand for nurturing children in order to raise children who are not addicted to substances. Moreover, in the event that parents notice the use of substances by their adolescents, it is essential for

them to monitor the relationships and emotional support they provide to these children, as well as the kind of friends with whom they socialize.

As shown above in the result and discussion section, parental level of education has no place in determining the smoking behaviors of adolescents. However, family is proclaimed as the first clique of belonging for adolescents where they develop knowledge, values, and norms surrounding behaviors. Similarly, it is widely acknowledged that parents have a possibly strong influence on their children's smoking decisions, and as such, they are crucial in adolescent smoking prevention. In this regard, approaches to rearing children such as adequately and timely educating them on behavior and habitual consequences could be a potential means of curbing smoking. This education can only be possible when parents are well informed with regards to the consequences associated with smoking at a younger age as well as how addictive smoking can be.

Within schools and how academic performance influences adolescent smoking, it is of interest that the findings surrounding these variables suggest that relationships exist between peer relationships, academic success, teacher-student relationships, and adolescent smoking. As such, it is relevant that teachers and educators understand the advantages of maintaining a calm, peaceful and supportive school environment, which will assist students in maintaining beneficial relationships with their peers and teachers, as such relationships manifest in improving academic performance. With regards to those smoking, schools continue to be the ideal settings in which adolescent smoking onset can be stopped or postponed. This can only be done when interventions programs target risk factors that lead to adolescent smoking in a way that brings together all the related elements of the risk factors. To be much more potent, such school-based programs should reach out to adolescents before they start smoking. For that will offer an opportunity to stop the initiation instead of making efforts to stop being addicted to smoking.

5.3 Limitation

The purpose of this thesis was to examine the risk factors that predicted adolescent smoking in Turkey. This has been accomplished by concentrating on the main variables of interest in this study. However, this study has some limitations that relate to the data set, the variables considered and the statistical method used. For example, the study did not consider all the available variables that fall under the risk factors that the study aimed. It is, therefore, possible that other factors may better explain the reasons why adolescents smoke than the once considered. Moreover, the data used in the study were collected to elicit a comprehensive understanding regarding adolescent alcohol, cigarette, and substance use. Therefore, it would have been enriching if the present study took a broader scope in examining the risk factors that predict smoking, alcohol, and substance use. This, we believe, would have aided policymakers in comprehending the scope of delinquent behavior among Turkish adolescents, as well as social workers interested in addressing adolescent smoking and other deviant behaviors. Further future studies in the study area may consider this gap.

In addition, there is a significant disparity in the number of respondents who smoke compared to nonsmokers and those who have quit smoking. Of a total of 751 respondents only 21.2% smoke. This means the findings of the study may be difficult to generalize, for the data set did not capture a large proportion of adolescent smokers. Capturing a large population of smokers would have been an ideal idea in examining those risk factors that predict adolescent smoking. Similar to this, the data set also had some shortcomings that prevented the use of more rigorous data analysis methods in analyzing the variable of interest. For example, it was difficult to analyze variables in the study without the use of correlation and chi-square test of independence. It would have been more insightful if the data set was not violating basic assumptions of rigorous statistical analysis methods. Thus, future studies on a related topic as this study should remedy the limitation of the fact that a majority of respondents in this study are nonsmokers by considering replicating a similar study with a large proportion of adolescent smokers. Also, future studies can complement this study by adopting a more rigorous statistical data analysis that gives more insight compared to the once much in this study.

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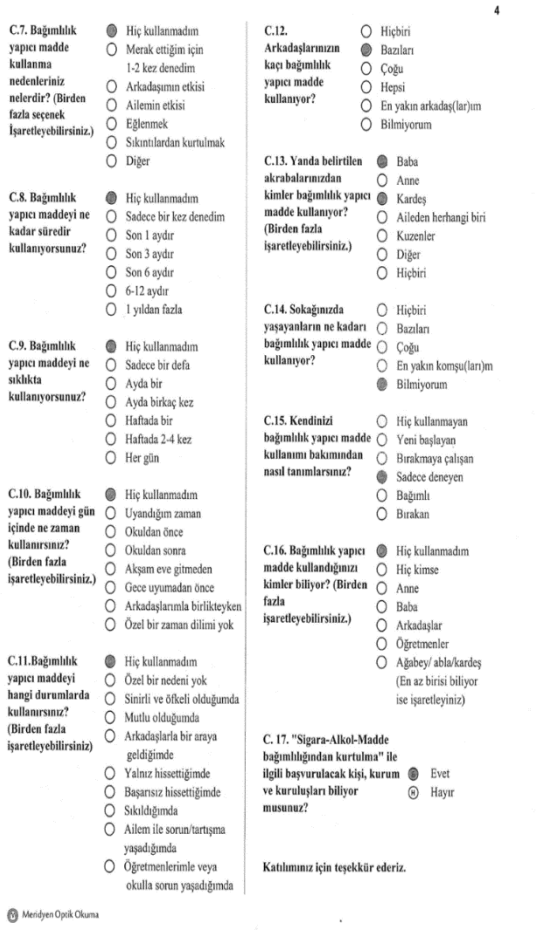
APPENDIXES

APPENDIX A



4

C.7. Bağımlılık yapıcı madde kullanma nedenleriniz nelerdir? (Birden fazla seçenek İşaretleyebilirsiniz.)
- Hiç kullanmadım
- Merak ettiğim için 1-2 kez denedim
- Arkadaşımın etkisi
- Ailemin etkisi
- Eğlenmek
- Sıkıntılardan kurtulmak
- Diğer

C.8. Bağımlılık yapıcı maddeyi ne kadar süredir kullanıyorsunuz?
- Hiç kullanmadım
- Sadece bir kez denedim
- Son 1 aydır
- Son 3 aydır
- Son 6 aydır
- 6-12 aydır
- 1 yıldan fazla

C.9. Bağımlılık yapıcı maddeyi ne sıklıkta kullanıyorsunuz?
- Hiç kullanmadım
- Sadece bir defa
- Ayda bir
- Ayda birkaç kez
- Haftada bir
- Haftada 2-4 kez
- Her gün

C.10. Bağımlılık yapıcı maddeyi gün içinde ne zaman kullanırsınız? (Birden fazla işaretleyebilirsiniz.)
- Hiç kullanmadım
- Uyandığım zaman
- Okuldan önce
- Okuldan sonra
- Akşam eve gitmeden
- Gece uyumadan önce
- Arkadaşlarımla birlikteyken
- Özel bir zaman dilimi yok

C.11.Bağımlılık yapıcı maddeyi hangi durumlarda kullanırsınız? (Birden fazla işaretleyebilirsiniz)
- Hiç kullanmadım
- Özel bir nedeni yok
- Sinirli ve öfkeli olduğumda
- Mutlu olduğumda
- Arkadaşlarla bir araya geldiğimde
- Yalnız hissettiğimde
- Başarısız hissettiğimde
- Sıkıldığımda
- Ailem ile sorun/tartışma yaşadığımda
- Öğretmenlerimle veya okulla sorun yaşadığımda

Meridyen Optik Okuma

C.12. Arkadaşlarınızın kaçı bağımlılık yapıcı madde kullanıyor?
- Hiçbiri
- Bazıları
- Çoğu
- Hepsi
- En yakın arkadaş(lar)ım
- Bilmiyorum

C.13. Yanda belirtilen akrabalarımızdan kimler bağımlılık yapıcı madde kullanıyor? (Birden fazla işaretleyebilirsiniz.)
- Baba
- Anne
- Kardeş
- Aileden herhangi biri
- Kuzenler
- Diğer
- Hiçbiri

C.14. Sokağınızda yaşayanların ne kadarı bağımlılık yapıcı madde kullanıyor?
- Hiçbiri
- Bazıları
- Çoğu
- En yakın komşu(ları)m
- Bilmiyorum

C.15. Kendinizi bağımlılık yapıcı madde kullanımı bakımından nasıl tanımlarsınız?
- Hiç kullanmayan
- Yeni başlayan
- Bırakmaya çalışan
- Sadece deneyen
- Bağımlı
- Bırakan

C.16. Bağımlılık yapıcı madde kullandığınızı kimler biliyor? (Birden fazla işaretleyebilirsiniz.)
- Hiç kullanmadım
- Hiç kimse
- Anne
- Baba
- Arkadaşlar
- Öğretmenler
- Ağabey/ abla/kardeş (En az birisi biliyor ise işaretleyiniz)

C. 17. "Sigara-Alkol-Madde bağımlılığından kurtulma" ile ilgili başvurulacak kişi, kurum ve kuruluşları biliyor musunuz?
- Evet
- Hayır

Katılımınız için teşekkür ederiz.

1

LİSE ÖĞRENCİLERİNDE SİGARA–ALKOL–MADDE KULLANIMI ANKET UYGULAMASI

Lütfen öncelikle bu bölümü okuyunuz!

Bu anket tamamen isimsiz yanıtlanmak üzere hazırlanmıştır. Adınızı ve kimliğinizi ortaya koyacak herhangi bir bilgiyi ankette belirtmeyiniz. Lütfen hiçbir soruyu boş bırakmayınız. Anketi tamamladığınızda, masa üstünde bulunan kutuya bırakınız.

Sorularda durumunuza uygun bir yanıt bulamamanız durumunda, en yakın seçeneği işaretleyin. Uygun bulduğunuz yanıtı, uygun kutuyu ● şeklinde karalayın. Soruları kendi bilgi ve deneyimleriniz ışığında görevli öğretmenlere soru yöneltmeden cevaplayınız.

Anket tüm öğrenciler tarafından bitirilene kadar sınıftan çıkılmayacaktır. Örnek kodlama ●

Katılımınız için teşekkür ederiz…

A. Anketin bu kısmında kimlik bilgilerinizi içermeyen size ait sorular bulunmaktadır.

A1. Cinsiyetiniz: Kız ● Erkek

A.2. Doğum yılınız? ● 1999 ○ 2001 ○ 2003 ○ 2000 ○ 2002 ○ 2004

A.3. Aileniz nerede ikamet etmektedir? ● Bağcılar ○ Bağcılar dışı

A.4. Kaç kardeşiniz var? (Siz Hariç) ○ Yok ○ 3 ○ 1 ○ 4 ● 2 ○ 5 ve üzeri

A.5. Annem: Sağ ● ○ Vefat

A.6. Babam: Sağ ● ○ Vefat

A.7. Anne ve Babanız:
- ● Beraber yaşıyor
- ○ Boşanmamış, ayrı yaşıyor
- ○ Boşanmış, ayrı yaşıyor
- ○ Boşanmış, beraber yaşıyor
- ○ En az biri vefat

A.8. Annenizin eğitim durumu nedir? (*Hayatta olsun veya olmasın*)
- ○ Okuryazar değil
- ● İlkokul Mezunu
- ○ Ortaokul Mezunu
- ○ Lise Mezunu
- ○ Üniversite Mezunu

A.9. Babanızın eğitim durumu nedir? (*Hayatta olsun veya olmasın*)
- ○ Okuryazar değil
- ● İlkokul Mezunu
- ○ Ortaokul Mezunu
- ○ Lise Mezunu
- ○ Üniversite Mezunu

A.10. Okul saatleri dışında ücretli bir işte çalışıyor musunuz? ● Evet ○ Hayır

A.11. Evde maaş- ücret karşılığı çalışan birey sayısı kaçtır? ○ Yok ○ 3 ● 1 ○ 4 ve üzeri ○ 2

A.12. Ailenizin aylık sabit geliri ne kadardır?
- ● Sabit geliri yok
- ○ 0-1600 TL
- ○ 1600 TL üzeri

A.13. Anneniz; ● Çalışmıyor ○ Emekli ○ İşçi ○ Esnaf ○ Memur

A.14. Babanız; ○ Çalışmıyor ○ Emekli ● İşçi ○ Esnaf ○ Memur

A.15. Aynı evde yaşadığınız kişileri işaretleyiniz? (Birden fazla işaretleyebilirsiniz.)
- ○ Yalnız yaşıyorum
- ○ Yurtta kalıyorum
- ○ Annem ve babam
- ● Annem veya babam
- ○ Üvey babam ve annem
- ○ Üvey annem ve babam
- ● Kardeşlerim (kız veya erkek)
- ○ Diğer akraba/larım (Büyükanne, dayı , hala vb.)
- ○ Akrabanız olmayan kişi/ler

A.16. Son 12 ay içerisinde aile bireylerinden en az biriyle sigara, alkol veya bağımlılık yapıcı maddelerin zararları hakkında konuştunuz mu? ● Evet ○ Hayır

A.17. Son 12 ay içerisinde bağımlılık yapıcı maddelerin zararları, tehlikeleri ve bunlara nasıl karşı konulacağını anlatan ders, seminer ya da konferansa katıldınız mı? ○ Evet ● Hayır

A.18.Bugüne kadar herhangi bir konuda psikolojik destek aldınız mı? (Okul Rehberlik Servisi, hastane v.b) ● Hayır, almadım ○ Evet aldım

Lütfen diğer sayfadan devam ediniz ▶

B. Anketin bu kısmında sigara ve alkol kullanımı ile ilgili sorular bulunmaktadır.

B.1. Sigara içiyor musunuz?
- ○ Evet
- ● Hayır
- ○ Bıraktım

B.2. Sigaraya ilk defa kaç yaşınızda başladınız?
- ● Hiç içmedim
- ○ 10 yaş öncesi
- ○ 10-12
- ○ 13-15
- ○ 16 ve sonrası

B.3. Sigarayı ilk kiminle birlikte içtiniz?
- ● Hiç içmedim
- ○ Yalnız
- ○ Okuldan arkadaşlarımla
- ○ Okul dışı arkadaşımla
- ○ Akrabalık bağı olan biriyle

B.4. Bildiğiniz kadarıyla yandaki aile bireylerinden kimler sigara içmektedir?
- ○ Anne
- ● Baba
- ● Kardeş
- ○ Anne ve baba
- ○ Hepsi
- ○ Hiçbiri

B.5. Genelde nerede sigara içmektesiniz? (Birden fazla işaretleyebilirsiniz.)
- ● Hiç içmedim
- ○ Evde
- ○ Okulda
- ○ Dışarıda
- ○ Kafede
- ○ Her yerde

B.6. Sigara içtiğinizi kimler bilmektedir? (Birden fazla işaretleyebilirsiniz.)
- ● Hiç içmedim
- ○ Anne
- ○ Baba
- ○ Ağabey/abla/kardeş (en az biri biliyorsa işaretleyiniz)
- ○ Arkadaşlar
- ○ Öğretmenler

B.7. Sigara içmeye başlamanızda aşağıdakilerden hangisi etkili olmuştur? (Birden fazla işaretleyebilirsiniz)
- ● Hiç içmedim
- ○ Merak ettiğimden
- ○ Arkadaşlarım önerdiği için
- ○ Ailede kullanıldığı için
- ○ Sevdiğim ünlüler kullandığı için
- ○ Arkadaşlarımla beraber olabilmek için
- ○ Yetişkin yaşantısına ilgi duyduğum için

B.8. Bildiğiniz kadarıyla arkadaşlarınızın kaçı sigara içmektedir?
- ○ Hiçbiri
- ● Bazıları
- ○ Çoğunluğu
- ○ Hepsi
- ○ En yakın arakadaş(lar)ım

B.9. Daha önce sigara dışında yandaki ürünlerden hangisini kullandınız? (Birden fazla işaretleyebilirsiniz.)
- ● Hiç kullanmadım
- ○ Nargile
- ○ Elektronik sigara
- ○ Çiğneme tütünü

B.10. Alkollü içecekler kullanıyor musunuz?
- ○ Evet
- ● Hayır
- ○ Bıraktım
- ○ Merak ettiğimden 1-2 kez denedim

B.11. Alkollü içecek(ler)i ilk kez kaç yaşında kullandınız?
- ● Hiç kullanmadım
- ○ 10 yaş öncesi
- ○ 10-12 yaş
- ○ 13-15 yaş
- ○ 16 yaş ve üzeri

B.12. Ailenizde alkollü içecek(ler) kullanan var mıdır? (Birden fazla işaretleyebilirsiniz.)
- ○ Hiçbiri
- ○ Anne
- ● Baba
- ● Ağabey/abla/kardeş (en az biri kullanıyorsa işaretleyiniz)

B.13. Alkollü içecek(ler)i ilk kez kiminle içtiniz?
- ● Hiç içmedim
- ○ Yalnız
- ○ Okuldan arkadaşlarımla
- ○ Okul dışı arkadaşlarımla
- ○ Akrabalık (aile) bağı olan birisiyle- birileriyle

B.14. Arkadaşlarınızdan kaçı alkollü içecek(ler)den kullanıyor?
- ○ Hiçbiri
- ○ En yakın arkadaş(lar)ım
- ● Birkaçı
- ○ Çoğunluğu
- ○ Hepsi

B.15. Alkollü içecek(ler)i nerede kullanırsınız? (Birden fazla işaretleyebilirsiniz.)
- ● Hiç kullanmam
- ○ Evde
- ○ Kafe-bar
- ○ Dışarıda
- ○ Her yerde kullanırım

B.16. Alkollü içecekler kullandığınızı kimler biliyor? (Birden fazla işaretleyebilirsiniz.)
- ● Hiç kullanmam
- ○ Annem
- ○ Babam
- ○ Ağabey/ abla/kardeş (En az birisi biliyor ise işaretleyiniz)
- ○ Arkadaşlarım
- ○ Öğretmenlerim
- ○ Hiçbiri
- ○ Hepsi

B.17. Alkollü içecekler ile ilgili ailenizin bakış açısı nedir? (Birden fazla işaretleyebilirsiniz.)
- ○ Sağlığa zararlı olduğu için içilmemelidir.
- ○ Özel günlerde içilebilir
- ○ Herkesin kendi kararıdır
- ○ Uygun ölçüde içilmesine müsaade edilebilir
- ○ Her zaman içilebilir
- ● Dinimizce yasak olduğu için içilmemelidir

B.18. Ailenizle ilişkileriniz nasıldır?

	Hiç Anlaşamam	Anlaşamam	Biraz Anlaşırım	Anlaşırım	Çok iyi Anlaşırım
Annemle	1	2	3	● 4	5
Babamla	1	2	3	4	● 5
Kardeş(ler)imle	1	2	3	4	● 5

B.19. Aşağıdaki ifadeler size ne kadar uymaktadır?

	Hiçbir zaman	Nadiren	Bazen	Sıklıkla	Her zaman
Okulumu seviyorum	1	2	● 3	4	5
Okul derslerini yararsız buluyorum	● 1	2	3	4	5
Derslerden sıkılıyorum	1	● 2	3	4	5
Dersler için yeterince çaba harcamadığımı düşünüyorum	1	2	● 3	4	5
Bazı dersleri başaramıyorum	1	● 2	3	4	5
Bence dersler çok kolay	1	2	● 3	4	5
Bence dersler çok zor	● 1	2	3	4	5
Okuldan ayrılmak istiyorum	● 1	2	3	4	5
Okulumu değiştirmek istiyorum	1	● 2	3	4	5
Okulda arkadaş edinmekte zorlanıyorum	1	● 2	3	4	5
Öğretmenlerimle iyi anlaşamıyorum	● 1	2	3	4	5

B.20. Özürlü / Özürsüz okul devamsızlığınız toplam kaç gündür?
- ○ Hiç
- ○ 1-3 gün
- ○ 3-5 gün
- ○ 5-10 gün
- ● 10-20 gün
- ○ 21 ve üzeri

C. Anketin bu kısmında madde kullanımı ile ilgili sorular bulunmaktadır.

C.1. Daha önce hiç bağımlılık yapıcı madde kullandınız mı?
- ○ Evet
- ● Hayır

C.2. Bağımlılık yapıcı maddeyi ilk ne zaman kullandınız?
- ● Hiç kullanmadım
- ○ 11 yaş ve altı
- ○ 12 yaş
- ○ 13 yaş
- ○ 14 yaş
- ○ 15 yaş
- ○ 16 yaş
- ○ 17 yaş ve üzeri

C.3. Bağımlılık yapıcı maddeyi ilk nerede kullandınız?
- ● Hiç kullanmadım
- ○ Kendi evimde
- ○ Okulda
- ○ Açık alanda
- ○ Kafede
- ○ Başkasının evinde
- ○ Diğer

C.4. Bağımlılık yapıcı maddeyi ilk nasıl elde ettiniz?
- ● Hiç kullanmadım
- ○ Okuldan arkadaş
- ○ Mahalleden arkadaş
- ○ Akrabadan
- ○ Tanımadığım biri
- ○ İnternet aracılığıyla
- ○ Diğer

C.5. Bağımlılık yapıcı maddeyi ilk kullandığınızda para vererek mi temin ettiniz?
- ● Hiç kullanmadım
- ○ Evet
- ○ Hayır

C.6. Bağımlılık yapıcı maddeyi ilk kiminle kullandınız?
- ● Hiç kullanmadım
- ○ Arkadaş
- ○ Tanımadığım biri
- ○ Akraba
- ○ Yalnız başıma
- ○ Diğer

APPENDIX B

Ethics Committee Permission Certificate

Evrak Tarih ve Sayısı: 26.03.2021-2264

İBN HALDUN ÜNİVERSİTESİ

T.C.
İBN HALDUN ÜNİVERSİTESİ
Sosyal ve Beşeri Bilimler Bilimsel Araştırma ve Yayın Etiği
Kurulu Başkanlığı

Sayı : E-71395021-020-2264
Konu : Ali Cissey USMAN-Etik Kurul Kararı

İLGİLİ MAKAMA

Kurulumuza başvuran Ali Cissey USMAN'ın "An examinatıon of risk factors that predict adolescent smoking (Ergenlerde sigara içmeyi yordayan risk faktörlerinin incelenmesi)" isimli projesi; amaç, araştırma türü, veri toplama araçları, süreç ve işlemler, veri analizleri dikkate alınmak suretiyle 22.02.2021 tarihinde değerlendirilerek 2021/02-2 karar numarası ile etik açıdan uygun bulunmuştur.

Bilgilerinizi arz/rica ederim.

Prof. Dr. Ali YEŞİLIRMAK
Başkan

APPENDIX C

Varaible Correlations

	School type	Education level of mother	Education level of father	Smoking Status	Child-mother relationships	Child-father relationships	Perception of academic success	Peer-relationships	Teacher-Student relationships	Gender
School Type	1									
Education level of mother	-.154**	1								
Education level of father	-.164**	.470**	1							
Smoking Status	-.010	.013	.044	1						
Child-mother relationships	.116**	-.002	.005	.036	1					
Child-father relationships	.104**	.020	.038	.148**	.474**	1				
Perception of academic success	-.014	-.039	-.027	-.096**	-.088*	-.115**	1			
Peer-relationships	-.040	-.021	-.012	.094**	-.127**	-.110**	.181**	1		
Teacher-Student relationships	.011	-.015	-.006	-.134**	-.095**	-.143**	.211**	.250**	1	
Gender	-.018	.008	.015	-.071	.074*	.008	.049	.010	.135**	1

**. Correlation is significant at the 0.01 level (2-tailed).
*. Correlation is significant at the 0.05 level (2-tailed).

Demographics

Crosstabulation of Mother Education

			Smoking Status			
School Type			Yes	No	Stopped	Total
Anadolu	Education level of mother	Illiterate	1	11	1	13
		Primary School Graduate	18	87	4	109
		Middle school graduate	21	39	4	64
		High school graduate	9	40	4	53
		University graduate	3	7	2	12
	Total		52	184	15	251
Imam Hatip	Education level of mother	Illiterate	1	14	0	15
		Primary School Graduate	9	42	4	55
		Middle school graduate	9	15	2	26
		High school graduate	0	10	0	10
		University graduate	0	2	0	2
	Total		88	276	28	392
Vocational	Education level of mother	Illiterate	13	28	3	44
		Primary School Graduate	46	139	13	198
		Middle school graduate	20	81	6	107
		High school graduate	8	26	6	40
		University graduate	1	2	0	3
	Total		88	276	28	392
Total	Education level of mother	Illiterate	15	53	4	72
		Primary School Graduate	73	268	21	362
		Middle school graduate	50	135	12	197
		High school graduate	17	76	10	103
		University graduate	4	11	2	17
	Total		159	543	49	751

Crosstabulation of Father Education

			Smoking Status			
School Type			Yes	No	Stopped	Total
Anadolu	Education level of Father	Illiterate	1	1	0	2
		Primary School Graduate	16	63	3	82
		Middle school graduate	17	50	5	72
		High school graduate	14	55	5	74
		University graduate	4	15	2	21
	Total		52	184	15	251
Imam Hatip	Education level of Father	Illiterate	0	2	0	2
		Primary School Graduate	9	38	2	49
		Middle school graduate	8	24	2	34
		High school graduate	2	12	2	16
		University graduate	0	7	0	7
	Total		19	83	6	108
Vocational	Education level of Father	Illiterate	2	3	1	6
		Primary School Graduate	43	121	13	177
		Middle school graduate	28	96	8	132
		High school graduate	13	46	6	65
		University graduate	2	10	0	12
	Total		88	276	28	392
Total	Education level of Father	Illiterate	3	6	1	10
		Primary School Graduate	68	222	18	308
		Middle school graduate	53	170	15	238
		High school graduate	29	113	13	155
		University graduate	6	32	2	40
	Total		159	543	49	751

Crosstabulation of Child-mother relationship

			Smoking Status			
School Type			Yes	No	Stopped	Total
Anadolu	Child-mother relationship	Never get along	4	3	0_a	7
		Can't get along	4	4	1	9
		Sometimes get along	8	19	1	28
		Get along	16	66	6	88
		Strongly get along	20	92	7	119
	Total		52	184	15	251
Imam Hatip	Child-mother relationship	Never get along	0	2	1	3
		Can't get along	0	1	0	1
		Sometimes get along	1	4	0	5
		Get along	5	25	3	33
		Strongly get along	13	51	2	66
	Total		19	83	6	108
Vocational	Child-mother relationship	Never get along	3	4	1	8
		Can't get along	0	4	2	6
		Sometimes get along	11	16	5	32
		Get along	25	78	5	108
		Strongly get along	49	174	15	238
	Total		88	276	28	392
Total	Child-mother relationship	Never get along	7	9	2	18
		Can't get along	4	9	3	16
		Sometimes get along	20	39	6	65
		Get along	46	169	14	229
		Strongly get along	82	317	24	423
	Total		159	543	49	751

Crosstabulation of Child-father relationship

			Smoking Status			
School Type			Yes	No	Stopped	Total
Anadolu	Child-father relationship	Never get along	8	11	1	20
		Can't get along	2	4	0	6
		Sometimes get along	20	31	4	55
		Get along	11	65	6	82
		Strongly get along	11	73	4	88
	Total		52	184	15	251
Imam Hatip	Child-father relationship	Never get along	4	1	1	6
		Can't get along	2	1	0	3
		Sometimes get along	2	5	2	9
		Get along	6	23	3	32
		Strongly get along	5	53	0	58
	Total		19	83	6	108
Vocational	Child-father relationship	Never get along	13	10	4	27
		Can't get along	7	6	1	14
		Sometimes get along	15	33	7	55
		Get along	20	79	4	103
		Strongly get along	33	148	12	193
	Total		88	276	28	392
Total	Child-father relationship	Never get along	25	22	6	53
		Can't get along	11	11	1	23
		Sometimes get along	37	69	13	119
		Get along	37	167	13	217
		Strongly get along	49	274	16	339
	Total		159	543	49	751

Crosstabulation of Perception of academic success

			Smoking Status			
School Type			Yes	No	Stopped	Total
Anadolu	Perception of academic success (I can't succeed in my lessons)	Never	1	11	0	12
		Occasionally	8	44		58
		Sometimes	20	66	3	89
		Often	14	42	3	59
		Always	9	21	3	33
	Total		52	184	15	251
Imam Hatip	Perception of academic success (I can't succeed in my lessons)	Never get along	1	9	0	10
		Can’t get along	4	24	1	29
		Sometimes get along	5	31	3	39
		Get along	5	16	2	23
		Strongly get along	4	3	0	7
	Total		19	83	6	108
Vocational	Perception of academic success (I can't succeed in my lessons)	Never get along	5	14	4	23
		Can’t get along	20	72	3	95
		Sometimes get along	20	108	8	136
		Get along	26	58	9	93
		Strongly get along	17	24	4	45
	Total		88	276	28	392
Total	Perception of academic success (I can't succeed in my lessons)	Never get along	7	34	4	45
		Can’t get along	32	140	10	182
		Sometimes get along	45	205	14	264
		Get along	45	116	14	175
		Strongly get along	30	48	7	85
	Total		159	543	49	751

Crosstabulation of Peer relationships pressure

			Smoking Status			
School Type			Yes	No	Stopped	Total
Anadolu	Peer relationships pressure (I can't get along with my friends)	Never	37	113	7	157
		Occasionally	6	34	1	41
		Sometimes	7	26	3	36
		Often	0	5	3	8
		Always	2	6	1	9
	Total		52	184	15	251
Imam Hatip	Peer relationships pressure (I can't get along with my friends)	Never get along	17	58	5_a	80
		Can't get along	1	10	0	11
		Sometimes get along	1	10	0	11
		Get along	0	1	0	1
		Strongly get along	0	4	1	5
	Total		19	83	6	108
Vocational	Peer relationships pressure (I can't get along with my friends)	Never get along	65	182	19	266
		Can't get along	12	40	3	55
		Sometimes get along	9	32	4	45
		Get along	0	13	1	14
		Strongly get along	2	9	1	12
	Total		88	276	28	392
Total	Peer relationships pressure (I can't get along with my friends)	Never get along	119	353	31	503
		Can't get along	19	84	4	107
		Sometimes get along	17	68	7	92
		Get along	0	19	4	23
		Strongly get along	4	19	3	26
	Total		159	543	49	751

Crosstabulation of teacher-student relationships

			Smoking Status			
School Type			Yes	No	Stopped	Total
Anadolu	Teacher-student relationships (I can't get along with my teachers)	Never	16	84	7	107
		Occasionally	11	47	4	62
		Sometimes	9	20	1	30
		Often	9	23	2	34
		Always	7	10	1	18
	Total		52	184	15	251
Imam Hatip	Teacher-student relationships (I can't get along with my teachers)	Never get along	3	37	0	40
		Can't get along	7	25	3	35
		Sometimes get along	0	6	3	9
		Get along	4	7	0	11
		Strongly get along	5	8_b	0_a	13
	Total		19	83	6	108
Vocational	Teacher-student relationships (I can't get along with my teachers)	Never get along	26	132	11	169
		Can't get along	19	56	5	80
		Sometimes get along	18	34	5	57
		Get along	13	34	4	51
		Strongly get along	12	20	3	35
	Total		88	276	28	392
Total	Teacher-student relationships (I can't get along with my teachers)	Never get along	45	253	18	316
		Can't get along	37	128	12	177
		Sometimes get along	27	60	9	96
		Get along	26	64	6	96
		Strongly get along	24	38_b	4	66
	Total		159	543	49	751

CURRICULUM VITAE

Personal Information

Name - Surname: Ali Cissey Usman

Education

2012 – 2014 Diploma in Adult Education and Human Resource, University of Ghana, Accra, Ghana

2014 – 2018 B.Ed honors in Guidance and Counseling, University of Education, Winneba, Ghana.

2018 – 2021 MA in Guidance and Counseling Psychology, Ibn Haldun University, Turkey

Experience

2019 – 2021 Research Assistant, Ibn Haldun University, Turkey

2016 – 2018 Teacher and Guidance coordinator, Ghana-Lebanon high school, Accra, Ghana

2014 – 2015 Public Education officer, Commission of Human Rights and Administrative Justice (CHRAJ), Accra, Ghana.

Publications

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