IBN HALDUN UNIVERSITY
SCHOOL OF GRADUATE STUDIES
DEPARTMENT OF COUNSELING PSYCHOLOGY

MASTER THESIS

ADOLESCENT ALCOHOL CONSUMPTION AND THE ROLE OF FAMILY, PEERS, AND SCHOOL

LIYANA THABASSUM

THESIS SUPERVISOR

ASSIST. PROF. THSEEN NAZIR

ISTANBUL, 2021

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by

LIYANA THABASSUM

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.

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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

Thesis Jury Members

Title - Name Surname	Opinion	Signature
Assist. Prof. Dr. Thseen Nazir	Successful	_____
Prof. Dr. Sefa Bulut	Successful	_____
Assist. Prof. Dr. Besra Taş	Successful	_____

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

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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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Signature:

ÖZ

LİSELİ GENÇLERİN ALKOL KULLANIMINA AİLE, AKRAN VE OKUL TÜRÜNÜN ETKİSİ

Thabassum, Liyana
Rehberlik ve Psikolojik Danışmanlık Yüksek Lisans Programı
Öğrenci Numarası: 186031011
Open Researcher and Contributor ID (ORC-ID): 0000-0001-9047-4995
Ulusal Tez Merkezi Referans Numarası: 10405898

Tez Danışmanı: Dr. Öğr. Üyesi Thseen Nazir
Temmuz 2021, 139 sayfa

Alkol tüketimi bireyler için ve özellikle de ergenler için çok tehlikeli bir alışkanlıktır. Bu olumsuz davranış ergenler için oldukça zarar vericidir olabilmektedir. Ergenlerin genel refahını, günlük yaşamlarını, akademik hayatlarını ve kişilerarası ilişkilerini olumsuz biçimde etkileyebilmektedir. Ergenlerin alkol tüketimi bireysel ve çevresel faktörlerden etkilenmektedir. Bu çalışmada ergenlerin alkol kullanmaları, ergenlerin çalışma durumları, demografik bilgileri, aile, akran ve okul türleri gibi değişkenler açısından incelenmiştir. Aslında son yıllardaki alkol tüketimi trendleri açısından, ülkenin sosyo kültürel ve ekonomik durumunun ışığında Türk ergenler arasındaki içki içme davranışlarını anlamaya yönelik bir çalışmadır. Bu nedenle, bu çalışma İstanbul ili Bağcılar ilçesi örnekleminde, Türkiye'deki ergen alkol tüketiminin demografik, aile, akran ve okul değişkenleriyle ilişkisini araştırmaktadır. Örneklem, İstanbul, Bağcılar ilçesinde bulunan Anadolu, Meslek ve İmam Hatip Liselerinde okuyan 751 lise öğrencisinden oluşmaktadır. Öğretim üyeleri tarafından literatür taranarak, bir anket hazırlanmış ve öğrencilerin alkol tüketimi davranışlarına ilişkin veriler toplanmıştır. Bu veriler daha sonra demografik, aile, akran ve okul değişkenlerinin ergen alkol tüketimi üzerindeki rollerini araştırmak için kullanılmıştır. Çalışmada Ki-kare testi ve çoklu regresyon analizi kullanılmıştır. Sonuçlar ergen alkol kullanımının; yerleşim yeri, hane geliri, ebeveyn medeni durumu, annenin eğitim düzeyi ve çalışma durumu, ailenin alkol kullanımı (anne, baba, kardeş), akran alkol kullanımı, okul türü ve okula devam durumu gibi değişkenlerle pozitif olarak ilişkili olduğunu göstermiştir. Ayrıca,

erkek olmanın, 18 yaşında olmanın, Bağcılar'da ikamet etmenin, eğitimli olan veya işçi olarak çalışan anneye, çalışan ya da emekli babaya ve alkol tüketen aile üyelerine sahip olmanın (baba ve kardeş) ergenlerde alkol kullanımını tetiklediği öngörülmektedir. Sonuçlar ergenlerin alkol tüketiminde çevresel faktörlerin çok önemli olduğunu göstermektedir. Ayrıca bu çalışma, dinin Türk ergen nüfusu arasında alkole başlama ve tüketimini engellemede önemli bir rol oynadığını da göstermektedir.

Anahtar Kelimeler: Ergen Alkol Tüketimi, Çevresel Etki, Aile Alkol Kullanımı, Akran Etkisi, Okul Türleri ve Alkol Kullanımı, Liselerde Alkol Kullanımı

ABSTRACT

ADOLESCENT ALCOHOL CONSUMPTION AND THE ROLE OF FAMILY, PEERS, AND SCHOOL

Thabassum, Liyana

MA in Counseling Psychology

Student Number: 186031011

Open Researcher and Contributor ID (ORC-ID): 0000-0001-9047-4995

National Thesis Center Reference Number: 10405898

Thesis Supervisor Assist Prof. Thseen Nazir

July 2021, 139 Pages

Alcohol consumption can be a volatile pastime amongst people, but especially among adolescents. The behavior is debilitating and affects the overall well-being of students across varying instances of their daily lives, including their academics and interpersonal relationships. Adolescent alcohol consumption is influenced by internal and external factors, of which the current study focuses on demographic, family, peer, and school factors. A rising need to understand drinking behaviors among Turkish adolescents in the backdrop of the country's religious, political, and economic climate has been identified. As a result, this study focuses on exploring adolescent alcohol consumption in relation to demographic, family, peer, and school variables in Istanbul, Turkey. The sample consists of 751 high school students from private, vocational, and Islamic vocational schools located in Istanbul. Data on their drinking behaviors were collected by implementing a survey designed for this purpose by the Bağcılar research institute. This data was then used in the study to explore the roles of demographic, family, peer, and school variables on adolescent alcohol consumption. A chi-square test of independence and Multinomial logistic regression analysis was conducted. The results revealed that variables like the area of residence, household income, parental marital status, mother's level of education and work status, family's alcohol use (mother, father, siblings), peer alcohol use, types of school, and school attendance were significantly associated with adolescent alcohol consumption in a Turkish sample. Furthermore, it was revealed that in the current sample being male, 18 years

of age, and residing in Bağcılar, and having educated mothers, mothers working as laborers, working or retired fathers, and alcohol using family members (father and siblings) predicted alcohol use. These findings indicate the importance of external and environmental factors in influencing adolescent consumption of alcohol. The study also touches upon the potential role that religion plays in curbing alcohol initiation and consumption among the Turkish adolescent population.

Keywords: Adolescent Alcohol Consumption, Environmental Influence, Family Alcohol Use, Peer Influence, School Type and Alcohol Use in High Schools.

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Liyana Thabassum
ISTANBUL, 2021

TABLE OF CONTENTS

LIST OF TABLES

LIST OF SYMBOLS AND ABBREVIATIONS

B	Multinomial Logistic Regression Coefficient
X^2	Chi-square Coefficient
φ_{Cramer}	Cramer's V Coefficient

CHAPTER I

INTRODUCTION

1.1 Background of the Study

Alcohol consumption and drunkenness tend to emerge during early adolescence. The WHO (2018) reports that worldwide 31.4% of adolescents between the ages of 15 and 19 consider themselves to be regular drinkers. Additionally, 12% reported that they had consumed alcohol at least once in their lifetime. Numbers from the United States show that in 2019, approximately 24.6% of adolescents between the ages of 14 to 15 reported having at least one drink, and 7 million 12 to 20-year-olds consumed alcohol occasionally in the past month (NIAAA, 2020). Data from Central America suggests that among students aged 12 to 20 years, over 51.5% had tried alcohol (Chen et al., 2004). Likewise, in Europe, approximately half of the adolescents start drinking at the age of 13 or below (ESPAD, 2016). Furthermore, it is said that by the age of 15 or 16 almost over 80% of European adolescents would have tried alcohol at least once in their lifetime (ESPAD, 2016). These numbers are quite concerning but within perspective, considering how common adolescent alcohol consumption is in European countries. Once this habit forms, it becomes all the more difficult to abstain from it. Comparatively, Turkey records significantly lower levels of adolescent alcohol consumption, largely associated with the predominance of the religion of Islam among the Turkish population (Doksat et al., 2016; Alikaþifoðlu et al., 2004). Islam lays down for its followers a strict prohibition of alcohol consumption.

Turkey is a transcontinental country that holds a unique position both in terms of its geographical location and its cultural and religious features. The predominantly Muslim country straddles both Europe and Asia and is largely collectivistic (Özbay & Özcan, 2006). Despite the secular mantle that Turkey adorns, there is no barrier to practicing religion (Orak & Solakoglu, 2017). This is quite interesting considering the majority of the Turkish population identifies as Muslim, irrespective of whether they are practicing or not. This can be attributed to the remnants of the long-standing

Ottoman empire, a beacon of the proliferation of Islamic culture. Such a rich history coupled with innate feelings of nationalism creates for the 'Muslim identity' if not religiously, at least culturally. This is why in Turkey you would find certain individuals fasting during the Holy month of Ramadhan (when Muslims are ordained to fast) as a homage to tradition rather than because of religious sentiments (Odabasi & Argan, 2009; Keenan & Yeni, 2003). Islam prohibits the use and consumption of alcohol based on its religious ideals. Irrespective of whether one is a practicing Muslim or not, such religious beliefs masked as 'convention' or 'tradition' have been passed down generations to help cultivate "morally upstanding" citizens.

Although Turkey boasts a very low percentile of adolescent alcohol consumption, the advent of globalization and social manipulation of youth culture ensures that change is imminent and may already be underway (Doksat et al., 2016). The power that advertising and marketing industries hold in spreading drinking culture among the youth are substantial. The 1960s in Turkey can be characterized by the emergence of widespread use of illicit drugs amongst the youth (Doksat et al., 2016). Since then, a variety of different substances along with the standard over-the-counter drugs have frequented Turkish streets and its adolescent population. This has especially been the case in Istanbul, easily the busiest city in the entirety of Turkey, where it is easier for such trends to unfurl (Ögel, Tamar, Evren & Çakmak, 2000). While the rest of Turkey dances around in middle eastern influences, Istanbul marks the amalgamation of the European and Asian cultures. The city is a melting pot of various cultures brought on by mass immigration, migration, and the influx of international students from around the world. This alone acts as a major reason for the proliferation of youth culture, alcohol consumption included, wherein different cultural influences weigh in against 'tradition' and 'religion'. Istanbul is also at the cusp of major change in its social and political structure given the advent of large-scale globalization and modernization that the city is undergoing (Pumariega, Burakgazi, Unlu, Prajapati & Dalkilic, 2014). Although Turkey is conventionally family-oriented, in cities like Istanbul that are crowded with immigrants and refugees, the family system may not be as cohesive. Parental supervision may be low in these cities where crime rates are relatively higher than in the rest of Turkey (Çiftçi Demirci et al., 2015).

The above-mentioned factors are both positive and negative in terms of the influence they may have on adolescent alcohol behaviors. A study conducted in Turkey shows that 45% of Turkish adolescents have indulged in alcoholic beverages at least once in their lifetime (Arslan, Terzi, Dabak & Pekşen, 2012). In Istanbul and nearby city Kocaeli alone, high schoolers who have consumed alcohol at least once in their lifetime account for about 61% and 51% respectively (Kara, Hatun, Aydoğan, Babaoğlu & Gökalp, 2003). Likewise, an earlier study in Istanbul shows similar results that 27.6% of 1500 high schoolers consumed alcohol at least once in their lifetime (Ögel et al., 2000). Such overwhelming numbers suggest that adolescents are at a higher risk of emulating drinking behaviors, leading to social, behavioral, and health problems (Ryan, Jorm & Lubman, 2010; Alikaþifoðlu et al., 2004; Donovan, 2004). However, a later study concluded that alcohol abuse was not as prevalent among Turkish adolescents as was illicit drug abuse, cannabis use, and abuse of inhalants/solvents (Çiftçi Demirci et al., 2015).

Alcohol use in adolescence (roughly 12 to 18 years of age) is an age-inappropriate behavior and is considered illegal in most countries. Consuming alcohol at this age is considered precocious and heavy drinking is deemed deviant in many communities (Oesterle et al., 2004). It is important to note that there exists a clear distinction between alcohol consumption (use) and heavy/binge drinking. Alcohol consumption strictly refers to the frequency and quantity of alcohol use, unlike heavy drinking that involves an excessive amount of alcohol consumed in a relatively shorter period (Schulenberg & Maggs, 2002). Further, there are the Alcohol Use Disorders (AUDs) which include alcohol abuse and alcohol dependency, both of which are debilitating to an individual's personal and professional life (Merline, Jager & Schulenberg, 2008). For the purpose of this research, however, we are looking at alcohol consumption/use. Alcohol use in adolescents, no matter the intensity or the frequency of consumption, is a concerning issue for several reasons. Apart from the obvious, that it affects the physical, psychological, and social well-being of individuals. It also paves the way for dependence and a curiosity to try other drugs. Early-onset drinking in adolescents increases the possibility of later binge drinking, drug abuse, sexual risk-taking, positive alcohol/drinking perceptions, and poor academic outcomes (Brenner, Bauermeister & Zimmerman, 2011; Trucco, Colder & Wieczorek, 2011).

1.2 Alcohol Based Regulations in Turkey

Alcohol advertising is usually based on the advertising regulations prescribed by the law of each country. However, these regulations usually do not have much of an effect in reducing adolescent alcohol consumption as can be seen from an Australian example. Donovan and colleagues (2007) tried to ascertain the frequency and content of alcohol advertisements and sales promotion in popular magazines in Australia. They wanted to understand how many of these advertisements comply with Australia's Alcoholic Beverages Advertising Code (ABAC) and found that both advertisements and promotional items breached the codes set by the ABAC regulatory board (Donovan, Donovan, Howat & Weller, 2007). Looking into Turkey's regulations on alcohol advertising, one can see that according to law no. 4250 on Alcohol and Alcoholic Beverages, alcohol advertising is completely banned in Turkey. That is, any type of advertisements, campaigns, or promotions that encourage alcohol consumption through any media platforms is not allowed according to the law. This includes, but is not limited to, TV and radio, ads or product placements in movies, printed media, social media, etc. Moreover, alcohol manufacturers cannot market or sponsor their beverage, brand, or logo through any means. Similarly, any form of promotional events and tasking activities with alcoholic beverages are not allowed ("The Alcohol Advertising Law in Turkey," 2020). This could be why Turkey has the lowest alcohol consumption rate as compared to other European countries, however, the gaining momentum of exchanging cultures through tourism, social media, online movie platforms, etc. may cause more damage to adolescent alcohol consumption than is at this point.

To further understand alcohol regulations in Turkey, we must look into the history and how these regulations have been shaped by the changing socio-cultural and political climate of Turkey. Evered and Evered (2017) in their paper titled "From *Rakı* to *Ayran*: regulating the place and practice of drinking in Turkey" look deep into the history of alcohol regulations in Turkey while debating its social, cultural, and political impact. Alcohol was an integral part of Anatolia even before the arrival of the Turkic people from Eurasia or of Islam from Arabia. A type of alcoholic beverage made of fermented milk called the *'kumys'* was popular at that time. Even after the arrival of Islam to Anatolia, alcohol was still consumed by the non-Muslim communities. Furthermore,

it is understood that the majority of the troops serving the Ottoman Empire practiced a form of Sufism called the *Bektaşi Tarikat*, wherein they practiced ritualized drinking. During the late Ottoman and early republic eras of Turkey, there were movements to prohibit the consumption of alcohol. Although this move came from a concern of public health as opposed to the previously cited reasons to do with morality or religion (sharia laws). However, by March 1923 under the leadership of Mustafa Kemal Atatürk, there was a move to reverse or abolish the bans on alcohol production, with the government then choosing to opt for regulating alcohol production and consumption rather than outright prohibition. This meant new provisions for improved inventories, tax collections, and controls over alcohol-serving establishments. In this new Kemalist socio-cultural and political climate, drinking was considered a marker of Turkey's new status as a modernized and western nation-state. Alcohol consumption was also becoming increasingly gendered with males enjoying a certain social approval to consume the then-popular alcoholic drink called 'rakı' (alcoholic beverage), otherwise known as the "nation's drink" (Evered & Evered, 2017). The rakı was soon becoming a symbol of nationalism. The Turkish republic was slowly habituating itself to social drinking. In the late 1920s to 1930s, the republic nationalized alcohol production under a state monopoly titled TEKEL (Turkish tobacco and alcoholic beverages company). However, in 2000 under the new government, the republic moved to privatize alcohol, tobacco, and other industries leading to the inception of the TAPDK (Tobacco and Alcohol Market Regulatory Authority). On 18th January 2005, the state introduced a regulation curtailing the promotion or advertising of alcoholic beverages. This included a ban on employing celebrities or influencers to promote alcoholic beverages and brands. In August of the same year, a new regulation was passed constricting the opening of alcohol-related businesses and promoting the localization of these businesses to certain regions called the "red regions." This decision led to an outcry from alcohol businesses, opposition, and the general public, who weren't happy with the new regulations. The term "red zone" which sounded to the people like the idea of European "red streets" created even more unrest. Another strategy that was implemented was the introduction of huge amounts of taxes for alcohol (Evered & Evered, 2017). This leads to present-day Turkey where the regulations mentioned in law no. 4250 is still in effect.

Therefore, it becomes pertinent to understand the factors of influence or the predictors associated with adolescent alcohol consumption to curb the onslaught of more and more adolescents picking up drinking habits. Considerably, a variety of different patterns of influence exists between adolescents and their social circles. These influences do not have to be direct. For example, even the most implicit of messages on mass media promote the idea of 'youth culture' which ordains that adolescents need to excerpt their independence and their identity by following what is essentially herd behavior, by using substances and taking up drinking or smoking habits (Dube et al., 2006). The easy availability of alcohol, family and peer approval of drinking culture, and the promotion of social drinking culture, are just some examples of different factors that may influence adolescent drinking. Further, all of these different factors of influence come under a biopsychosocial spectrum of risk factors. That is, there may be a genetic or biological predisposition, social and environmental factors, or developmental changes in the way drinking behaviors manifest among individuals. For example, demographic factors known to be associated with adolescent alcohol consumption include being male, externalizing behaviors, and psychological problems (Squeglia et al., 2017). Similarly, environmental stressors such as academic pressure, low self-esteem, family, and peer influences implicate adolescent drinking (Dube et al., 2006). Parental education, parental drinking, and adolescent use of substances such as nicotine or marijuana were also identified as risk factors (Merline et al., 2008). Other predictors of early drinking include poor family management, peer influence, witnessing domestic violence, experiencing physical, emotional, or sexual abuse (Dube et al., 2006), academic pressure, school strain, family conflict, peer strain, etc. (Orak & Solakoglu, 2017).

1.3 Importance of the Study

The current study intends to explore the trends of adolescent alcohol consumption in Istanbul and understand the different factors and predictors of influence. Although similar studies were undertaken in various countries including Turkey (Evren et al., 2014; Pumariega et al., 2014; Guler et al., 2009; Şaşmaz et al., 2006; Ögel et al., 2006), there is a need to stay up to date with the results. Furthermore, the existing studies (as will be discussed in the literature section) provide contradicting results. For example, while certain studies show an increase in adolescent alcohol consumption in Turkey

(Evren et al., 2014; Pumariega et al., 2014; Guler et al., 2009; Şaşmaz et al., 2006; Ögel et al., 2006), some other studies show the exact opposite (Pumariega et al., 2014; Şaşmaz et al., 2006). Such trends are constantly evolving especially when it comes to human behaviors like alcohol consumption. In countries with constantly changing political and cultural climates, one must make sure to keep up to date with the prevalence of unhealthy behaviors that have a significant social implication. Therefore, the current study aims to identify the prevalence of adolescent alcohol consumption within different high schools in Istanbul. The study also seeks to examine the relationship between adolescent alcohol consumption and demographic variables (age, gender, residence, and household income), family variables (parental marital status, parental education level, parental work status, family alcohol use), peer alcohol use, and school variables (type of school and school attendance). Further, the study aims to identify the predictors of adolescent alcohol consumption from among these variables. It was important to include a wide variety of factors in the study, which may have a significant role to play in adolescent lives and behaviors. Identifying these trends and related factors may help in tailoring campaigns and policies to help reduce alcohol availability to minors or adolescents. It would also be instrumental in educating and spreading awareness regarding the negatives of adolescent alcohol consumption, and the risk factors that play into alcohol initiation and continuation. Finally, family, school, and peer systems make up a huge portion of the influence on adolescent drinking behaviors. These systems may be able to influence adolescents positively if they are aware of different factors that can influence adolescents negatively.

As mentioned previously, this study shares similarities with previous research works. However, it sets itself apart from the other studies by including a wide repertoire of variables including personal factors like age and gender, family, school, and peer factors. As a result, the current study creates a space for exploring how different factors surrounding an adolescent's life can encourage their drinking behaviors, and that too, in a Turkish cultural setting. This is important given the understanding that adolescent behaviors are generally shaped by different environmental, social, and biological factors (Ennet et al., 2008; Kliewer & Murrelle, 2007; Grant et al., 2005; Vermeiren et al., 2003; Kilpatrick et al., 2000). Furthermore, unlike previous studies, the sample used in the current study consists of participants from three different high schools (private, vocational, and Islamic vocational/Imam Hatip) in Istanbul. That is, the

current study boasts a wide range in sample distribution especially across different high schools in Istanbul. As far as literature goes, prior studies in Turkey have not studied as many variables in as many types of Turkish schools. Consequently, the current study opens up opportunities to understand the nature of influence and the power it holds in shaping adolescent behaviors.

1.4 Variables

The dependent variable of the study is adolescent alcohol consumption. In the current study, adolescent alcohol consumption is defined as the use of alcoholic beverages at least once in the past month by children between the ages of 11 and 19. Apart from the dependent variables, this study makes use of several independent variables categorized under broader terms like demographic, family, peer, and school variables. Each of these umbrella terms hosts distinctive variables underneath, all of which will be studied with adolescent alcohol consumption.

Firstly, the current study makes use of demographic variables like age, gender, area of residence, and household income. Variables of age and gender are quite self-explanatory and do not require elaboration. However, it is important to note that the variable of age signifies adolescents between the ages of 11 and 19. Area of residence refers to where the participants reside; either in the Bağcılar district of Istanbul or outside Bağcılar. Finally, the household income refers to the monthly income that the family brings in and is measured between having no fixed income and having an income of 1600 TL and more.

Family variables are studied extensively in this research and consist of parental marital status, mother's level of education, father's level of education, mother's work status, father's work status, mother's alcohol use, father's alcohol use, and siblings' alcohol use. Firstly, we have the parental marital status that is defined as the current relationship status between both parents. This could range from being married or divorced to still living together despite divorce or living separately despite being married. Next, we have the current education levels of both mothers and fathers, which range from illiteracy to university graduation. Further, the work status of both parents is defined as the current occupation of both father and mother, which includes options

like unemployed, retired, laborer, office holder, and tradesmen. Next is family alcohol use, which is defined as the occasional or current consumption of alcoholic beverages by fathers, mothers, and/or siblings.

Peer variable or peer alcohol use can be defined as the current use of alcoholic beverages by peers. Under school variables, we have the types of school and school attendance. The types of schools are defined as the three different types of schools in the Turkish education system. These are private schools, vocational schools, and Islamic vocational (Imam Hatip) schools, where the data was collected from. The next variable of school attendance can be defined as the number of days students missed or did not attend school. Each of these variables was clubbed under such broad terms for the sake of convenience as listing them out separately would have made it all the more difficult to make sense of the research objectives. Each of the variables, however, is separately analyzed and discussed in the later chapters of this research.

1.5 Aims and Objectives

The current research aims to explore the prevalence of adolescent alcohol consumption in Istanbul. For this purpose, the prevalence of adolescent alcohol consumption will be measured across demographic factors like gender, age, residence, and household income. Next, we aim to explore the relationship between alcohol consumption among adolescents and demographic factors, family variables, peer alcohol use, and school variables. Further, we will attempt to see if these variables directly impact adolescent alcohol consumption. It is important to note that the related variables of this study have been clubbed together under the titles; demographic variables, family variables, peer variables, and school variables, to present the hypothesis in an orderly manner. All of the variables, if listed separately, would account for a large number of hypotheses. Instead, each of these variables would be separately analyzed in the results and discussion sections of the paper. Therefore, the current study aims to fulfill the following objectives:

1. To measure the relationship between alcohol consumption and each of the demographic variables in Turkish adolescents.

2. To measure the relationship between alcohol consumption and each of the family variables in Turkish adolescents.

3. To measure the relationship between alcohol consumption and peer alcohol use in Turkish adolescents.

4. To measure the relationship between alcohol consumption and each of the school variables in Turkish adolescents.

5. To measure the impact of demographic, family, peers, and school variables on alcohol consumption in Turkish adolescents.

1.6 Hypothesis

It is hypothesized that:

H_1: There is a significant relationship between alcohol consumption and each of the demographic variables in Turkish adolescents.

H_2: There is a significant relationship between alcohol consumption and each of the family variables in Turkish adolescents.

H_3: There is a significant relationship between alcohol consumption and peer alcohol use in Turkish adolescents.

H_4: There is a significant relationship between alcohol consumption and each of the school variables in Turkish adolescents.

H_5: Demographic, family, peers, and school variables significantly impact on alcohol consumption in Turkish adolescents.

CHAPTER II

LITERATURE REVIEW

2.1 Adolescent Alcohol Consumption

Adolescents are at an age where they are easily manipulated and vulnerable to their surroundings. This stage in their lives is characterized by unexpected, and often confusing changes across multiple spheres of functioning; biological, cognitive, and social (Windle, 2000). The onset of puberty also opens up new experiences in terms of heightened levels of emotional volatility, increased levels of negative affect, and increased risk-taking behaviors (Gunn & Smith, 2010). This period in their lives is instrumental in the successful resolution of adolescent developmental goals. Self-esteem, an important developmental goal, is a construct that determines an individual's responses to external stimuli and the environment. Adolescents who are plagued by fluctuating self-esteem need to belong to certain peer groups to feel satisfied with their selves (Satan, 2011). Peer approval and belongingness to those peer groups can shape adolescent behaviors to a large degree.

Additionally, these changes make them highly susceptible to acts of violence, delinquency, and/or risky behaviors (Squeglia et al., 2017; Windle, 2000). Problematic behaviors are those that deviate from generally accepted social and legal norms. Such behaviors are socially disapproved by institutions of authority and are often responded to with legal action, social rejection, or incarceration (Siyez & Aysan, 2007). The period of adolescence is a turbulent time marked by a tendency to engage in problematic behavior. The behaviors mentioned here include illicit drug use, cigarette smoking, sexual behaviors (Kulbok & Cox, 2002), drunk driving, and missing school, among others (Squeglia et al., 2017). These behavioral changes are also a part of the adolescent experience, owing to the lack of prefrontal cortex maturity (Spear, 2000). Alcohol initiation and consumption are major consequences of the behavioral changes observed in adolescence. Adolescent alcohol consumption typically begins in early adolescence with experimentation and gradually increases to peak usage in late

adolescence or early adulthood (Webb, Bray, Getz & Adams, 2002). What's more, earlier drinking behaviors can lead to later alcohol dependence and alcohol-related health concerns (Ryan et al., 2010; Grant et al., 2005; Hingson, Heeren, Zakocs, Winter & Wechsler, 2003). These health concerns may present themselves as brain damage, acute and chronic illnesses, cardiovascular diseases, diabetes, hypertension, and cancer, etc. (Charro Baena et al., 2018; Mostofsky et al., 2016).

Mental health has also been implicated in alcohol consumption and may manifest as depression or anxiety disorders (Mostofsky et al., 2016). These issues bring to light the negative effects that alcohol consumption can have on adolescent lives. Drinking behaviors are almost always debilitating and crush the foundations of one's social and psychological lives. The earlier it starts, the worse it gets. The extent of this is put in perspective considering the large expenditure of public and private resources on the health care system, social services, and the justice system demanded by alcohol-related problems in the youth (Englund, Egeland, Olivia & Collins, 2008). However, alcohol consumption does not always have negative consequences, typical consumption can stimulate positive experiences of having fun, socializing, or making new friends (Lee, Maggs, Neighbors & Patrick, 2011). These positive experiences, albeit short-term, signify the need to make a distinction between problematic consumption and typical consumption of alcohol.

Adolescents may pick up drinking habits from a couple of different sources, be it peers, family, school, or the neighborhood they are from. Community violence has often been cited as one of the reasons that adolescents may pick up substance use or drinking. The stress of witnessing or being a victim of community violence can lead to alcohol use as a coping strategy (Vermeiren et al., 2003; Kilpatrick et al., 2000). Kilpatrick and colleagues identified that more than 10% of the participating 17-year-olds had a current alcohol and substance dependence, owing to either experienced or observed violence and familial alcohol problems. Alcohol use in adolescents is also preceded by social norms and social media influences. For example, evidence suggests that adolescents who perceive alcohol consumption as normative are more likely to have a positive attitude towards alcohol and hence, more likely to engage in alcohol consumption (Litt & Stock, 2011). On the other hand, Kliewer and Murrelle (2007) claim that a community that encourages certain conventional beliefs and practices

against substance use or alcohol use can influence the delay or prevention of adolescent alcohol use. For example, religious communities are claimed to have adolescents who engage in less risky and deviant behaviors, either because of their own belief in God or their parent's beliefs.

To study the patterns of adolescent substance use and alcohol abuse, large-scale projects were conducted in many countries. The European School Survey Project (ESPAD) is one worth mentioning especially because Turkey was one of the participants in this project. As compared to the rest of the countries taking part in the study, Turkey (6 cities) showed a significantly lower prevalence of alcohol use in the last 12 months (35% vs 83%) and substance abuse (ESPAD, 2003). The prevalence of alcohol use and other substances were considerably lower in Turkey compared to other Western countries and the bordering regions of Greece and Georgia (Evren et al., 2014; Tot et al., 2004). Pumariega and colleagues (2014) conducted a study with Turkish youth and found that out of the 28,303 participants 45.5% engaged in lifetime smoking and 32.5% in alcohol use. The authors maintained that the results showed similarities with other similar studies conducted in developing nations undergoing severe globalization (Pumariega et al., 2014). However, literature has also been pointing towards a decreasing trend in adolescent alcohol use in Istanbul (Evren et al., 2014; Ögel, Taner & Eke, 2006). For example, a cross-sectional study in Turkey with 7700 students from 9 different high schools revealed adolescent alcohol use to be only 4.4% of the sample collected (Guler, Güler, Ulusoy & Bekar, 2009). This result was considerably lower than the other Turkish studies that were referred to by the authors. In Mersin, Turkey lifetime alcohol rates were 24.5% out of the 4143 high school student participants (Şaşmaz et al., 2006). Lifetime alcohol consumption has further been established to have psychological and behavioral consequences in adolescents (Evren, Evren, Bozkurt & Ciftci-Demirci, 2015).

As mentioned previously, alcohol use in adolescents is preceded by environmental, constitutional, and sociodemographic predictors. It is important to identify such predictors and correlates and work on them to ensure a reduction in underage or adolescent alcohol consumption. Akkuş and colleagues (2017) studied the prevalence of adolescents in Turkey and identified that the rates of those who have consumed alcohol at least once in their lifetime were 18.7% and those who consumed alcohol

almost every day were 1.8% of 1997 students. These numbers are considerably underwhelming as the rates of students who consume alcohol are significantly less. Furthermore, the study also looked into the possible predictors/correlates that are associated with adolescent alcohol consumption. It was identified that alcohol use was higher in male students, from vocational schools, belonging to the 12th grade, having low school engagement, having undergone severe disciplinary actions at school and punishments at home, having peers who abused alcohol and other substances, and having undergone prior psychological treatment (Akkuş, Karaca, Şener & Ankaralı, 2017). This study is a perfect example of the factors of influence associated with adolescent alcohol use. Most of the literature written about this subject also looks at these factors. As evident from Siyez and Ayan's (2007) study that looked into the psychosocial risk factors preceding adolescent alcohol use in Izmir, Turkey. They discerned stress, depression, alienation, low school engagement (school dropout), parental factors, peer factors, peer pressure, neighborhood factors, association with problematic cliques/gangs, and availability of illicit drugs, as important psychosocial risk factors leading up to adolescent alcohol consumption (Siyez & Aysan, 2007).

2.2 Causal/Theoretical Framework

Different theoretical frameworks implicate different risk factors or causal factors associated with adolescent alcohol consumption. These theories vary from cognitive and personality theories to social learning and social attachment theories. For example, cognitive theories assume that adolescent alcohol use is a direct consequence of poor decision-making capacity, whereas personality theories highlight individual and affective characteristics that lead to deviant behaviors like alcohol use (Griffin, Scheier, Botvin & Diaz, 2000). Likewise, social learning theories highlight the importance of the negative influences posed by alcohol-using role models and social attachment theories explain how adolescents withdraw from their families, parents, or school, and instead attach themselves to deviant (alcohol using/abusing) peer groups (Griffin et al., 2000). These theories suggest an overlap of factors that ultimately encourages an adolescent to pick up deviant habits. In other words, adolescent alcohol use can be understood when studying all of these risk factors together rather than focusing on each one separately. This attests to the close interrelation between many of these risk factors.

Baumrind and Moselle (1985) provide seemingly appropriate propositions regarding the negative effects of adolescent alcohol or drug use. The authors conclude that early alcohol or drug use may obstruct the acquisition of important cognitive and emotional self-regulatory mechanisms necessary for the successful resolution of age-appropriate milestones (Scheier & Botvin, 1996; Baumrind & Moselle, 1985). Not only does alcohol consumption impair one's physical health but also impedes the attainment of important cognitive and emotional skills. Hence arises the question; why do adolescents initiate alcohol use? Is it a genetic predisposition that pulls them to alcohol or are there certain environmental characteristics that may act as a potential risk factor? Finding answers to these questions would help academicians, policymakers, school administrators, and parents in devising policies and strategies that could help in delaying or preventing adolescent alcohol consumption.

2.2.1 Genetic Models and Problem Behavior Theory

In an attempt to understand some of these questions, twin studies were conducted, which revealed the presence of a genetic component in the manifestation of adolescent drinking behaviors (Grant et al., 2005; Kendler, Karkowski, Neale & Prescott, 2000). Twin studies have maintained that 40-60% of the risk of alcohol dependence is made up of genetic factors (Heath et al., 2001). That is, genetic factors constitute 14-40% of the variance in alcohol initiation and about 20-35% of the variance in the regular use of alcohol (Hopfer, Crowley & Hewitt, 2003). Further, Jessor's Problem Behavior Theory (1992) posits that certain individuals are genetically predisposed to developing problematic behaviors such as early alcohol consumption. It is safe to assume that genetic predisposition is an important factor in adolescent alcohol initiation, more so for regular drinkers than the occasional ones. Other theories have come up with answers such as the involvement of temperamental characteristics that predispose adolescents to alcohol use (Biogenetic-dispositional models), or family and peer influences that lead to early alcohol use (socialization models), and adolescent alcohol use that is a direct consequence of affect regulation (Windle, 2000).

2.2.2 Ecological System's Theory

Bronfenbrenner's Ecological System's Theory (1997) suggests that human development is an intricate process of complex relationships and multiple levels of social contexts. The theory explores adolescent behavior in terms of its relationship with various social institutions like family, peers, schools, and neighborhoods (Bronfenbrenner, 1979). According to Bronfenbrenner, these systems do not influence adolescent behaviors independently, but rather through an intricate web of interrelatedness. Therefore, studying just one of these factors separately would not give us a comprehensive understanding of adolescent behaviors. Ennett and colleagues (2008) explored Bronfenbrenner's theory concerning adolescent alcohol consumption and relayed that the effect of school, peer, family, and neighborhood contexts significantly predict the development of adolescent alcohol consumption from age 11 to 17. Most of what influences adolescent alcohol use comes from modeling drinking behaviors by parents, peers, and adults alike (Ennet et al., 2008). The theory highlights the importance of social bonds and modeling influences that adolescents may receive from their immediate environment. This idea gains support from another theory, Albert Bandura's Social Learning Theory.

2.2.3 Social Learning Theory

Albert Bandura's Social Learning Theory posits that adolescents acquire drinking behaviors primarily through role models such as parents and peers (Duncan, Duncan & Strycker, 2006). Adolescents consider parents, peers, and school administrators as immediate socializing agents from whom behavior is modeled and learned. Accordingly, the importance of social relationships in adolescent lives is established. The Social Learning Theory also demonstrates the role of positive and negative expectancies in initiating and sustaining adolescent alcohol consumption (Chartier, Hesselbrock & Hesselbrock, 2010). Positive influences from socializing agents, immediate environments, or personal intrinsic factors can help negate or moderate the relationship between adolescent alcohol use and risk factors (Fergus & Zimmerman, 2005). In other words; parental support, peer support, external social and emotional support, high self-esteem, etc. can all work towards reducing or delaying the risk of adolescent alcohol consumption.

2.2.4 Social Control Theory and Social Disorganization Theory

On the other hand, negative environmental and social influences may encourage adolescent alcohol use. As one of the most widely used and tested theories in criminology, the Social Control Theory (Hirschi, 1969) expounds that humans try to regulate their behavior towards conforming to societal rules and regulations (Nagasawa, Qian & Wong, 2000). Conformity is maintained through the social bonds they create with conventional institutions such as family, parents, peers, and teachers. That is, these social bonds are necessary models for adolescent behavior, allowing them to conform to societal norms. However, weak social bonds, like bad parenting or negative peer influence, can instead predict deviant behaviors such as adolescent alcohol use (Yuksek & Solakoglu, 2016; Trucco et al., 2011). Similarly, The Social Disorganization Theory expounds that disadvantaged neighborhoods, with few social and economic resources, lack the community social control necessary to keep deviant behaviors at bay (Shaw & McKay, 1943). A disadvantaged neighborhood could indicate poverty, parent's socioeconomic status, parent's marital status, the ready availability of alcohol/drugs, crime rates, and more (Brenner et al., 2011). According to this theory, neighborhood socioeconomic factors influence adolescent alcohol consumption albeit indirectly.

2.2.5 Family Socialization Models

Apart from environmental and social factors, the current study also focuses on family and peer influences on adolescent alcohol use. Family socialization models expound on this idea by explaining that children learn drinking behaviors or any social behavior for that matter, through a socialization process firstly with parents and then subsequently with friends (Barnes, Reifman, Farrell & Dintchef, 2000). This transition of influence from parents to peers/friends is expected as adolescents tend to be closer to peers rather than parents during the later years of their adolescence. Furthermore, family socialization works by linking individual factors (such as biological and psychological) and the overarching cultural and sociodemographic factors (Barnes et al., 2000). That is, through this socialization process, children are deeply impacted by the larger cultural dimensions, political climate, and societal conventions directly or indirectly. The interplay of individual factors, societal/cultural factors, and

parental/peer influence directs adolescent behaviors to a large degree. Should the family be problematic or the neighborhood aggravating, adolescents may find themselves involved in deviant behaviors more often than not.

2.2.6 General Strain Theory

A different perspective can be seen from Agnew's (1992) 'General Strain Theory' which postulates that people exhibit deviant (or criminal) behaviors to prevent negative stimuli from occurring or the loss of positive stimuli. This could include anything from economic strain to their goals being blocked (Orak & Solakoglu, 2017). Although the occurrence of negative stimuli or the loss of positive stimuli does not necessitate deviant behavior, it leads to negative affective states such as anxiety, depression, or anger for which deviant behaviors are picked up as coping strategies (Agnew, 1992). Therefore, it can be assumed that adolescents drink alcohol due to the strain they face from their immediate surroundings (family, friends, school, etc.). Agnew's theory gives as much importance to personal and situational factors, as it does to environmental and social factors. Previously mentioned factors of academic pressure, school strain, family conflict, and peer pressure can be so strenuous that individuals are forced to exhibit deviant or criminal behaviors. Orak and Solakoglu (2017) examined adolescent alcohol consumption in light of the General Strain Theory in Turkey and revealed that economic strain, peer strain, and school strain were significantly related to adolescent alcohol use.

2.3 Personal Risk Factors

Research has identified a collection of different individual factors that are implicated in adolescent alcohol use. Some of these are positive alcohol expectancies, poor problem-solving skills, poor self-control, exhibiting sensation-seeking or risk-taking behaviors, and high levels of perceived alcohol use (in immediate surroundings) (Griffin et al., 2000). Personality dimensions have been largely studied in the context of alcohol abuse and rarely in the context of alcohol use/consumption. The Motivational Model of Alcohol use by Cox and Klinger (1988) stipulates that personality factors affect alcohol consumption through their association with drinking motives. Drinking motives are perhaps the most important antecedent of alcohol use

as it lays out the motivation behind said behavior. That said, the personality dimension of impulsivity is present at elevated levels in at-risk individuals, alcohol consumers, and heavy drinkers (Stautz & Cooper, 2013; Bjork, Hommer, Grant & Danube, 2004). This relationship is reciprocal, as heightened impulsivity leads to alcohol consumption which is further exacerbated by the neurobiological effects of alcohol (Stautz & Cooper, 2013). According to Gunn and Smith (2010), the different traits associated with impulsive behavior, such as positive urgency, negative urgency, and sensation seeking influence the adolescent learning process, which in turn promotes the onset and continuation of adolescent alcohol consumption. Adolescents who possess high negative urgency tend to learn that alcohol can act as a coping strategy that alleviates distress leading to positive social interactions (Gunn & Smith, 2010). The learning, that alcohol can reduce distressing signals which can then increase positive social interaction, can reinforce drinking behaviors in youngsters, making way for a vicious cycle of use and abuse. Similarly, adolescents possessing high positive urgency tend to learn that alcohol use is related to risky and problematic behavior (Gunn & Smith, 2010). Such forms of learning affect an individual's alcohol intake for the better or worse. Additional traits like sensation-seeking, neuroticism, conscientiousness, and extraversion are also implicated in increasing/decreasing the effects of the above-mentioned learnings (Curcio & George, 2011; Gunn & Smith, 2010; Kuntsche, von Fischer & Gmel, 2008).

Further, self-esteem is another factor that has especially been studied along with adolescent alcohol use. This is because the period of alcohol initiation in children usually begins and escalates in early adolescence (Oesterle et al., 2004). Early adolescence is also the period in an individual's life when they are riddled with a fluctuating and vulnerable sense of self. This vulnerability taints almost all aspects of an adolescent's life, from emotions to behaviors. Consequently, low self-esteem has repeatedly been found to be associated with adolescent alcohol use albeit inconclusively (Trucco, Connery, Griffin & Greenfield, 2007; Scheier, Botvin, Griffin & Diaz, 2000). One particular study in Turkey showed that adolescents who consume alcohol face higher levels of peer pressure and have lower self-esteem levels (Satan, 2011). Fisher and colleagues (2007) tried to understand the relationship between types of self-esteem, gender, and adolescent alcohol consumption. The findings were rather interesting given alcohol initiation was associated with greater athletic self-esteem in

boys and social self-esteem in girls. Both forms of self-esteem ensure adolescent participation in various social settings priming them to engage in more alcohol-related activities as well. Furthermore, greater scholastic self-esteem was inversely associated with adolescent alcohol use (Fisher, Miles, Austin, Camargo & Colditz, 2007). That is, the higher the scholastic performance, the lower the chances are of alcohol consumption. Alcohol use in adolescents may be a way to compensate for the lack of self-esteem and self-worth they experience (Scheier et al., 2000). Alcohol and other such substance provide individuals with an escape that dampens negative emotions and provide them with a "happy buzz".

When it comes to emotions, and specifically negative emotional experiences, an increase in adolescent alcohol behaviors are tied with them (Telef, 2014). Other studies have also identified dysregulation as a potential risk factor for adolescent alcohol use (Thatcher & Clark, 2008; Kliewer & Murrelle, 2007; Mezzich, Tarter, Giancola & Kirisci, 2001). Dysregulation is defined as an individual's incapacity to modulate affect, cognition, and behavior resulting in excessive and poorly managed responses to environmental stimuli. Psychological dysregulation is characterized by deficits in all three facets of human functioning: behavior, emotion, and cognition. For example, dysregulation includes behavioral impulsivity, emotional lability, and executive cognitive dysfunction (Thatcher & Clark, 2008). Childhood dysregulation has been linked to adolescent alcohol and substance use (Kliewer & Murrelle, 2007).

Adolescent alcohol consumption is impacted by several factors as can be understood from the sections above. These factors are continuously working with and against each other in creating the appropriate environment for adolescents to pick up drinking habits. The transition from childhood to adolescence is an important period in a child's developmental timeline. For example, adolescent brains are highly sensitive to the effects of alcohol leading to greater chances of addiction and produce lesser cues to regulate alcohol intake as well (Nixon & McClain, 2010). The stress accompanying this transition can cause changes in adolescent personality and behaviors. The transition is also affected by various environmental forces that lay the groundwork for adolescent alcohol consumption. Interactions between different environmental factors such as parental and peer influence, sociodemographic factors of the adolescents and their families, educational qualifications, school factors, etc. can influence adolescent

drinking behaviors to a great extent. These concepts encourage the implementation of primary intervention that often translates to prevention tactics. Identifying the environmental and sociodemographic risk factor provides us with an understanding of what needs to be changed to ensure a reduction in adolescent alcohol consumption.

2.3.1 Adolescent Alcohol Expectancies

Alcohol-related cognitions are beliefs, attitudes, or predictions about the self and the world that are known to predict later alcohol consumption and these factors are prone to modifications by external stimuli (Newton, Barrett, Swaffield & Teesson, 2014). According to Newton and colleagues (2014), alcohol-related cognitions are based on the assumption that cognitions are susceptible to change, and this further leads to changes in behavior. One such cognitive process is called alcohol expectancies that are both positive and negative. These are predictions of alcohol use, for example, positive alcohol expectancies predict alcohol use and negative alcohol expectancies predict abstinence (Bekman et al., 2011). The underlying mechanism for alcohol-related cognitions and expectancies comes from the Expectancy theory, which postulates that direct or indirect exposure to alcohol can allow adolescents to make informed connections between drinking and favorable outcomes (popularity or pleasure) (Newton et al., 2014). This learning that drinking can have desirable outcomes creates expectancies that later motivates adolescents to consume alcohol. That is, alcohol-related expectancies about perceived outcomes of drinking behavior are said to affect whether adolescents start to drink, become binge drinkers, or become addicted (Engels, Wiers, Lemmers & Overbeek, 2005). Newton and colleagues (2014) were also able to establish that alcohol-related expectancies are significantly associated with alcohol consumption and bingeing over time.

As such, this is why most theorists like the Cognitive Behaviorists believe that changing the thinking drives or cognitive processes of individuals can help in preventing or reducing the conversion of these thoughts to alcohol-consuming behaviors. Having an idea or a certain amount of knowledge of the risks associated with alcohol use can act as a protective factor against alcohol use/abuse in adolescents. Tot and colleagues (2004) explain that educating adolescents on the risks associated with alcohol/substance-using peer groups can help increase awareness about this issue.

This becomes even more important when considering the finding that non-drinking adolescents who have positive views on alcohol are more than likely to initiate drinking a year later (Fisher et al., 2007). This is where awareness of alcohol and its dangers becomes necessary. Alcohol-related communication and rules can affect adolescent alcohol-specific cognitions which further creates a normative framework that acts as an external control system for adolescent behaviors. The framework may contain the dos and don'ts of alcohol usage and is significantly associated with adolescent lifetime alcohol use (Mares et al., 2013). This shows that alcohol-related communication is necessary for adolescents to form healthy expectations and understanding alcohol use. Adolescent alcohol expectations are heavily influenced by parental, peer, media, and societal expectations/norms of the same. Therefore, it is instrumental that adolescents be involved in alcohol-related conversations and conferences. The main concern is the quality of such communication and not the frequency of it, as the quality of communication can also lead to higher self-efficacy in adolescents that is associated with lower alcohol consumption (Mares et al., 2013).

Human behavior is partly motivated by our expectations of how a certain thing or event might be like. This is the case for adolescents and their consumption of alcohol. Adolescents may possess positive or negative expectancies regarding alcohol use that shape their behavior and decide whether they will also get on the bandwagon of drinking culture. Expectancies allow individuals to predict outcomes for how certain behaviors would manifest. Positive alcohol-related expectancies can develop pretty early on and can predict alcohol consumption during adolescence (Bekman et al., 2011). Moreover, expectancies predict the motivations behind actions like with drinking behaviors. These drinking motives may be drinking for social rewards, enhanced positive mood, dealing with negative emotions, and avoiding social rejection (Engels et al., 2005). Further, these motives can create different drinking habits in adolescents. Engels and colleagues (2005) conducted a study aimed at examining the associations between drinking motives, alcohol expectancies, self-efficacy, and alcohol use among Dutch adolescents and adults. The results indicated that social and enhancement motives were the most cited reasons for alcohol consumption and that coping motives were positively associated with these two motives. Further, the study also revealed that drinking motives, alcohol-related expectancies, and self-efficacy

were revealed to make up for the most variance in predicting general drinking measures than in predicting situational drinking (Engels et al., 2005).

What kind of expectancies adolescents may have, depends on their attachments to conventional institutions like family and school, society and its cultural values, media, etc. These expectancies, which are formed quite early in life, develop over time thereby encouraging or discouraging adolescents from substance/alcohol use (Simons-Morton, 2004). One factor that affects adolescent expectations of alcohol use is internalized parental expectations. The literature suggests there is a positive correlation between adolescent behavior and parental expectations (Nash et al., 2005). The transmission of parent's norms regarding alcohol use on adolescents is what is known as the process of internalization (Brody, Ge, Katz & Arias, 2000). The authors revealed through their study that parent's alcohol-related expectations affected children's expectations about alcohol use. For example, parents who had positive alcohol-related expectations affected adolescent alcohol use 2 years later and those parents who have negative expectations had adolescents who reflected those conservative alcohol norms a year later (Brody et al., 2000). It is widely accepted in literature that what predicts adolescent alcohol consumption the most consistently is the alcohol-specific rules that parents set for their children to reduce or prevent health-risk behaviors (Mares, Lichtwarck-Aschoff & Engels, 2013). Parental expectations are also very important in leading adolescents to or away from alcohol consumption. For example, studies maintain that adolescents who perceive their parents as having positive expectations of alcohol may be more likely to consume alcohol than adolescents who perceive the opposite. That is, adolescents who believed their parents approved of alcohol consumption, even without any direct indication of it, were more likely to take up alcohol consumption (Nash et al., 2005). Simons-Morton (2004) found that adolescents with positive alcohol expectations that are balanced by negative parental alcohol expectations held a significantly lower chance of alcohol consumption than adolescents and parents both having positive alcohol expectations. This is especially so during early adolescence wherein teens are still influenced by parents to a high degree (Simons-Morton, 2004).

Alcohol advertising is a notable source of alcohol-related communication. Alcohol advertising plays an important role in shaping and reshaping adolescent perceptions

about alcohol and its consequences. How this works is that continued exposure to alcohol advertising creates certain cognitive responses within adolescents that result in the formation of positive expectancies (Fleming, Thorson & Atkin, 2004). Accordingly, alcohol advertising focuses on selling fantasies about an idealized lifestyle, which can incidentally be achieved should people buy and consume the alcoholic beverage being advertised. These fantasies are designed to be psychologically attractive to those who find themselves exposed to alcohol advertising. The advertising agencies use influential characters and promote the idea of wealth, privilege, and social approval as associated with alcohol consumption to promote drinking culture among people. This effect is even greater for adolescents and young adults due to their greater vulnerability to external influences. Fleming and colleagues (2004) explored this concept through the Message Interpretation Model, which expounds that children initially find the role models in alcohol advertisements as desirable, they then identify with these role models, and finally, their identification with these role models would in turn influence children's alcohol expectancies. The authors found that alcohol advertising did indeed have a direct effect on adolescent (15-20-year-olds) attitudes and perceptions towards alcohol consumption. The positive expectancies would then translate to an adolescent's intention to initiate alcohol consumption (Fleming et al., 2004).

2.4 Sociodemographic Risk Factors

2.4.1 Gender

Alcohol use in adolescents is managed by a set of factors, of which gender is perhaps the most studied. Gender as a construct is intimately tied to culture in a reciprocal relationship. Gender roles are often a reflection of certain cultural values and this is the case for drinking behaviors as well. This is the reason why in certain parts of the world you would expect both men and women to consume alcohol, whereas in other parts of the world women drinking is somewhat of a social taboo. Consequently, the bulk of the research on adolescent alcohol use has focused on males. However, recent studies have reported on a steep inclination in alcohol consumption among younger females (Bolland et al., 2013; Chen & Jacobsen, 2012). This could be because of the rising social acceptability women face in consuming and partaking with the drinking

culture in pubs or other public spaces. Traditionally males have a higher prevalence of alcohol use than females, but this pattern holds different for different ethnic groups (Nolen-Hoeksema, 2004; Griffin et al., 2000). This was largely due to societally assumed gender roles wherein females have to maintain sobriety to fulfill their social roles which consisted mainly of nurturing, child-rearing, and family building. Other than societally approved gender roles, gender differences in socialization roles of different ethnicities also influence alcohol use in adolescents (Griffin et al., 2000). Keeping this in mind, it is understandable that a large section of literature focuses on male consumption of alcohol and male drinking behaviors. It is also quite concerning that despite a steadily increasing prevalence of female alcohol consumption, research has been unable to keep up with this trend.

Consequently, the vast area of literature on this topic reveals certain studies as showing a clear demarcation in how genders consume alcohol. However, as with other sociodemographic factors, gender also shows inconsistencies within the literature, with some studies claiming a gender difference in drinking behaviors and some not. The study by Doksat and colleagues (2016) is a prime example of this inconsistency within the literature. The study looked into alcohol consumption between the years 2011 and 2014 in Turkey and revealed that alcohol use was significantly higher in females during 2011, whereas in 2014 such a gender difference was not found. Furthermore, the study reported that female alcohol consumption has reduced by the year 2014 (Doksat et al., 2016). This trend, where female alcohol use seems to be declining over the years, has been reported widely across multiple studies. One explanation given for this phenomenon is that girls (early adolescence) initially have a higher prevalence of alcohol use than boys, however, this trend is diminishing over time leaving not much of a difference in alcohol use between genders (Strycker, Duncan & Pickering, 2003). Torikka and colleagues (2016) came to similar conclusions, that there was a significant gender difference among adolescent alcohol users (boys more than girls) although this difference diminished between the genders after a 12-year follow-up. Furthermore, Nolen-Hoeksema (2004) has identified that not only are fewer women consuming alcohol, but the proximal (lowering of cognitive and motor functioning at low levels of alcohol) and distal consequences (poor reproductive health) of alcohol use manifest earlier in women, who face it at a higher

degree than males. These issues may discourage women from excessive alcohol consumption and create in them negative expectancies towards future alcohol intake.

Among studies that have reported on a significant gender difference, there are still differences in that some studies report adolescent alcohol use to be higher in males and some in females. Kristjansson and colleagues (2009) reported girls to be at a higher risk of alcohol consumption than males. Conversely, a relatively large portion of the literature suggests boys/males are at a higher risk of alcohol consumption than females. For example, according to Kuntsche and colleagues (2015), adolescent males drink more frequently (often drunk) than females especially in late adolescence/early adulthood. The study also revealed that girls were more likely to engage in coping drinking whereas boys drink more for social and enhancement (of positive affect) motives (Kuntsche et al., 2015). Further, Guler and colleagues (2009) reported male adolescents as showing a significantly higher prevalence of alcohol use than females. As a result, the psychological and behavioral consequences of alcohol use are more so in males than in females (Evren et al., 2015). Similar findings were reported in Turkey as well, wherein a study conducted in Samsun showed alcohol consumption to be significantly higher in male high school students than in females (Arslan, Terzi, Dabak & Pekşen, 2012). Akkuş and colleagues (2017) sampled students from both vocational and public schools to present a higher percentage of males consuming alcohol than females. This study maintains that despite the sociodemographic differences of students attending public and vocational schools, there was a significant amount of male dominance in drinking culture. The lifetime prevalence of alcohol use was also implicated with gender differences according to a study done in Mersin, Turkey, wherein males adolescents reported higher rates than female adolescents (Şaşmaz et al., 2006; Tot et al., 2004). The dominating presence of males in drinking culture can be associated with the 'male macho image' that is prevalent in most patriarchal societies (Ögel, Tamar, Evren & Çakmak, 2000). In such societies, women engaging in drinking behaviors are heavily frowned upon. This could be the reason for the staggering gender differences (male dominance) in alcohol consumption as observed in Turkey. Surprisingly, a significant amount of literature also attests to the finding that there is not a marked difference in gender associations in alcohol consumption (Alikaþifoðlu et al., 2004). Further, there are also claims that the gender gap observed in alcohol use has been reducing with time (Chartier, et al., 2010). Therefore, findings

of gender differences or lack thereof from these studies mentioned above cannot be generalized to different populations or samples.

Gender differences cover a range of factors associated with alcohol use, from consequences of alcohol usage to factors of influence, gender divides them all. For example, in females, alcohol use is related to internalizing factors (anxiety and depression) whereas in males alcohol use is associated with externalizing factors (aggression, violence, delinquency, etc.) (Bolland et al., 2013; Webb et al., 2002). Since prior literature has already established that alcohol use is significantly associated with externalizing factors, it explains why males tend to use/abuse alcohol more than females (Squeglia et al., 2017). Among other factors that show an association with gender, early initiation of alcohol use among adolescents seems to show gender differences as well. For example, in females, early alcohol initiation was associated with early sexual initiation, and in males, it was associated with later internalizing symptoms (Brook et al., 2010; Odgers et al., 2008). This report reiterates the association between early alcohol use/initiation and risky/deviant behaviors among adolescents. Further, according to one study, the relationship between binge drinking and delinquent behaviors was stronger for males than for females (Barnes, Welte & Hoffman, 2002). When it comes to the nature of influence, we have identified that a variety of different factors play a role in initiating or sustaining adolescent alcohol use. It can be assumed that these factors are also related to gender in one way or the other. For example, parental and peer influences on adolescent alcohol consumption did not discriminate by gender. In other words, parental and peer influence both had the same effect on adolescent alcohol consumption (Scholte et al., 2008). Perceived parental monitoring was another factor that seemed to affect adolescent male and female alcohol consumption differently. As seen from a study by Webb and colleagues (2002), perceived maternal monitoring was a significant predictor of current adolescent alcohol consumption and less alcohol use over time in female adolescents more so than in males. Moreover, with genetic influences as well, studies suggest that there is a strong genetic predisposition for alcoholism in males as compared to females (Dube et al., 2002).

2.4.2 Age

According to Piaget, children are afflicted with a sense of egocentrism, an inability to separate between subject-object relations. This egocentrism relays onto the period of adolescence wherein it becomes what is called adolescent egocentrism (Alberts, Elkind & Ginsberg, 2006). Elkind (1967) elaborated on Piaget's theory by introducing this concept of adolescent egocentrism, which was further divided into two related constructs – personal fable and imaginary audience. The construct of the personal fable allows the adolescent to believe that he is unique and deserving of the center stage. The personal fable indulges the adolescent, allowing him to believe that his feelings, his problems, and his experiences are like none other. This feature in adolescence is also associated with adolescent risk-taking behaviors such as substance or alcohol use (Alberts et al., 2006). Since risk-taking behaviors are considered a result of cognitive immaturity this association with the personal fable makes sense. Therefore, the cognitive immaturity seen in adolescence brings about constructs such as the personal fable, further leading to risk-taking behaviors (alcohol use). This also explains why adolescence is the most cited age of onset for alcohol initiation. Evidence suggests the same, that adolescent alcohol behavior is related to their age and the understanding of alcohol as something bad or good (Herken, Özkan & Bodur, 2000). This understanding that comes with age and social learning is vital to the development of drinking habits among teenagers.

Literature suggests that there are distinct developmental periods that define alcohol consumption in adolescents. In other words, alcohol use in adolescents can start gradually as early as elementary or middle school and become accelerated in high school, after which there is a gradual decrease in adulthood (Li, Duncan, Duncan & Hops, 2001). Greater physical maturity and age are instrumental in adolescent alcohol initiation (Fisher et al., 2007). The central psychological developmental milestones that adolescents are expected to go through include individuation, identity formation, mastery, intimacy, autonomy, and independence (Bray, Adams, Getz & Baer, 2001). That is, there are certain developmental triggers such as the need to create an independent identity, the need to try different lifestyles and take risks, the need to be accepted by a group of peers, or even the need to be treated as an adult, that plays into deviant behaviors like alcohol use (Arslan et al., 2012). It is not surprising then, that

early adolescence (10-15 years/ 7th-8th grade) is often cited as the period when alcohol initiation begins and late adolescence as the period when unsafe alcohol patterns such as binge drinking take root (Chartier et al., 2010). A health report by the Turkish Statistical Institution shows that 53% of individuals reported that they began drinking between the ages of 15 and 19 (Turkstat, 2012). A later study in Turkey found similar results, that approximately 20% of youth started using alcohol before they were 14 (TUIK, 2013). Another study showed that alcohol consumption was seen more in children aged 14 and above in Turkey (Doksat et al., 2016). Bolland and colleagues (2013) conducted a multiple cohort longitudinal study from 1998 to 2011 that targeted adolescents from impoverished neighborhoods. They identified that within their sample, 15% of the participants had consumed alcohol (first time) before the age of 12 and this trend seemed to drastically increase during their early ages and especially between 4th and 6th grade, whence alcohol use seemed to double in prevalence rates (Bolland et al., 2013). Later studies have also come to similar conclusions, that alcohol use in adolescents can lead to a drastic increase in the frequency of consumption from age 12 through 17.

The consensus within the literature is that alcohol consumption increases with age during adolescence (Arslan et al., 2012; Şaşmaz et al., 2006; Kilpatrick et al., 2000). For example, some studies have shown that alcohol consumption increases consecutively as children age from 9 to 11 (Alikaþifoðlu et al., 2004; Ünlü & Evcin, 2014) or 9 to 16 (Strycker, Duncan & Pickering, 2003). This increasing trend can be seen in older adolescents and stabilizes during early adulthood (approx. 21-26 years) (Chartier et al., 2010). The Monitoring the Future Study divulged that 36% of students would have consumed alcohol by 8th grade and 71% of them by 12th grade (Johnston, O'Malley, Bachman & Schulenberg, 2011). That is, both increasing age and increasing school grades are associated with heightened alcohol use in adolescents (Şaşmaz et al., 2006). A study conducted in Turkish high schools shows similar patterns of increasing alcohol use with increasing school grades among adolescents (Akkuş et al., 2017). Given adolescence is a risky period for alcohol initiation, it is pivotal that the effects of early consumption be known. For example, a study exploring the developmental antecedents of youth alcohol consumption revealed that higher alcohol consumption at age 16 increased the chances of heavy drinking in adulthood for both boys and girls (Englund et al., 2008).

When it comes to the relevance of age in factors of influence, there is a trend of declining sibling and peer drinking influence with age (Scholte et al., 2008). Further, elevated externalizing behavior at age 9, lower school achievement at age 12, and having a drinking mother at age 16 significantly predicted heavy drinking or an alcohol disorder in adult males (Englund et al., 2008). However, it must also be taken into account that not all adolescents who drink turn out to be heavy drinkers in adulthood and vice versa.

2.4.3 Socioeconomic Status

Since the year 2000, Turkey has been showing incredible improvements in its economy and social development. The national minimum wage in Turkey for the year 2019 was estimated to be 2,558.4 Turkish Liras per month. Since then, there has been an increase in the amount allotted for the national minimum wage. Leading reforms in major sectors of the government has led to increased employment making Turkey an upper-middle-income country. Nonetheless, the past few years have been witnessing growing economic vulnerabilities, rising inflation, and unemployment (Turkey Overview, n.d.). Istanbul, popularly decreed as the cultural hub of Turkey, sits at the center of the country's economic development. As much as Istanbul contributed to the economic and social development of Turkey, the currency and debt crisis of 2018 hit the city hard. The debilitating economic condition has driven a wedge between the rich and poor of the city. The fluctuating economic and social conditions the country is going through is critical to the construction of social institutions, which will fail in its duty should there be no resource backing it. Socioeconomic status has always been a determining factor in deciding communal development, school structures, parenting styles, etc. As mentioned previously the cultural and economic climate of a country or city decides human attitudes and behaviors. The same applies to adolescent behaviors, choices, and attitudes.

In previous sections of this research, we have attempted to understand Bronfenbrenner's conceptualization of socialization as a prerequisite for adolescents to successfully transition into adulthood. What has been highlighted through this conceptualization is the importance of social systems like family, school, peers, and neighborhoods. In this section of the literature, we will be focusing on how different

neighborhoods and families with different socioeconomic backgrounds fare in shaping parent, peer, and adolescent behaviors. Chuang and colleagues (2005) studied just this as they attempted to explore neighborhood influences on adolescent alcohol and cigarette use through parent and peer behaviors. Disadvantaged neighborhoods are often cited to be hubs wherein drugs and other substances are bartered among adolescents. Such neighborhoods may increase the chances of adolescents being presented with substances like alcohol. Moreover, families in these neighborhoods lack adequate psychological, physical, and monetary resources to keep themselves going, resulting in lower parental monitoring and support. Therefore, disadvantaged neighborhoods are not only limiting adolescent well-being but also suppressing their potential to grow. However, Chuang and colleagues (2005) expanded on two models; the 'Collective socialization models' submit that adults in a neighborhood (disadvantaged or not) take themselves as role models for children who aren't their own. 'Relative deprivation models' put forward the idea that if people feel that they are incapable of fitting into the current environment they may create deviant subcultures to adapt to. These deviant subcultures may take the form of gangs or troublesome peer groups. The results of this particular study revealed that disadvantaged neighborhoods are associated with high levels of peer drinking and thereby associated with increased adolescent drinking (Chuang, Ennett, Bauman & Foshee, 2005). They further revealed that neighborhoods with low Socio-Economic Status (SES) were related to increased parental monitoring whereas neighborhoods with high SES were related to increased parental alcohol consumption, however, this finding was inconsistent with prior research (Chuang et al., 2005). As established, both parental monitoring and parental alcohol consumption are associated with adolescent alcohol consumption.

Generally, SES is calculated via constructs such as family income, parental education, occupation, and race/ethnicity (Oakes & Rossi, 2003). According to a review published by Wiles and colleagues (2007), a report from the Strategy unit's Alcohol Harm Reduction project in the UK revealed that individuals in managerial or professional households consumed more alcohol in the past 5 or more days and that the heaviest drinking was observed among unskilled men. Considering adolescents model parent behaviors, there is a high chance that adolescents in such households initiate alcohol use themselves. However, the authors take caution in the possibility

that a reciprocal effect may be at play as alcohol consumption can itself influence social position (Wiles et al., 2007). One particular study identified that white adolescents coming from low SES households were related to greater alcohol consumption, cigarette, and cocaine use (Goodman & Huang, 2002). The study however reported that this finding wasn't consistent for adolescents from different ethnic/racial backgrounds. According to Goodman and Huang (2002), the presence of depressive symptoms in adolescents plays a major role in facilitating the relationship between SES and adolescent alcohol consumption. However, this does not mean that interventions aimed at reducing depressive symptoms may have any impact on either adolescent SES or alcohol consumption. The reason for the relationship between low SES and adolescent alcohol consumption can perhaps be explained in terms of the parenting styles adopted by parents from low SES households. For example, studies have identified that lower SES is associated with authoritarian parenting style and are more likely to use physical punishments as a consequence of stress-induced from the low SES (Pinderhughes, Dodge, Bates, Pettit & Zelli, 2000). This can in turn cause adolescents to pick up drinking habits as a way to cope.

Although adolescent alcohol use has been largely associated with low socioeconomic status, this finding seems to be inconsistent in later literature (Torikka et al., 2016). This can be seen from a study done in Mersin, Turkey wherein the authors identified adolescents from families of higher socioeconomic status to be at a greater risk of emulating alcohol use than adolescents from lower socioeconomic families (Tot et al., 2004). Similarly, adolescent alcohol consumption was more frequent in higher-income households (Melotti et al., 2011). Spijkerman and colleagues (2008) found that families with high and intermediate SES enforce strict rules on alcohol-related behaviors. Further, the study also revealed that families with higher SES were more likely to have mothers who consumed alcohol as compared to families with low SES and that alcohol was more readily available in households with higher SES than the contrary. That is, there are two different frameworks at work here. On the one hand, higher SES families may be more preoccupied with healthy living and therefore enforce strict alcohol-specific rules on adolescents allowing them to delay or prevent alcohol consumption. On the other hand, high SES families are at a higher social standing and can easily afford alcoholic beverages paving the way for a normalization of drinking culture within the household.

There is growing research that attests to the idea that alcohol consumption in adolescents may be related to a higher SES than previously believed. Having enough financial resources ensures the easy availability of alcohol/substances that may play a factor in increased alcohol use/abuse in adolescents as well. Alcohol use is extremely money sensitive and hence, consumption is assumed to decrease as alcohol prices increase. Naturally, it has been identified that adolescents with more pocket money to spend are more likely to consume alcohol frequently, indulge in public drinking, and binge drinking (Bellis et al., 2007). Similarly, a study was able to identify that alcohol consumption in young adults was associated with higher family SES during childhood (Patrick, Wightman, Schoeni & Schulenberg, 2012). Humensky (2010) conducted a study to examine the relationship between adolescent SES and later substance use and found that adolescents from high SES households (measured by parental education and household income) are more likely to engage in substance use, especially alcohol consumption and binge drinking. However, other studies have also maintained that adolescents with a low socio-economic background or who are afflicted with poverty are more prone to later aggression and heavy alcohol consumption (Najman et al., 2010). Similar findings were attained from a study in Ankara where substance use was explored in two high schools of different socioeconomic backgrounds. It was revealed that despite the differences in socioeconomic statuses, there were no differences regarding alcohol consumption between the schools (Karatay & Kubilay, 2004). Surprisingly, one particular study explored gender differences in the relationship between SES and adolescent alcohol consumption to find that for girls moving to a higher SES neighborhood meant lower chances of alcohol consumption, whereas, for boys, it was the complete opposite (Kling, Liebman & Katz, 2007).

On top of a lack of research exploring the possible connection between socioeconomic status and adolescent alcohol consumption, the existing literature also seems to provide inconsistent results. Some authors have overcome this limitation by suggesting the presence of an indirect relationship between SES and adolescent alcohol use. One such research revealed that children from low SES families are highly susceptible to conduct problems and further that, adolescents with conduct problems are highly likely to consume more alcohol (Meltzer, Gatward, Goodman & Ford, 2003). This indirect relationship is complex in that adolescents from low SES families with conduct issues will inevitably have issues at school with school engagement, school attendance, and

academic performance, further increasing their exposure to potential alcohol use. Furthermore, there is a lack of informative literature on the association between SES and adolescent alcohol consumption in a Turkish context. Consequently, more research into this topic would do wonders to spreading awareness about adolescent alcohol consumption.

2.5 Family Domain Risk Factors

Family plays a huge role in the socialization process of children. This process is instrumental in that if families are unable to provide the right nurturing and encouragement, children can learn problematic or deviant behaviors (Barnes et al., 2000). Nurtured children will be more receptive to family interventions. Family interventions are a positive step in realizing functional adolescent behaviors. Social learning theory postulates that adolescent alcohol culture is acquired primarily through role models like parents and peers (Duncan et al., 2006). Therefore, adolescents are easily influenced by both parents and their peers when it comes to emulating drinking culture. The magnitude of family influence on adolescent behavior is understood better with social learning. A study on 1559 high school students in Konya, Turkey revealed the 11.3% of the sample consumed alcohol once a month, and this was associated with the alcohol users (fathers, elder brothers, and sisters) within the family (Herken et al., 2000). Parent's alcohol consumption often paves the way for the normalization of alcohol culture within the family. To further prove this point, literature shows that most adolescents who initiate alcohol consumption quite early, do so with their parents, family, or at home (Strycker, Duncan & Pickering, 2003). What's even more surprising is that the mere perception of parental approval and family modeling of alcohol and other substances is more than enough to predict adolescent alcohol initiation (Donovan, 2004).

The socialization doesn't end there, as adolescents are often dependent on their parents for both emotional and financial support. Parents, by way of providing them with said support, retain a strong influence over adolescent behaviors, which may prove useful in preventing or delaying alcohol use (Gurbuz, Solakoglu & Lo, 2017). On the other hand, this also means that any form of stress or trauma within the family can cause adolescents to take up drinking behaviors as a way of coping (Dube et al., 2006;

Alikaþifoðlu et al., 2004). Gurbuz and colleagues (2017) studied Agnew's General Strain Theory to explore the role that family plays in adolescent alcohol use and found that while strengthening family bonds tend to delay or diminish adolescent alcohol use, a family-related strain can, in turn, set the stage for or increase adolescent alcohol use (Gurbuz et al., 2017). Moreover, family structure and attachment styles were determined to explain 11% of substance use proclivity among 903 high school students in the Black Sea region of Turkey (Bülbül & Odacı, 2008a). Family is also a source for conventionality and religiosity (if any), which acts as a source of control for younger generations. What's more, family members have reciprocal influences on one another that extends to attitudes regarding alcohol use and abuse (Duncan et al., 2006).

Ryan, Jorm, and Lubman (2010) conducted a systematic analysis of literature that revealed the effects of various patterns of parental influence on adolescent alcohol use. The results indicated that parental alcohol consumption and allowing alcohol to be consumed at home or in social gatherings are significantly associated with early adolescent alcohol initiation (Ryan et al., 2010). Most of the literature attests to this finding that family/parental use of alcohol is a significant factor in adolescent usage of alcohol (Evren et al., 2014; Şaşmaz et al., 2006; Tot et al., 2004; Windle, 2000). What's more, the risk of alcohol dependence doubled in children whose family members abused alcohol (Dube, Anda, Felitti, Edwards & Croft, 2002; Kilpatrick et al., 2000). The risk is even higher for children who have faced adverse life experiences while having alcoholic parents (Dube et al., 2002). Therefore, we can conclude that parental alcohol consumption is a key factor in deciding adolescent alcohol consumption. The nature of this relationship is that parental alcohol consumption has destructive consequences on parental support and parental control, further creating a scenario in which adolescents may engage in deviant behaviors (Barnes et al., 2000).

According to Barnes and colleagues (2000) parenting involves two key processes: parental support and parental control. Support entails engaging in parental behaviors that would indicate to the child that he is loved and accepted, whereas control refers to parental behaviors that direct children to behave in a manner acceptable to parents. A balance between parental support and parental control is optimal for shaping functional adolescent behaviors. For example, should parental control be not moderately applied and instead becomes coercive, it can lead to deviant or problem behaviors in

adolescents (Barnes et al., 2000). Parental monitoring is also one of the strongest predictors to a broad range of positive or negative behavioral changes in children and adolescents. High parental monitoring is associated with greater academic achievement and higher self-esteem, whereas poor parental monitoring is related to externalizing behaviors (aggression, delinquency, violence, etc.) and early initiation of substance and drug use (Webb et al., 2002).

Although studies have looked into father's and mother's influence on adolescent alcohol use separately, their results are inconsistent (Scholte, Poelen, Willemsen, Boomsma & Engels, 2008). However, Tot and colleagues (2004) maintain that both father's and mother's alcohol use predict alcohol use in adolescents and that there is not a difference between the two. Another study showed that poor family management was related to an increase in adolescent alcohol use (Shortt, Hutchinson, Chapman & Toumbourou, 2007). The previous study also revealed that delayed alcohol initiation was associated with strict alcohol-specific rules, quality of parent-child relationships, parental involvement, and good communication (Ryan et al., 2010). Furthermore, there was no clear evidence that parental disapproval of alcohol use is related to delayed adolescent alcohol initiation but rather that it was associated with lower levels of later alcohol consumption (Ryan et al., 2010). The results in the above-mentioned study become even more conclusive when taking into consideration that restrictive parental attitudes were the cause of the decline in adolescent alcohol consumption in Stockholm between 2010-2016 (Carlson, 2019).

Negative family patterns, interactions, and communication have been linked to adolescent substance use issues (Kliewer & Murelle, 2007; Şaşmaz et al., 2006). Family conflicts and a negative family environment can be considered stressors that adolescents may deal with by consuming alcohol or using substances. Family conflicts are a significant predictor of adolescent alcohol use, more so because adolescents tend to model the negative behaviors that their families exhibit as a response to frustrations or rage (Kelly, 2000). Families with poor relationships or communication may also not be as effective in monitoring/managing adolescent behaviors. Good communication is necessary for parental monitoring of adolescent behaviors because more information will be gained by parents from their children's willing disclosure (Stattin & Kerr, 2000). However, studies have also identified that the more parents communicate with

adolescents about alcohol use, the higher the drinking levels of adolescents (Spijkerman, van den Eijnden & Huiberts, 2008). Cohesive families ensure that adolescents have a healthy and supportive environment to learn effective coping mechanisms. Similarly, the quality of adolescent-parent relationships and the productive time spent between them are protective factors against adolescent alcohol initiation (Kristjansson et al., 2009). Quite interestingly, a study revealed that eating dinner with the family every day significantly reduced the risks of alcohol initiation in adolescent girls (Fisher et al., 2007). This translates to the time that adolescents spend with their family allowing the family to retain a certain amount of control over adolescent behaviors.

Therefore, it can be assumed that negative parenting factors such as a lack of communication, modeling drinking behaviors, domestic violence, family conflict, etc., may increase the likelihood of adolescent alcohol consumption. Similarly, positive family factors such as positive family interactions, time spent between family members, quality of communication, parental monitoring, parental disapproval of negative and socially deviant behaviors, etc., can, in turn, lend a positive influence on adolescent alcohol consumption. The positive influence may either translate to an absence of drinking behaviors or a delaying of alcohol initiation. For example, a particular study identified that separation and family conflict predicted increased adolescent alcohol consumption, whereas a sense of separate or individual identity and family cohesion predicted the opposite (Bray, Adams, Getz & Baer, 2001). A study by Nash, McQueen and Bray (2005) provided support to the idea that a good family environment and positive parenting attitudes can lead up to a direct or indirect reduction in adolescent alcohol consumption. Specifically, good parent-child communication, parental monitoring, acceptance, and parental expectations reduced adolescent alcohol intake and the effects of peer influence. Likewise, it was also associated with increased self-efficacy and reduced stress (Nash et al., 2005). Studies have also explored how adolescents with moderate or high levels of parental support consume lesser amounts of alcohol as compared to adolescents with little or no parental support (Borawski, levers-Landis, Lovegreen & Trapi, 200). As mentioned here, parents can nullify or at least modify the effects of peer influence on adolescent drinking behaviors, and this process is entirely dependent on the level of parental disapproval of adolescent drinking (Knafo & Schwartz, 2003).

2.5.1 Parental Level of Education

Parental quality and level of education is an important factor when it comes to adolescent alcohol consumption. A higher social standing and greater parental education have been identified to be associated with greater adolescent alcohol consumption (Maggs, Patrick & Feinstein, 2008). A higher educational qualification in the mother is also a significant factor in adolescent alcohol consumption (Alikaþifoðlu et al., 2004; Tot et al., 2004). Similarly, a study in Turkey revealed that the higher education level of parents predicted risky and delinquent behaviors in adolescents (Aras, Günay, Özan & Orcin, 2007). A higher education qualification could mean better social standing. It can be assumed that parents of a better social standing are more likely to consume alcohol at home, entertain others at home, or visit social gatherings where social drinking is looked at favorably (Maggs et al., 2008). This not only makes alcohol readily available to adolescents who wish to try it but also normalizes drinking culture. An analysis of the Ontario Student Drug Use Survey revealed that adolescents between the ages of 12 and 19 with college-educated parents were not likely to take part in alcohol use or other substance use (Hamilton, Noh & Adlaf, 2009). Educationally qualified parents have the privilege of communicating with adolescents about the negative effects of alcohol use. Parental education may work indirectly in encouraging alcohol use in youth as adolescents are often influenced by their parents on decisions regarding later college attendance. Should adolescents have college-educated parents, they are more likely to pursue a college education themselves. This could in turn provide greater opportunities to engage in substance use and alcohol consumption (Humensky, 2010).

According to Ennett and colleagues (2001), there are three forms of communication styles that parents may adopt to deal with their children's negative behaviors: directive/harder communication, softer communication, and cautionary communication. Directive communication involves sanctions such as telling adolescents not to use alcohol, softer communication relays potential harm, and cautionary communication involves discussions about the influence of media in promoting alcohol use. According to the authors, parents were less likely to use directive communication and instead engaged in softer communication. It was also found that parents who consumed alcohol talked less frequently about rules than did

those who did not consume alcohol. However, the study was unable to establish an effectual relationship between the parental level of education, their efforts at communication, and adolescent alcohol consumption and initiation. On the contrary, at a low significance level, parental communication was seen to result in increased adolescent alcohol consumption (Ennett, Bauman, Foshee, Pemberton & Hicks, 2001). This could be because of an adolescent's need to rebel or go against the directives of their parents as a means of establishing a separate identity. Parents under the pretense of "knowing better" or having enough evidence to suggest the negative effects of alcohol may exert control over adolescents or attempt to direct their behaviors in a certain acceptable way. They may turn to authoritarian forms of parenting by administering strict rules and severe disciplinary punishments that serve no purpose at the end of the day. Instead, such methods would distance adolescents from their parents, ignite in them a rebellious attitude, and increase their curiosity in experimenting with alcohol or other substances (Borawski et al., 2003).

Conversely, studies have also shown that higher education in parents predicts lower alcohol consumption in children. Melotti and colleagues (2011) examined the relationship between alcohol use among adolescents and their socioeconomic background and revealed that alcohol consumption was less frequent in adolescents with higher levels of maternal education. Educationally qualified parents can understand the negative effects of alcohol consumption and convey the same to their children. They are henceforth able to set down certain rules or instructions that would ensure lesser adolescent alcohol consumption. Moreover, such parents would have more resources and time to monitor and guide their children. As can be seen from the example above, socioeconomic status is yet another factor that can be seen frequently accompanying parental level of education in alcohol and substance use literature. The reason for this being the compatibility between these two factors in influencing adolescent alcohol consumption. For example, Goodman, Slap, and Huang (2003) revealed that low SES and low parental level of education were associated with depressive symptoms which could further cause adolescents to consume alcohol to deal with their negative emotions. Frequent adolescent alcohol consumption and drunkenness were seen more in families with unemployed parents or parents with a lower level of education as compared to the contrary (Torikka, Kaltiala-Heino, Luukkaala & Rimpelä, 2016). The literature provides a confusing account of the role

of parental level of education in adolescent alcohol consumption. As is visible with some studies supporting the idea that a higher parental level of education translates to more consumption in children, and other studies opposing the idea by revealing the converse to be true.

2.5.2 Parental Marital Status

When it comes to the effects of parental marital status on adolescent alcohol use, most studies have tried to predict drinking behaviors during adulthood. In other words, there is only a scant amount of literature on parental marital status and adolescent alcohol use/drinking behaviors. One such case is that of adolescents with divorced parents. Generally, divorced parents/families have often been viewed as flawed systems by the public, media, and mental health professionals (Kelly, 2000). Experiencing their parent's divorce during their childhood or adolescence is a frequent disruptive stressor (Thompson, Lizardi, Keyes & Hasin, 2008). This is because the transition is immensely burdensome to children who are expected to make life-altering decisions at a young age. Similarly, stress theories state that parental divorce may be a crisis that brings about major changes in an adolescent's life, leading up to severe disruptions in behavior (Vanassche, Sodermans, Matthijs & Swicegood, 2013). Consequently, they exhibit problems within the scope of psychological, social, behavioral, and academic issues (Dube et al., 2002; Kelly, 2000), including delinquency and risky health behaviors (Barrett & Turner, 2005). Contradicting prior studies that established parental conflicts arising from divorce as the main predictor of adolescent delinquency, Kristjansson and colleagues (2009) found that it is the conflict between children and parents that are the most significant predictor of adolescent alcohol use.

Children with divorced parents have been identified to exhibit higher rates of adolescent alcohol use (Kristjansson et al., 2009; Thompson et al., 2008). Children from recently divorced homes drink more frequently, in higher quantities, and are more likely to be drunk than children whose parents have been divorced for 4 years or more and children from intact families (Jeynes, 2001). Childhood divorce can also increase the chances of later adolescent alcoholism or problematic drinking (Dube et al., 2002). Stress from parental divorce is cited to be the major reason for adolescent alcohol consumption across the literature. Another reason could be that one or both parents

have drinking issues, leading to divorce. In this context, adolescent alcohol consumption could be the result of modeling drinking behaviors from parents rather than because of divorce (Jeynes, 2001). This finding solidifies the idea that divorce alone may or may not be the reason for adolescent alcohol consumption. Studies also show that there is a greater risk for alcohol initiation in adolescents living with a stepparent as compared to those with intact families (Flewelling & Bauman, 1990). This finding raises another question; is it losing a parent or the stress of living with a new parent that leads to adolescent alcohol use. This question remains unanswered and is unfortunately beyond the scope of the current study as well. The best approach then is to consider the different family factors influencing adolescent alcohol consumption.

Following a parental divorce, adolescents are faced with the option of living with a single parent or with a stepfamily. According to Amato (2001), both these options may lead to delinquent behaviors, substance use, and alcohol consumption. On the other hand, adolescents belonging to intact families are less likely to exhibit such deviant behavior (Amato, 2001). It was revealed that girls belonging to single-parent families and boys belonging to stepfamilies tend to drink more frequently than children from intact families (Vanassche et al., 2014). Another study touched on the marriage status of parents and revealed that single-parent families seem to have higher rates of adolescent alcohol consumption between the ages of 9-16 when compared to two-parent families (Strycker et al., 2003). Similarly, Vanassche and colleagues (2014) found that adolescents between the ages of 11 and 15 from broken families are more likely to be frequent alcohol consumers than adolescents from intact families. Nonetheless, single-parent homes proved to be a risk factor for adolescent alcohol use irrespective of age (Fisher et al., 2007). Moreover, a Turkish study maintains that not only are adolescents with single parents likelier to take up drinking behaviors but also substance use (Karatay & Kubilay, 2004). Single parents are physically and mentally taxed having to work and take care of their children at the same time. This can often strain the relationship they have with their children, and the children with their siblings. Moreover, since single parents are usually working, their children are left unsupervised most of the time. This allows for children, especially adolescents to engage in delinquent behaviors such as alcohol or substance use. Parents from such complicated marriages create long-lasting emotional scars within their children. For example, studies have shown that mothers in high conflict marriages tend to be

rejecting, harsh, and use guilt and anxiety-inducing disciplinary methods with their children, whereas fathers in high conflict marriages withdraw from their children (Kelly, 2000). This would indicate that marital conflict (and not necessarily divorce) is enough to create major behavioral changes in adolescents.

2.5.3 Sibling Alcohol Use

All siblings are known to share unique and dynamic relationships that help unravel the basis of sibling behaviors. Siblings influence each other's attitudes, behaviors, belief systems, etc. Most of the time they share the same familial environment, the same school environment, and even share the same peer groups. All of these factors inevitably lead to shared experiences and sometimes shared behavioral patterns. Approaches to studying sibling influences on adolescent consumption would naturally consider a social modeling approach wherein the intimacy of sibling relationships determines sibling modeling. In other words, adolescents may model their siblings' delinquent behaviors like alcohol consumption should they share a close bond. As children grow up to the age of adolescence, the hold parents have on them starts dissipating. Peers and siblings take on this place to become the main source of modeling behavior. East and Khoo (2005) hypothesized that parenting, and especially mother's parenting, along with other family stressors mold sibling relationships. Sibling relationships further influence adolescent substance use behaviors. The sibling relationship mentioned here were measured based on warmth, closeness, and power. The balance of power is especially important since the sibling who holds more power or authority is to be considered the model for socializing behavior from (Whiteman, McHale & Crouter, 2007; East & Khoo, 2005). And so mostly older siblings will significantly impact adolescent risk-taking behaviors (Fagan & Najman, 2005).

It is also assumed that older siblings can socialize younger adolescents into early adolescent alcohol use, either by providing them with alcoholic beverages or creating instances where drinking is acceptable (Windle, 2000). As older siblings take up drinking for whatever reasons, younger siblings find themselves wanting to imitate this behavior. According to Fagan and Najman (2005), substance use/abuse by older siblings increases the chances of younger siblings/adolescents consuming alcohol by three to five times. Further, Whiteman and colleagues (2016) found that not only was

there a significant association between older siblings and younger siblings' alcohol consumption but also that this association was mediated through social and cognitive pathways. In particular, older siblings' alcohol use paved the way for younger sibling's co-use and positive expectations about alcohol consumption (Whiteman et al., 2016). Not only is sibling drinking a positive predictor of alcohol use but also paves the way for binge drinking in girls (Fisher et al., 2007). Sibling influences on adolescent alcohol consumption are especially concerning since there isn't much literature written or studies done regarding this matter (Scholte et al., 2008). Windle (2000) conducted a study that found sibling substance use significantly predicted peer substance use and coping motives for alcohol use, leading up to an indirect influence on adolescent alcohol and substance use. Sibling influence is similar to peer influence when it comes to adolescent alcohol consumption, with parental influences weighing the lowest (Scholte et al., 2008; Windle, 2000). Here we may even go as far as to say that the clearest form of socialization is older siblings' facilitation of younger siblings' alcohol/substance use (Whiteman, Jansen, Mustillo & Maggs, 2016). This is especially so because adolescence is an age when shared experiences and similar ages play much more of an important role. This is exactly why siblings may act as stronger role models to adolescents considering they spend a lot of time together.

Another approach that is generally seen in the literature about sibling effects on adolescent alcohol consumption comes from a family systems perspective. According to this perspective, the well-being of individual family members is dependent on the positive and healthy functioning of the family as a whole (East, 2009). Therefore, sibling relationships would be dependent on various family factors including parenting styles. In this context, siblings are assumed to be equally vulnerable to internalizing and externalizing problems (East, 2009). Sibling factors become even more important should there be familial disturbances such as divorce, separation, or single parents. In such cases, siblings tend to stick together and try to elicit support from each other, leading to an intimate connection between them. This makes it even easier for siblings to model alcohol behaviors from older siblings (Chappell & Penning, 2005). Furthermore, in families where parents consume/abuse alcohol and do not involve themselves in monitoring or controlling adolescent behaviors, there is a greater chance for the siblings in that to model drinking behaviors or involve themselves in similar delinquent behaviors (East, 2009).

Generally, research about sibling influences on adolescent alcohol consumption has had a conflict as to the effects at play; is it genetic or environmental? Naturally, a considerable number of twin studies and otherwise have been conducted to determine whether sibling influences are a result of genetic factors or environmental/social factors. Poelen and colleagues (2007) conducted a twin study which led to the conclusion that the effect of monozygotic (MZ) co-twins was significantly more powerful on adolescent alcohol consumption than the effects of other siblings. However, this association between adolescent alcohol consumption and alcohol consumption by the co-twin decreased over time given the fact that the social contact between the two would fade as the years went by (Poelen, Scholte, Willemsen, Boomsma & Engels, 2007). This study reasserts that while there may be genetic influences at play, environmental factors take precedence as siblings grow up. Further, the study also emphasizes the importance of a shared environment that solidified drinking behavior in siblings. Having similar experiences, similar ages, and similar genders are some of the reasons that sibling socialization is so influential in adolescent alcohol consumption. That is, genetic and shared experiences/ environmental influences on adolescent alcohol consumption are moderated by factors such as gender, age, region, religiousness, etc. (Hopfer et al., 2003). Likewise, Rende and colleagues (2005) explored certain genetic models to explain adolescent alcohol consumption between twins. It was revealed that factors like sibling contact and mutual friendships are essential to shared drinking behaviors and although monozygotic twins had these in high levels, the results for other sibling types were not consistent with the models. Therefore, shared environmental factors were revealed to be more of an influencing factor than genetics. As mentioned previously shared experiences, social contact, and having mutual friends enable siblings to act in perfect unison when it comes to deviancy, often taking up the mantle of "partners in crime" (Slomkowski, Rende, Conger, Simons & Conger, 2001). In other words, younger siblings will be more susceptible to modeling older sibling behaviors (in this case, alcohol consumption) should they share mutual friends and have a warm relationship. However, there are other pieces of evidence pointing to the effectuality of both a warm sibling relationship and a conflicted sibling relationship in predicting sibling alcohol consumption (East, 2009).

Given the lack of sufficient literature pertaining to this topic in recent years, more studies must be done in this context. Especially considering the severe lack of significant research regarding sibling factors in adolescent alcohol use in Turkey. This alone calls for more studies related to this issue. From the literature we have at hand it is clear that there is a clear relationship between sibling alcohol use and adolescent alcohol use. This is further exacerbated by complicated family structures and poor financial status to state the least. As mentioned above, siblings have shared experiences that influence behaviors and attitudes, setting the stage for sibling socialization and modeling of drinking behaviors.

2.6 Peer Domain Risk Factors

Peer factors seem to be as important, if not more, in the initiation of alcohol use among adolescents. This is evident from the fact that alcohol or substance-using peers and peer encouragement in using alcohol are influential factors in the early initiation of alcohol use among adolescents (Strycker, Duncan & Pickering, 2003; Maxwell, 2002; Windle, 2000) and cessation over a year (Maxwell, 2002). As children age into adolescence, peers take precedence over family, their influence overshadowed if not overthrown. This could be why peer drinking enables alcohol initiation among adolescents, a greater danger than is comprehendible (Fisher et al., 2007). Problematic peers may model deviant behaviors to other adolescents. They may express alcohol consumption as normative, indirectly pressurizing adolescents to indulge in the same, to feel a sense of belongingness (Simons-Morton, 2004). Moreover, problematic or alcohol-consuming peers may raise opportunities for other adolescents to take up alcohol consumption, sometimes going as far as to provide peers with alcohol. Adolescents, who wish to fit in with a group, are immensely attracted to the cliques that offer this opportunity. Thus, alcohol-consuming peers can influence others to do the same. One important finding related to peer influences on adolescent alcohol consumption comes from social media usage. Adolescents are ardent users of various social media platforms like Instagram, Twitter, Facebook, etc. Needing mass validation from internet citizens, adolescents are enthusiastic about posting pictures and videos about their private lives. Social media plays a huge role in the peer socialization of drinking culture. Studies suggest that witnessing online portrayals of risky behaviors, drinking, and partying by peers can significantly influence adolescents

to conform to the same behavior (Huang et al., 2014). The thought is especially scary considering the increasing number of children on social media platforms who may initiate such behavior even earlier, should there be no parental control or monitoring. Furthermore, considering internet usage can happen anywhere and at any time, peer influence of drinking can also happen anywhere and anytime.

In an earlier study, the onset of adolescent alcohol use was significantly associated with greater identification with peers, peer deviance, and peer usage of drugs (Brook, Whiteman, Gordon, Nomura & Brook, 1986). Certain studies have attempted to explore this further through the concepts of peer selection and peer influence (Urberg, Luo, Pilgrim & Degirmencioglu, 2003). According to the authors, peer selection and peer influence are complementary processes that work together to curate an adolescent's social context. That is peer acceptance and the quality of friendship determined how readily adolescents would confirm with peer behavior. For alcohol use, it was found that adolescents who may have not had any other predisposing risk factors were still more likely to attain a social context that would expose them to drinking culture (Urberg et al., 2003). In other words, if the adolescent perceives his friendship with an alcohol-consuming peer to be important for social acceptance, then he is more likely to engage in similar behavior. However, this result seems to be inconsistent since other studies have found peer influence to be more of an important factor in predicting adolescent alcohol consumption than peer selection (Sieving, Perry & Williams, 2000). Much like parental and sibling influence, peer influence also works under the mechanism of peer socialization/modeling and peer persuasion (Bot, Engels, Knibbe & Meeus, 2005). Bot and colleagues (2005) emphasize the importance of friendship in peer influence and attempts to distinguish between two different types of friendships; unilateral friendships wherein an adolescent may consider a peer their friend but aren't reciprocated and mutual friendships where such feelings are reciprocated. According to the results, friends' alcohol consumption predicted adolescent alcohol consumption and the results remained six months later as well. Significant associations were found between adolescent alcohol consumption and the alcohol consumption of a best friend. Associations were also found between the drinking behaviors of mutual friends and over longer periods between unilateral friends (Bot et al., 2005). However, studies have also maintained that close and cross-sex friends can protect adolescents from problematic behaviors (Uludağlı & Sayıl,

2009). It is no surprise then that declining alcohol consumption in Stockholm credited its findings to decreasing alcohol consumption among peers (Carlson, 2019).

Alikaþifoðlu and colleagues (2004) conducted a study with Turkish adolescents and found that ease in mingling with same-gender friends and spending more time with friends in the evenings are two peer-related factors that are associated with adolescent alcohol use. Factors such as the presence of a large number of friends who are into substance use significantly increased the risk of adolescent alcohol use, whereas being excluded by peers reduced said risk (Shortt, Hutchinson, Chapman & Toumbourou, 2007). Alcohol use is also associated with adolescent's spending time with friends after school in areas outside of parental observation such as cafés, the movies, parks, or the city center (Ünlü & Evcin, 2014). In this case, parental and peer factors seem to go hand in hand. Parental responsiveness and communication are quite essential in reducing negative peer influences on adolescents and should these factors not exist, peers would successfully be able to socialize or persuade adolescents into drinking (Nash et al., 2005). Parental factors and peer factors have further been studied together when Marshal and Chassin (2000) tested the moderating effects of parental (maternal and paternal) social support and consistency in disciplinary teachings. Here disciplinary teachings refer to any appropriate disciplinary behaviors or control mechanisms that would prevent adolescents from engaging in activities that do not go hand-in-hand with parental norms. The findings indicated that among female adolescents, parental social support and consistency in disciplinary teachings were effective in reducing the influence of drug/substance promoting peers (Marshal & Chassin, 2000). This means that the quality of parent-child relationships can help buffer the effects of negative peer influence on adolescent behavior, including certain deviant and risky behaviors like substance use, alcohol use, or smoking for that matter. However, among males the opposite was true. Higher levels of parental support and disciplinary teachings actually worsened the relationship between adolescent alcohol use and substance-promoting peers (Marshal & Chassin, 2000). This study is particularly important given the consideration it gives to paternal social support and disciplinary teachings in buffering negative peer influence on adolescents as opposed to the majority of studies that have only looked at maternal factors.

Given the above-mentioned factors are important in their own right, peer pressure seems to be the most important determining factor of adolescent alcohol use. Peer pressure can be defined as the influence exerted by a group over its members to conform to the norms of said group. Different studies have looked into the effects of peer pressure in shaping adolescent behaviors. In Turkey especially, one particular study tried to examine the relationship between peer pressure, self-esteem, and alcohol use in adolescents and revealed that alcohol use was higher in those adolescents who faced higher peer pressure and had lower self-esteem (Satan, 2011). Studies can attest to the fact that having a peer who uses substances or alcohol is a predictor of adolescent alcohol consumption (Poelen et al., 2007; Tot et al., 2004). A study by Ünlü and Evcin (2014), that looked into factors associated with adolescent alcohol use between the years 2008 and 2010, showed that in two years there has been a significant increase in perceived alcohol use of peers from the sample group, which inadvertently relate to the adolescent's themselves using alcohol. In other words, an increase in actual alcohol use among friends or an increase in perceived alcohol use among friends can influence adolescent alcohol consumption. Another study among Turkish high schoolers maintains that having peers who use/abuse alcohol, tobacco, and other substances increases the likelihood of adolescent alcohol consumption (Akkuş et al., 2017).

Further, a large-scale study that encompassed 43 schools from 15 districts of Istanbul explored the relationship between peer characteristics of adolescents and their substance use behaviors. The findings indicated that peer pressure was a significant factor in increasing the risk of adolescent alcohol/substance use (Erdem, Eke, Ögel & Taner, 2006). One study conducted in Ankara with 380 high school students observed that alcohol-using adolescents will most likely have peers who take part in substance use and smoking (Karatay & Kubilay, 2004). That is, peer groups don't necessarily have to consume alcohol for adolescents to pick up the same behavior. Instead, peer groups may take part in any behavior deemed 'deviant' or 'problematic' for adolescents to pick up a wide variety of similar behaviors, including alcohol consumption. Further, among peer characteristics that influence adolescent alcohol/substance use, the following were mentioned: having substance-using peers, having friends who engaged in delinquent acts or acts of violence, having antisocial peers, having peers with behavioral issues, having peers who are not approved by parents (Erdem et al., 2006). This particular study raises an important question; is it

behaviorally troubled peers that seek out problematic peer groups or is it the problematic peer groups that are pressuring adolescents to conform to their deviant norms? This question is beyond the scope of this study, however, proposes food to our thoughts.

2.7 School Domain Risk Factors

Schools act as important social institutions that play a profound role in adolescent lives, thereby creating a positive or negative influence on adolescent behaviors. Students spend most of their adolescence in schools. For this reason, whether students enjoy school or not, schools play a major role in shaping adolescent attitudes and behaviors. Some authors have assumed that the structural differences between schools (socio-economic conditions) are the most important influence on student behaviors, others have claimed that it is the school culture or peer network that plays a more significant role in shaping adolescent behavior (Turner, West, Gordon, Young & Sweeting, 2006; Gottfredson, Gottfredson, Payne & Gottfredson, 2005). Literature has further maintained that school type (public, private, vocational, and religious), the student population in schools, social and minority status of students, gender, positive relationships within schools, etc. are equally important (Gottfredson et al., 2005). As we have looked into the role of socio-economic factors in adolescent alcohol consumption in prior sections of the paper, it is important to note that the same factors also affect schools. Schools reflect the larger culture that is found outside their walls. That is, the socioeconomic conditions of a student influence his choice of school, and the school, in turn, mirrors the socioeconomic and cultural conditions of the community it is located in. For example, according to Gottfredson and colleagues (2005) students from cities were more likely to follow rules and keep away from deviant behaviors as compared to students from rural areas. The characteristics of students, teachers, peers, school administrations, community, and the interaction between them are very important nuances to consider when studying adolescent alcohol consumption.

Three major theories including social bonding theory (1969), social control theory (Hawkins & Weis, 1985), and problem behavior theory (Jessor, Donovan & Costa, 1994) indulge in the idea that forming attachments to certain conventional institutions

like family or school, and commitment to conventional pathways of achievement are inconsistent with problematic youth (Simons-Morton, 2004). It is quite essential for adolescents to feel anchored to certain institutions. Having positive attachments and a commitment to various conventional institutions can direct adolescent behavior away from substance or alcohol use and towards constructive social activities that encourage socialization with peers and adults alike. Furthermore, attachments to conventional institutions can also foster positive attitudes towards adolescent abstinence. This is the main reason for researchers to look into factors related to school commitment such as school engagement, as they are significant to adolescent alcohol literature.

An advantage of committing to conventional institutions like schools is that they are a sort of haven for adolescents coming from disadvantaged neighborhoods or broken families. Adolescents from these backgrounds are easily attracted to substance-using peers or initiate substance/alcohol use themselves. However, a positive attachment to schools and teachers can deter adolescents from that path. Teachers may offer tremendous amounts of social and emotional support that these children may not be receiving from elsewhere (Kliewer & Murrelle, 2007). This alone could act as a major reason for adolescents to steer away from deviant behaviors like alcohol consumption. Good relationships with teachers can also help adolescents improve their learning experiences and boost school engagement. On the other hand, factors such as poor academic achievement (Tot et al., 2004), low school connectedness (Alikaþifoðlu et al., 2004), low school attendance, and tardiness (Ünlü & Evcin, 2014) can increase the chances of adolescent alcohol consumption. Akkuş and colleagues (2017) also reported similar findings wherein students who perceived themselves to have low academic achievement and those who face stringent disciplinary actions at school tend to consume alcohol more so than others. Yet another study in Izmir identified that adolescents with lower exam scores and males who have repeated a grade reported to have more delinquent behavioral tendencies (Aras et al., 2007). In another perspective, schools may also foster deviant tendencies should there be such a culture within school walls. For example, public schools that have lesser control over student behaviors may have problematic student cliques that may encourage such behaviors in other adolescents as well. These studies shed light on the importance of considering school factors when studying the topic of adolescent alcohol consumption.

2.7.1 School Engagement

School engagement has often been referred to as proactive behaviors aimed at a specific goal, being focused and attentive in school, participation in school activities, etc. There is no conclusive definition for engagement per se, however, it has been explained in terms of the constructive behaviors mentioned above (Hirschfield & Gasper, 2010). Generally, active participation in school-based instructional and extracurricular activities can help increase adolescents' school engagement. Not only do these activities help students acquire knowledge and develop themselves but also protect them against risky behaviors. According to Glanville and Wildhagen (2007), the extent to which students take part in academic and extracurricular activities, feel connected to the school, respect its values and the goals of education helps in their positive development and keeps them away from risky and deviant behaviors. Most bodies of literature concerning this topic reveal the same that students who underperform in schools and keep away from participating in academic and non-academic activities are more likely to engage in delinquent behavior (Hirschfield & Gasper, 2010). According to the social development model (Catalano & Hawkins, 1996), adolescents learn behaviors from primary socializing sources such as peers, friends, and schools, which can act as a protective factor against risky and unhealthy behaviors. It is widely believed that adolescents who are emotionally attached to their schools or respect the norms and guidelines that are a part of the school culture, may be less likely to engage in problematic or risky behaviors (Li et al., 2011). Low school engagement is a risk factor for many deviant behaviors of which alcohol consumption is a part of (Li et al., 2011; Simons-Morton, 2004). In other words, adolescents less engaged with school are more likely to consume alcohol than those who are more engaged with school (Aunola, Stattin & Nurmi, 2000).

Li and Lerner (2011) and Fredricks, Blumenfeld, and Paris (2004) tried to differentiate between three forms of school engagement: behavioral, emotional, and cognitive school engagement. Behavioral school engagement refers to involvement in academic and extracurricular activities and demonstrates positive conduct whereas, emotional school engagement refers to the student's emotional reactions to the school, teachers, and peers (Li & Lerner, 2011). Cognitive engagement is the mental process that adolescents undertake to complete tasks, comprehend complicated ideas, and master

skills (Fredricks et al., 2004). While behavioral and emotional school engagement has been the focus of some research, academics haven't been as forthcoming with cognitive school engagement and adolescent risky and deviant behaviors. It was revealed that adolescents who exhibited positive pathways of behavioral and emotional engagement were more likely to have better grades and less likely to be involved in delinquent behaviors and substance use (Li & Lerner, 2011). The results are not surprising considering adolescents with high behavioral school engagement may be too busy with school activities to consider taking on drinking behaviors. Other studies have had similar findings that the more time adolescents spend doing homework or studying translates to lesser delinquent activities such as alcohol use or other substance use (Barnes, Hoffman, Welte, Farrell & Dintcheff, 2006; Wong, 2005). Further, adolescents who have a higher emotional engagement may feel sufficiently content in their relationship with the school, teachers, and peers that they do not need comfort from unconventional sources like alcohol (Li & Lerner, 2011; Crosnoe, 2006).

Another study explored the behavioral and emotional aspects of school engagement and found that it was inversely associated with the timing of initiating substance use (Lee, Maggs, Neighbors, & Patrick, 2011). Similar findings were made by Hirschfield and Gasper (2010); however, they went a step further to reveal that cognitive school engagement is associated with increases in school and general delinquency. This would mean that adolescents stay away from risky behaviors, substance use, and delinquency when they attend classes regularly. This is consistent with the previously mentioned social control theory (Hawkins & Weis, 1985) which postulates that commitment and engagement to school activities and learning may protect adolescents against alcohol use. A particular study conducted in Istanbul explored the relationship between adolescent delinquency (alcohol consumption included) and attachment to school among other conventional institutions in the context of Hirschi's (1969) social bonding theory. The results indicated that adolescent delinquency depended on the extent of adolescent bonding with schools, parents, and peers (Yuksek & Solakoglu, 2016). In the context of the current study, this means that the higher the school engagement, the likelier adolescents were to keep away from delinquency. Further, the authors also found that adolescent bonds with parents and peers had a moderating effect on adolescent delinquency (Yuksek & Solakoglu, 2016).

Higher school engagement may reduce adolescent alcohol initiation significantly (Simons-Morton, 2004). Adolescents with an affinity towards alcohol consumption report a disengagement from school and learning activities (Karatay & Kubilay, 2004). This relationship is reciprocal in nature, as school disengagement can lead to and be a consequence of adolescent alcohol use (Kilpatrick et al., 2000). Once adolescents are disengaged from school activities, they may be exposed to deviant peers with whom they may seek affiliation (Kliewer & Murrelle, 2007). One factor that can be used to define school engagement is academic achievement, which has also been largely implicated in adolescent alcohol consumption studies. Drinking can be a method of coping for teenagers who are struggling at school both academically and behaviorally. Alcohol consumption then becomes a coping mechanism and an alternate form of social achievement (Crosnoe, 2006). In this case as well, there is the question of whether academic failure leads to adolescent drinking and vice versa? Or whether both academic failure and adolescent drinking are the results of the same mechanism? Crosnoe (2006) explains that academic failure was indeed more of a significant risk factor for adolescent drinking than drinking was for academic failure. The association between academic failure and adolescent alcohol consumption can break or weaken adolescent bonds with conventional social institutions like school, family, and peers. They will probably suffer disrupted emotional ties with the people in their life and things they hold dear. This is a very toxic path that keeps enabling delinquent behaviors rather than reducing them and hence, requires urgent and early intervention.

However, school engagement alone does not relate to adolescent alcohol use, instead, there is an interconnection of various socialization sources such as parents, peers, and school factors. This is evident from how the more parental support adolescents have, the more likely they are to engage positively with school, leading to a decline in unhealthy behaviors (alcohol use) (Chaplin et al., 2012). Roebroek and Koning (2016) examined the reciprocal effects between school engagement and adolescent alcohol consumption while looking at the moderating effect of parental support. The results revealed that school engagement and adolescent alcohol use do influence each other reciprocally, but only for those adolescents who experience high parental support (Roebroek & Koning, 2016). A study done in Turkey among high schoolers established that low school attendance is a significant factor in predicting increased adolescent alcohol consumption (Akkuş et al., 2017). This eventually brings us to the

conclusion that interventions aimed at reducing adolescent alcohol use must include measures that inadvertently promise a better school experience for adolescents, better student-teacher relationships, parental involvement within the school community, etc. Furthermore, schools that provide value-added education can delay the initiation of substances; alcohol included (Bisset, Markham & Aveyard, 2007).

2.7.2 Type of School

Generally, studies intending to look at adolescent deviant behaviors take a look at a couple of different factors including adolescent personal characteristics like age or gender, and social networks like family, peers, schools, or community. This is to get a comprehensive idea about the different factors of influence on adolescent behaviors. The interplay of the above-mentioned factors is usually the culprit in driving adolescents towards dysfunctional and unhealthy life practices. Considering the researcher has looked into most of these factors including school factors, an attempt is made in this section to explore the related factor of school type. It is assumed that there are differences in the manifested adolescent behaviors based on different school types. There is a shortage of literature about the effects of different school types in shaping adolescent behaviors. Private schools, public schools, and vocational schools often have different kinds of students coming from different socioeconomic backgrounds that create a unique culture for each type of school. Some may think private schools to be more strict or serious when it comes to the discipline of their students, and public schools to be lacking in that department. This can result in the creation of unique cultures within schools that may encourage or discourage adolescents from risky and delinquent behaviors. Schools may also have certain cliques that encourage alcohol and substance use. The presence of such cliques may be a trigger for other students to engage in the same behaviors. Similarly, public schools aimed at providing religious education and vocational schools have their own cultures that can foster or deter drinking culture.

In Turkey, there are mainly three types of high schools: regular public schools, science schools, and vocational schools. Apart from these, there are private (Anatolian) high schools and Islamic vocational (Imam Hatip) high schools that fulfill specific conditions. There are also social science high schools and fine arts high schools to

mention (Bülbül & Odacı, 2018b). Private high schools are arguably the best schools in Turkey and only admit students who score high in the nationwide school entrance exams (Ünlü, Evcin, Dalkilic & Pumariega, 2014). The nationwide entrance exam is also applicable for students wishing to enroll in science high schools. These schools have the best resources, good teachers, involved parents, and motivated students. Islamic vocational high schools, on the other hand, provides additional moral and value-based education. These schools help students achieve both academic and religious education that would help them in character development and learning of the values of society (Aslanargun, Kilic & Bozkurt, 2014). Then we have the vocational high schools that are relatively easier to get in for students who score low on the entrance exams and wish to learn about specific vocations. The regular high schools on the other hand are bound by law to enlist any and every student who applies from their catchment area and so, the classes are often overcrowded (Ünlü et al., 2014).

The idea is that schools that enroll students based on the nationwide entrance exam do so with the conviction that only the top-scoring students would come to their high schools. Science high schools and private high schools that make use of this system are advantageous enough to have classrooms of motivated students who have college aspirations. Such schools are immensely supportive of students as well and provide them with the best conditions possible. Qualified teachers, involved parents, responsible school staff are all part of the top-notch resources that the school provides to its students. Therefore, the chances of students from these high schools engaging in delinquent behaviors or substance use are slim to none (Ünlü et al., 2014). However, vocational or technical high schools pose a problem since students come in at a large number. Moreover, these students are either the ones who score low on the nationwide entrance exam or those who want to straightaway find a vocation. Lack of school resources and the students themselves lacking academic motivation may be significant enough to encourage substance use. Schools like Imam Hatip (Islamic vocational high schools) encourage Islamic religious teaching side by side with regular academic teachings. Considering Islam heavily prohibits the use of substances, especially alcohol, the chances of students from these schools engaging in substance use is highly unlikely.

Ünlü and colleagues (2014) were perhaps the first to study the role of different types of schools in adolescent substance use in Istanbul. Their results suggested that there is indeed a significant difference across different school types in the prevalence of substance use. That is, the lifetime and past 30 days' consumption of alcohol was highest in the private schools as compared to the other schools (Ünlü et al., 2014). The results may seem surprising given private schools scored the lowest in any other substance use. However, it is understood that high school students from higher SES families consume alcohol. Likewise, Bülbül and Odacı (2018b) conducted a large-scale study to examine adolescent substance use in different types of high schools in Turkey's Black Sea region. The results revealed that the mean scores for adolescent substance use (including alcohol) were lower for students from science high schools when compared to students from vocational and technical high schools (Bülbül & Odacı, 2018b). This finding was associated with the idea that students attending science high schools are more serious about their education and are more successful than the students from vocational and technical schools, and hence less likely to indulge in substance use. Akkuş and colleagues (2017) from within their sample of Turkish public schools, industrial vocational schools, and girl's vocational schools identified alcohol use to be significantly higher in industrial vocational schools and lower in female vocational schools. The authors also mentioned that schools like Imam Hatip (Islamic vocational) high schools, that provide Islamic religious education, would be expected to have the least or no adolescent alcohol use given Islam prohibits alcohol consumption. Further, parents choose to send their children to Islamic vocational high schools so that they may receive value-based education that goes hand in hand with their religion, culture, and belief system. In this manner, parents can assert control over their children even when children are in school. Such a moral and religious influence on adolescents can discourage them from using alcohol or other substances. Boys attending a vocational school in Izmir reportedly had higher tendencies to exhibit delinquent behaviors such as substance use, alcohol use, or smoking (Aras et al., 2007). Boys and girls in technical education have a higher alcohol consumption than those in general education (Vanassche et al., 2013). On the other hand, Evren and colleagues (2014) concluded that school type (public vs private) was not a determining factor in adolescent alcohol use in Turkey.

The above-mentioned studies give a clear picture of how adolescent alcohol consumption may vary from school to school. This is not necessarily only because of the overt nature of the school itself (public, private, religious, or vocational) but also because of the underlying cultural mechanisms, peer networks, student-teacher relationships, etc. As observed above, vocational and general public schools usually face a shortage of staff and overcrowding in classes. Student behavior is thus left unmonitored leading to deviant behaviors. Schools with strict rules in place and staff to monitor students would inevitably lead to lower levels of deviant behaviors in students. Such schools may not even have a substance use culture or using peer networks in place. Parents are also instrumental in this case given students from good SES families, usually go to high-end schools wherein parental involvement is a given. This allows for students to inculcate functional behaviors and maintain expectations for college or other forms of higher education. There is usually a selection bias in the manner of school selection by parents and students. Parents are likely to send their students to schools that match their own SES, religious, or cultural values. Therefore, students from poor neighborhoods may end up in overcrowded public schools, and students from affluent neighborhoods may end up in private schools. Moreover, as mentioned previously, schools also reflect the community they are located in. A community that has a drug culture or has troubled youths may have schools that reflect the same culture. The chances of students attending these schools engaging in similar behaviors are also very high.

CHAPTER III

METHODOLOGY

3.1 Introduction

This chapter provides a general outline and discussion of the chosen research design, sampling, and data analysis techniques. The chapter will focus on specifying the details about the research design, the sampling technique, data collection methods, and analysis used in this particular study. The study takes on a quantitative approach, making use of archival data collected via surveys to explore the trends and factors related to adolescent alcohol consumption in Istanbul, Turkey. The study aims to understand the prevalence of alcohol use and the predictors associated with it among adolescents in Turkish high schools. Further, the study aims to identify the impact of demographic, family, peer, and school factors on adolescent alcohol consumption. The data used in the present study is archival and was attained from the Bağcılar Rehberlik Araştırma Merkezi (Bağcılar Guidance Research Center) with permission to use in the current study. The data was collected from three different high schools in Turkey: vocational high schools, İmam Hatip (Islamic vocational) high school, and private high schools. A total of 751 entries were available for analysis. Data analysis is to be conducted using the Statistical Package for the Social Sciences (SPSS) and the STATA software. Finally, this chapter will proceed to the results and discussion sections.

3.2 Research Design

This study follows a quantitative survey design. Quantitative designs are useful in quantifying or measuring the data available to create identifiable patterns out of them. One way of conducting a quantitative study is by following a survey design. Survey research makes use of self-reports to discern the thoughts, beliefs, attitudes, and behaviors of the target population. To be exact, survey designs are used to understand the characteristics, behaviors, or opinions of a specific group of people. This design is

usually implemented when there is a requirement to understand the prevalence of a particular event or behavior within the population and to assess the statistical relationship between certain variables. According to Isaac and Michael (1997), survey design is used "to answer that have been raised, to solve problems that have been posed or observed, to assess needs and set goals, to determine whether or not specific objectives have been met, to establish baselines against which future comparisons can be made, to analyze trends across time, and generally, to describe what exists, in what amount, and in what context." (Isaac & Michael, 1997, p.136). The current study aims to understand the prevalence of a specific behavior among a certain group of people, that is adolescent alcohol consumption in Istanbul. Further, to identify the patterns that manifest in relation to demographic, family, peer, and school factors. Therefore, the survey design seems to be a perfect fit for the focus of this research. Furthermore, according to Kraemer (1991), survey design is used to quantitatively identify and describe different features of a specific population, which would also mean identifying relationships between variables. Another significant feature of the survey design is sampling. As mentioned before, sampling in survey design is usually random, however, also focused on a specific population. The data needed for a survey design is naturally collected from people and is, therefore, very subjective. However, after analysis, the findings are usually generalized back to the population the sample was collected from.

3.3 Sample

The current study makes use of archival data collected by the Bağcılar Guidance Research Center from high schools in Istanbul, Turkey. The sampling method would therefore be a purposive sampling technique, given the need to directly access a subset of the population, who in this case are adolescent high schoolers. Purposive sampling is also known as judgmental or subjective sampling since it makes use of a researcher's judgment in choosing the members of a population (adolescent population) for a particular study. Moreover, purposive sampling is a non-probability sampling technique since the sample is selected based on the judgment of the researcher. The main idea behind this type of sampling is the assumption that the sample selected can be representative of the larger population and so, the findings elicited from this particular study can be generalized back to the population. This type of sampling

technique helps to hone in on a specific process, as is with the current study. To study the prevalence of alcohol consumption within the adolescent population, we take a subset of the adolescent population. For the current study, the data collected was already generated by another party. This data was thus selected because of its appropriateness concerning the aims of the current study.

3.3.1 Sample Characteristics

The study makes use of archival data collected by Prof. Dr. Sefa Bulut and the Bağcılar Guidance Research Center. The sample consists of adolescent high schoolers from different high schools in Istanbul. The participants are characterized as from either 'Bağcılar' or 'outside Bağcılar'. The reason for this is that Bağcılar is one of the most populous districts in Istanbul and is a working-class suburb that houses plenty of industries, media houses, and wholesale markets. Bağcılar, which is easily the largest district in Turkey has a population of 745,125, which is already more than 52 out of 81 cities in Turkey (Orak & Solakoglu, 2017). Therefore, the city seemed viable for the study. A total of 751 entries were available as archival data, out of which, 393 are female and 358 are male students. The student entries were collected from three different types of high schools in Istanbul. That is, 251 participants were from private high schools, 108 from Imam Hatip (Islamic vocational) high schools, and 392 from vocational high schools. Further detailed information about the sample would be presented later.

3.4 Data Collection Instrument

The data was collected by implementing a survey questionnaire titled 'Cigarette-alcohol-substance use survey for high school students.' This self-report questionnaire makes use of both multiple-choice and Likert scale types of questions. The survey is divided into 3 sections: demographic details, alcohol and cigarette use, and substance use. For the purpose of the current study, only the demographic details and questions related to alcohol use were taken. The demographic section consisted of 18 questions and the alcohol consumption section had 11 questions. Considering the data was archival in nature, the reliability and validity of the data collection tool were assumed.

3.5 Data Collection Procedure

Data was collected by implementing the 'Cigarette-alcohol-substance use survey for high school students' survey questionnaire on high school students in Istanbul. The participants were collected from three different high schools in Turkey, namely: vocational high schools, Imam Hatip (Islamic vocational) high schools, and private high schools. The selection of these schools was also at random, ensuring a diverse pool of samples to study alcohol consumption from. The data collection was spearheaded by Prof. Dr. Sefa Bulut and the Bağcılar Guidance Research Center. Ethics approval from the same was obtained from the Istanbul Provincial Directorate of National Education. Further, participation in the study was made voluntary and those willing to participate were presented with consent letters and all the necessary information about the study. Apart from this, participating students were ensured that their personal information would remain confidential. This archival data was then used in the current study, keeping the personal details of the participants confidential still.

3.6 Analysis of Data

The data will be analyzed using the Statistical Package for the Social Sciences (SPSS) and the STATA software. SPSS will be further used to provide demographic details on the prevalence of adolescent alcohol use in Istanbul, based on the independent variables of the study. Descriptive data will be presented in the form of frequencies, percentages, means, and standard deviations. Further, the relationship between adolescent alcohol consumption and demographic, family, peer, and school variables will be measured via a Chi-Square Test of Independence and Cramer's V. The Chi-Square test and Cramer's V will be used to compare the groups for categorical variables. Doing so will allow us to discern whether there is an association between the variables and at what strength. Considering the variables of this study are categorical, a Chi-Square test seemed appropriate. Further, to understand whether the independent variables influence the dependent variable and the magnitude of this relationship, a Multinomial Logistic Regression analysis would be implemented using STATA. The data will then be presented in the form of graphs and contingency tables, allowing for easier observation of the results. The results would be explained thoroughly in the discussion section of the research work.

CHAPTER IV

RESULTS

The current paper aims to identify and establish a relationship between adolescent alcohol consumption and demographic, family, peer, and school variables. Consequently, a Chi-square test, Cramer's V, and Multinomial Logistic Regression Analysis were proposed. This chapter will attempt to provide the results for the same and the findings will be explained in detail under the discussion section.

4.1 Demographic Characteristics

This section will provide the frequency distribution of the demographic variables (gender, age, residence, household income) and the dependent variable (adolescent alcohol consumption) used in the current study.

Table 4.1 (see Appendix c) illustrates the characteristics of the demographic variables used in the present study. As per the frequency table, 47.7% (N=358) of the participating students were male and 52.3% (N=393) were female. As such, the current study consists of a balanced data in terms of gender, with neither females nor males dominating the sample size. The age groups included in the study range from ages 17-20. According to the table, 74.8% (N=562) of the participants are 18 years old, 20.5% (N=154) are 19, 3.5% (N=26) are 20, and 1.2% (N=9) of them are 17 years old. The mean age of the participants was found to be 18 years. As such, the study aims to understand adolescent alcohol consumption in Turkish high schools. As a result, three types of schools were selected for data collection, and among these 52.2% (N=392) of the participants attend vocational high schools, 33.4% (N=251) attend private high schools, and 14.4% (N=108) attend Imam Hatip (Islamic vocational) high schools. That is, most of the students in the present study hail from public vocational schools, followed by private schools, and Islamic vocational schools.

Table 4.1 also illustrates the frequency distribution of the participants according to their area of residence. The data was collected from Bağcılar and outside of Bağcılar. This is because Bağcılar is one of the largest and most populous working districts in Istanbul (Orak & Solakoglu, 2017). The frequency table describes that in the current study, 73.6% (N=553) of the participants are from Bağcılar and 26.4% (N=198) are from outside of Bağcılar. However, from the analysis presented here, we can conclude that most of the participants were from Bağcılar. Next, we have the frequency distribution of the participants based on their household incomes. The frequency table 4.1 details 16.9% (N=127) of the participants have a household income between 0-1600 TL and 68.4% (N=514) have a household income over 1600 TL. More importantly, 14.6% (N=110) of the participants have no fixed household income. It is safe to assume that most participants in the current study have a stable average household income.

4.2 Demographic Variables and Adolescent Alcohol Consumption

This section attempts to provide a visual representation of the prevalence of adolescent alcohol consumption in relation to each of the demographic variables; gender, age, residence, and household income. Table 4.1 details the distribution of participants based on their alcohol consumption. That is, 10.4% (N=78) of the participants consume alcohol currently whereas, 75.4% (N=566) do not. Moreover, 14.2% (N=107) of the participants have consumed alcohol once or twice for curiosity purposes. A crosstabulation of adolescent alcohol consumption was made with each of the demographic variables to further explore the trends in the data.

Table 4.2 Gender * Adolescent Alcohol Consumption Crosstabulation (N=751)

			Adolescent Alcohol Consumption			
			Yes	No	1-2 times	Total
Gender	Male	N	43	261	54	358
		%	5.7%	34.8%	7.2%	47.7%
	Female	N	35	305	53	393
		%	4.7%	40.6%	7.1%	52.3%
Total		N	78	566	107	751
		%	10.4%	75.4%	14.2%	100.0%

According to Table 4.2, in the current sample, more males (N=43) are observed to be consuming alcohol than females (N=35) currently. Likewise, alcohol consumption (1-2 times) for curiosity purposes was observed more in males (N=54) than in females (N=53), although the difference is minuscule.

Table 4.3 Age * Adolescent Alcohol Consumption Crosstabulation (N=751)

			Adolescent Alcohol Consumption			
			Yes	No	1-2 times	Total
Age	20	N	4	20	2	26
		%	0.5%	2.7%	0.3%	3.5%
	19	N	24	105	25	154
		%	3.2%	14.0%	3.3%	20.5%
	18	N	50	432	80	562
		%	6.7%	57.5%	10.7%	74.8%
	17	N	0	9	0	9
		%	0.0%	1.2%	0.0%	1.2%
Total		N	78	566	107	751
		%	10.4%	75.4%	14.2%	100.0%

According to Table 4.3, 18-year-olds reported consuming the most alcohol (N=50), followed by 19-year-olds (N=24), and 20-year-olds (N=4). These findings are not surprising considering the mean age of the sample is 18. Furthermore, none of the 17-year-olds reported current alcohol consumption. This could be because of the relatively lower number of 17-year-old (N=9) participants in the sample. The results also indicate that drinking (1-2 times) for curiosity purposes was seen more in 18-year-olds (N=80), followed by 19-year-olds (N=25), and 20-year-olds (N=2).

Table 4.4 Residence * Adolescent Alcohol Consumption Crosstabulation (N=751)

			Adolescent Alcohol Consumption			
			Yes	No	1-2 times	Total
Residence	Bağcılar	N	50	429	74	553
		%	6.7%	57.1%	9.9%	73.6%
	Outside	N	28	137	33	198
	Bağcılar	%	3.7%	18.2%	4.4%	26.4%
Total		N	78	566	107	751
		%	10.4%	75.4%	14.2%	100.0%

According to Table 4.4, in the current sample, participants from Bağcılar reported consuming alcohol (N=50) more than participants outside Bağcılar (N=28). Likewise, more participants from Bağcılar reported having consumed alcohol once or twice for curiosity purposes (N=74) compared to participants outside Bağcılar (N=33).

Table 4.5 Household Income * Adolescent Alcohol Consumption Crosstabulation (N=751)

			Adolescent Alcohol Consumption			
			Yes	No	1-2 times	Total
Household Income	No Fixed Income	N	8	90	12	110
		%	1.1%	12.0%	1.6%	14.6%
	0-1600 TL	N	8	111	8	127
		%	1.1%	14.8%	1.1%	16.9%
	More than 1600 TL	N	62	365	87	514
		%	8.3%	48.6%	11.6%	68.4%
Total		N	78	566	107	751
		%	10.4%	75.4%	14.2%	100.0%

According to Table 4.5, in the current sample, participants with a household income of 1600 TL and above reported the most current alcohol consumption (N=62) compared to the participants with no fixed household income (N=8) and a household income of 0-1600 TL (N=8). Likewise, participants with a household income of 1600 TL and above reported the most to consuming alcohol (1-2 times) for curiosity purposes (N=87) than participants with no fixed household income (N=12) and a household income of 0-1600 TL (N=8).

4.3 Relationship Between Alcohol Consumption and Each of the Demographic Variables in Turkish adolescents

It is hypothesized that there is a significant relationship between alcohol consumption and each of the demographic variables in Turkish adolescents. A Chi-square test and Cramer's V will be conducted to examine whether a relationship exists between adolescent alcohol consumption and each of the demographic variables.

4.3.1 Relationship Between Alcohol Consumption and Gender in Turkish Adolescents

It is hypothesized that there is a significant association between adolescent alcohol consumption and gender in a Turkish sample.

Table 4.6 Gender * Adolescent Alcohol Consumption Chi-Square Tests (N=751)

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	2.625[a]	2	.269
Likelihood Ratio	2.624	2	.269
Linear-by-Linear Association	.000	1	.988
N of Valid Cases	751		

a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 37.18.

Table 4.7 Gender * Adolescent Alcohol Consumption Symmetric Measures (N=751)

		Value	Approximate Significance
Nominal by Nominal	Phi	.059	.269
	Cramer's V	.059	.269
N of Valid Cases		751	

A chi-square test of independence and Cramer's V was performed to examine the relationship between gender and adolescent alcohol consumption. The relation between these variables is not significant, X^2 (2, N = 751) = 2.625, p = .269, φ_{Cramer} = 0.059. Therefore, there is no significant association between gender and adolescent alcohol consumption in the current sample. Hence, we reject the hypothesis 'there is a significant association between adolescent alcohol consumption and gender in a Turkish sample.'

4.3.2 Relationship Between Alcohol Consumption and Age in Turkish Adolescents

It is hypothesized that there is a significant association between adolescent alcohol consumption and age in a Turkish sample.

Table 4.8 Age * Adolescent Alcohol Consumption Chi-Square Tests (N=751)

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	11.216[a]	6	.082
Likelihood Ratio	12.981	6	.043
Linear-by-Linear Association	.677	1	.411
N of Valid Cases	751		

a. 4 cells (33.3%) have expected count less than 5. The minimum expected count is .93.

Table 4.9 Age * Adolescent Alcohol Consumption Symmetric Measures (N=751)

		Value	Approximate Significance
Nominal by Nominal	Phi	.122	.082
	Cramer's V	.086	.082
N of Valid Cases		751	

A chi-square test of independence and Cramer's V was performed to examine the relationship between age and adolescent alcohol consumption. The relation between these variables is not significant, X^2 (6, N = 751) = 11.216, p = .082, φ_{Cramer} = 0.086. Therefore, there is no significant association between age and adolescent alcohol consumption in the current sample. Hence, we reject the hypothesis 'there is a significant association between adolescent alcohol consumption and age in a Turkish sample.'

4.3.3 Relationship Between Alcohol Consumption and Residence in Turkish Adolescents

It is hypothesized that there is a significant association between adolescent alcohol consumption and area of residence in a Turkish sample.

Table 4.10 Residence * Adolescent Alcohol Consumption Chi-Square Tests (N=751)

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	6.115[a]	2	.047
Likelihood Ratio	5.873	2	.053
Linear-by-Linear Association	.049	1	.825
N of Valid Cases	751		

a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 20.56.

Table 4.11 Residence * Adolescent Alcohol Consumption Symmetric Measures (N=751)

		Value	Approximate Significance
Nominal by Nominal	Phi	.090	.047
	Cramer's V	.090	.047
N of Valid Cases		751	

A chi-square test of independence and Cramer's V was performed to examine the relationship between the area of residence and adolescent alcohol consumption. The relation between these variables is significant, X^2 (2, N = 751) = 6.115, p = .047, φ_{Cramer} = 0.090. Therefore, there is a weak association between the area of residence and adolescent alcohol consumption in the current sample. Hence, we accept the hypothesis 'there is a significant association between adolescent alcohol consumption and residence in a Turkish sample.'

4.3.4 Relationship Between Alcohol Consumption and Household Income in Turkish Adolescents

It is hypothesized that there is a significant association between adolescent alcohol consumption and household income in a Turkish sample.

Table 4.12 Household Income * Adolescent Alcohol Consumption Chi-Square Tests (N=751)

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	17.881[a]	4	.001
Likelihood Ratio	19.586	4	.001
Linear-by-Linear Association	1.998	1	.157
N of Valid Cases	751		

a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 11.42.

Table 4.13 Household Income * Adolescent Alcohol Consumption Symmetric Measures (N=751)

		Value	Approximate Significance
Nominal by Nominal	Phi	.154	.001
	Cramer's V	.109	.001
N of Valid Cases		751	

A chi-square test of independence and Cramer's V was performed to examine the relationship between household income and adolescent alcohol consumption. The relation between these variables is significant, X^2 (4, N = 751) = 17.881, p = .001, φ_{Cramer} = 0.109. Therefore, there is a moderate association between household income and adolescent alcohol consumption in the current sample. Hence, we accept the hypothesis 'there is a significant association between adolescent alcohol consumption and household income in a Turkish sample.'

4.4 Relationship Between Alcohol Consumption and Each of the Family Variables in Turkish Adolescents

It is hypothesized that there is a significant relationship between alcohol consumption and each of the family variables in Turkish adolescents. A Chi-square test and Cramer's V will be conducted to examine whether a relationship exists between adolescent alcohol consumption and each of the family variables.

4.4.1 Relationship Between Alcohol Consumption and Parental Marital Status in Turkish Adolescents

It is hypothesized that there is a significant association between adolescent alcohol consumption and parental marital status in a Turkish sample.

Table 4.14 Parental Marital Status * Adolescent Alcohol Consumption Crosstabulation (N=751)

			Adolescent Alcohol Consumption			
			Yes	No	1-2 times	Total
Parental Marital Status	Living together	N	65	533	96	694
		%	8.7%	71.0%	12.8%	92.4%
	Separated, not divorced	N	2	7	2	11
		%	0.3%	0.9%	0.3%	1.5%
	Divorced, separated	N	9	12	8	29
		%	1.2%	1.6%	1.1%	3.9%
	Divorced, living together	N	0	1	0	1
		%	0.0%	0.1%	0.0%	0.1%
	At least on parent has passed away	N	2	13	1	16
		%	0.3%	1.7%	0.1%	2.1%
Total		N	78	566	107	751
		%	10.4%	75.4%	14.2%	100.0%

According to Table 4.14, most of the participants who consume alcohol (N=65) have married parents who live together, followed by adolescents who have divorced and separated parents (N=9) and adolescents with separated but not divorced parents (N=2). Similarly, most participants who consumed alcohol (1-2 times) for curiosity purposes also have married (living together) parents (N=96), followed by participants with divorced and separated parents (N=8), and participants with separated but not divorced parents (N=2).

Table 4.15 Parental Marital Status * Adolescent Alcohol Consumption Chi-Square Tests (N=751)

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	23.091[a]	8	.003
Likelihood Ratio	19.337	8	.013
Linear-by-Linear Association	.316	1	.574
N of Valid Cases	751		

a. 9 cells (60.0%) have expected count less than 5. The minimum expected count is .10.

Table 4.16 Parental Marital Status * Adolescent Alcohol Consumption Symmetric Measures (N=751)

		Value	Approximate Significance
Nominal by Nominal	Phi	.175	.003
	Cramer's V	.124	.003
N of Valid Cases		751	

A chi-square test of independence and Cramer's V was performed to examine the relationship between parental marital status and adolescent alcohol consumption. The relation between these variables is significant, X^2 (8, N = 751) = 23.091, p = .003, φ_{Cramer} = 0.124. Therefore, there is a moderate association between parental marital status and adolescent alcohol consumption in the current sample. Hence, we accept the hypothesis 'there is a significant association between adolescent alcohol consumption and parental marital status in a Turkish sample.'

4.4.2 Relationship Between Alcohol Consumption and Mother's Level of Education in Turkish Adolescents

It is hypothesized that there is a significant association between adolescent alcohol consumption and mother's level of education in a Turkish sample.

Table 4.17 Mother's Education Level * Adolescent Alcohol Consumption Crosstabulation (N=751)

			Adolescent Alcohol Consumption			
			Yes	No	1-2 times	Total
Mother's Education Level	Illiterate	N	11	57	4	72
		%	1.5%	7.6%	0.5%	9.6%
	Primary School Graduate	N	26	288	48	362
		%	3.5%	38.3%	6.4%	48.2%
	Middle School Graduate	N	23	146	28	197
		%	3.1%	19.4%	3.7%	26.2%
	High School Graduate	N	15	67	21	103
		%	2.0%	8.9%	2.8%	13.7%
	University Graduate	N	3	8	6	17
		%	0.4%	1.1%	0.8%	2.3%
Total		N	78	566	107	751
		%	10.4%	75.4%	14.2%	100.0%

According to Table 4.17, a larger number of adolescents with primary school graduate mothers are observed to consume alcohol currently (N=26), closely followed by adolescents with middle school graduate mothers (N=23). Further, adolescents with high school graduate mothers (N=15) reported lesser alcohol consumption as did adolescents with university graduate mothers (N=3). Adolescents with illiterate mothers were also comparatively lower in current alcohol consumption (N=11). On the other hand, most adolescents with primary school graduate mothers (N=48) reported consuming alcohol once or twice, followed by adolescents with middle school graduate mothers (N=28), high school graduate mothers (N=21), university graduate mothers (N=6), and illiterate mothers (N=4).

Table 4.18 Mother's Education Level * Adolescent Alcohol Consumption Chi-Square Tests (N=751)

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	24.508[a]	8	.002
Likelihood Ratio	24.002	8	.002
Linear-by-Linear Association	5.570	1	.018
N of Valid Cases	751		

a. 2 cells (13.3%) have expected count less than 5. The minimum expected count is 1.77.

Table 4.19 Mother's Education Level * Adolescent Alcohol Consumption Symmetric Measures (N=751)

		Value	Approximate Significance
Nominal by Nominal	Phi	.181	.002
	Cramer's V	.128	.002
N of Valid Cases		751	

A chi-square test of independence and Cramer's V was performed to examine the relationship between mother's education level and adolescent alcohol consumption. The relation between these variables is significant, X^2 (8, N = 751) = 24.508, p = .002, φ_{Cramer} = 0.128. Therefore, there is a moderate association between a mother's education level and adolescent alcohol consumption in the current sample. Hence, we accept the hypothesis 'there is a significant association between adolescent alcohol consumption and mother's level of education in a Turkish sample.'

4.4.3 Relationship Between Alcohol Consumption and Father's Level of Education in Turkish Adolescents

It is hypothesized that there is a significant association between adolescent alcohol consumption and father's level of education in a Turkish sample.

Table 4.20 Father's Education Level * Adolescent Alcohol Consumption Crosstabulation (N=751)

			Adolescent Alcohol Consumption			
			Yes	No	1-2 times	Total
Father's Education Level	Illiterate	N	2	6	2	10
		%	0.3%	0.8%	0.3%	1.3%
	Primary School Graduate	N	32	241	35	308
		%	4.3%	32.1%	4.7%	41.0%
	Middle School Graduate	N	22	184	34	240
		%	2.9%	24.5%	4.5%	32.0%
	High School Graduate	N	18	105	30	153
		%	2.4%	14.0%	4.0%	20.4%
	University Graduate	N	4	30	6	40
		%	0.5%	4.0%	0.8%	5.3%
Total		N	78	566	107	751
		%	10.4%	75.4%	14.2%	100.0%

According to Table 4.20, a larger number of adolescents with primary school graduate fathers are observed to consume alcohol currently (N=32), followed by adolescents with middle school graduate fathers (N=22), and adolescents with high school graduate fathers (N=18). Further, lesser number of adolescents with university graduate fathers (N=4) reported alcohol consumption, followed by adolescents with illiterate fathers (N=2). On the other hand, larger number of adolescents with primary school graduate fathers (N=35) reported consuming alcohol once or twice, followed by adolescents with middle school graduate fathers (N=34), high school graduate fathers (N=30), university graduate fathers (N=6), and illiterate fathers (N=2).

Table 4.21 Father's Education Level * Adolescent Alcohol Consumption Chi-Square Tests (N=751)

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	8.281[a]	8	.407
Table 4.21 Continued			
Likelihood Ratio	7.921	8	.441
Linear-by-Linear Association	2.647	1	.104
N of Valid Cases	751		

a. 3 cells (20.0%) have expected count less than 5. The minimum expected count is 1.04.

Table 4.22 Father's Education Level * Adolescent Alcohol Consumption Symmetric Measures (N=751)

		Value	Approximate Significance
Nominal by Nominal	Phi	.105	.407
	Cramer's V	.074	.407
N of Valid Cases		751	

A chi-square test of independence and Cramer's V was performed to examine the relationship between father's education level and adolescent alcohol consumption. The relation between these variables is not significant, X^2 (8, N = 751) = 8.281, p = .407, φ_{Cramer} = 0.074. Therefore, there is no significant association between a father's

education level and adolescent alcohol consumption in the current sample. Hence, we reject the hypothesis 'there is a significant association between adolescent alcohol consumption and father's level of education in a Turkish sample.'

4.4.4 Relationship Between Alcohol Consumption and Mother's Work Status in Turkish Adolescents

It is hypothesized that there is a significant association between adolescent alcohol consumption and mother's work status in a Turkish sample.

Table 4.23 Mother's Work Status * Adolescent Alcohol Consumption Crosstabulation (N=751)

			Adolescent Alcohol Consumption			
			Yes	No	1-2 times	Total
Mother's Work Status	Not Working	N	42	437	73	552
		%	5.6%	58.2%	9.7%	73.5%
	laborer	N	28	106	20	154
		%	3.7%	14.1%	2.7%	20.5%
	Office Holder	N	1	8	3	12
		%	0.1%	1.1%	0.4%	1.6%
	Retired	N	3	9	4	16
		%	0.4%	1.2%	0.5%	2.1%
	Tradesmen	N	4	6	7	17
		%	0.5%	0.8%	0.9%	2.3%
Total		N	78	566	107	751
		%	10.4%	75.4%	14.2%	100.0%

According to Table 4.23, most alcohol-consuming adolescents have unemployed mothers (N=42), followed by laborer mothers (N=28). A comparatively lower number of alcohol-consuming adolescents reported having tradesmen/artisan mothers (N=4), followed by retired mothers (N=3) and officeholder mothers (N=1). Similarly, most adolescents who consumed alcohol (1-2 times) for curiosity purposes have unemployed mothers (N=73), followed by laborer mothers (N=20), tradesmen/artisan mothers (N=7), retired mothers (N=4), and officeholder mothers (N=3).

Table 4.24 Mother's Work Status * Adolescent Alcohol Consumption Chi-Square Tests (N=751)

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	35.015[a]	8	.000
Likelihood Ratio	30.446	8	.000
Linear-by-Linear Association	1.749	1	.186
N of Valid Cases	751		

a. 6 cells (40.0%) have expected count less than 5. The minimum expected count is 1.25.

Table 4.25 Mother's Work Status * Adolescent Alcohol Consumption Symmetric Measures (N=751)

		Value	Approximate Significance
Nominal by Nominal	Phi	.216	.000
	Cramer's V	.153	.000
N of Valid Cases		751	

A chi-square test of independence and Cramer's V was performed to examine the relationship between mother's work status and adolescent alcohol consumption. The relation between these variables is significant, X^2 (8, N = 751) = 35.015, p = .000, φ_{Cramer} = 0.153. Therefore, there is a strong association between a mother's work status and adolescent alcohol consumption in the current sample. Hence, we accept the hypothesis 'there is a significant association between adolescent alcohol consumption and mother's work status in a Turkish sample.'

4.4.5 Relationship Between Alcohol Consumption and Father's Work Status in Turkish Adolescents

It is hypothesized that there is a significant association between adolescent alcohol consumption and father's work status in a Turkish sample.

Table 4.26 Father's Work Status * Adolescent Alcohol Consumption Crosstabulation (N=751)

			Adolescent Alcohol Consumption			
			Yes	No	1-2 times	Total
Father's Work Status	Not Working	N	5	41	3	49
		%	0.7%	5.5%	0.4%	6.5%
	laborer	N	38	343	67	448
		%	5.1%	45.7%	8.9%	59.7%
	Office Holder	N	7	29	7	43
		%	0.9%	3.9%	0.9%	5.7%
	Retired	N	16	54	10	80

Table 4.26 Continued

		%	2.1%	7.2%	1.3%	10.7%
	Tradesmen	N	12	99	20	131
		%	1.6%	13.2%	2.7%	17.4%
Total		N	78	566	107	751
		%	10.4%	75.4%	14.2%	100.0%

According to Table 4.26, most alcohol-consuming adolescents have laborer fathers (N=38), followed by retired fathers (N=16), and tradesmen/artisan fathers (N=12). A comparatively lower number of alcohol-consuming adolescents have officeholder fathers (N=7), followed by unemployed fathers (N=5). Similarly, most adolescents who consumed alcohol (1-2 times) for curiosity purposes have employed fathers (N=67), followed by tradesmen/artisan fathers (N=20), retired fathers (N=10), officeholders (N=7), and unemployed fathers (N=3).

Table 4.27 Father's Work Status * Adolescent Alcohol Consumption Chi-Square Tests (N=751)

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	14.681[a]	8	.066
Likelihood Ratio	13.690	8	.090
Linear-by-Linear Association	.001	1	.970
N of Valid Cases	751		

a. 1 cells (6.7%) have expected count less than 5. The minimum expected count is 4.47.

Table 4.28 Father's Work Status * Adolescent Alcohol Consumption Symmetric Measures (N=751)

		Value	Approximate Significance
Nominal by Nominal	Phi	.140	.066
	Cramer's V	.099	.066
N of Valid Cases		751	

A chi-square test of independence and Cramer's V was performed to examine the relationship between father's work status and adolescent alcohol consumption. The relation between these variables is not significant, X^2 (8, N = 751) = 14.681, p = .066, φ_{Cramer} = 0.099 Therefore, there is no significant association between a father's work status and adolescent alcohol consumption in the current sample. Hence, we reject the hypothesis 'there is a significant association between adolescent alcohol consumption and father's work status in a Turkish sample.'

4.4.6 Relationship Between Alcohol Consumption and Mother's Alcohol Use in Turkish Adolescents

It is hypothesized that there is a significant association between adolescent alcohol consumption and mother's alcohol use in a Turkish sample.

Table 4.29 Mother's Alcohol Use * Adolescent Alcohol Consumption Crosstabulations (N=751)

			Adolescent Alcohol Consumption			
			Yes	No	1-2 times	Total
Mother's Alcohol Consumption	No	N	68	565	104	737
		%	9.1%	75.2%	13.8%	98.1%
	Yes	N	10	1	3	14
		%	1.3%	0.1%	0.4%	1.9%
Total		N	78	566	107	751
		%	10.4%	75.4%	14.2%	100.0%

According to Table 4.29, most alcohol-consuming adolescents do not have alcohol-using mothers (N=68). Similarly, most adolescents who consume alcohol (1-2 times) for curiosity purposes also do not have alcohol-using mothers (N=104).

Table 4.30 Mother's Alcohol Use * Adolescent Alcohol Consumption Chi-Square Tests (N=751)

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	60.508[a]	2	.000
Likelihood Ratio	37.465	2	.000
Linear-by-Linear Association	4.843	1	.028
N of Valid Cases	751		

a. 2 cells (33.3%) have expected count less than 5. The minimum expected count is 1.45.

Table 4.31 Mother's Alcohol Use * Adolescent Alcohol Consumption Symmetric Measures (N=751)

		Value	Approximate Significance
Nominal by Nominal	Phi	.284	.000
	Cramer's V	.284	.000
N of Valid Cases		751	

A chi-square test of independence and Cramer's V was performed to examine the relationship between mother's alcohol use and adolescent alcohol consumption. The relation between these variables is significant, X^2 (2, N = 751) = 60.508, p = .000, φ_{Cramer} = 0.284. Therefore, there is a very strong association between a mother's alcohol use and adolescent alcohol consumption in the current sample. Hence, we accept the hypothesis 'there is a significant association between adolescent alcohol consumption and mother's alcohol use in a Turkish sample.'

4.4.7 Relationship Between Alcohol Consumption and Father's Alcohol Use in Turkish Adolescents

It is hypothesized that there is a significant association between adolescent alcohol consumption and father's alcohol use in a Turkish sample.

Table 4.32 Father's Alcohol Use * Adolescent Alcohol Consumption Crosstabulation (N=751)

			Adolescent Alcohol Consumption			
			Yes	No	1-2 times	Total
Father's Alcohol Consumption	No	N	48	539	91	678
		%	6.4%	71.8%	12.1%	90.3%
	Yes	N	30	27	16	73
		%	4.0%	3.6%	2.1%	9.7%
Total		N	78	566	107	751
		%	10.4%	75.4%	14.2%	100.0%

According to Table 4.32, most alcohol-consuming adolescents do not have alcohol-using fathers (N=48). Similarly, most adolescents who consume alcohol (1-2 times) for curiosity purposes also do not have alcohol using fathers (N=91).

Table 4.33 Father's Alcohol Use * Adolescent Alcohol Consumption Chi-Square Tests (N=751)

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	92.565[a]	2	.000
Likelihood Ratio	67.755	2	.000
Linear-by-Linear Association	2.976	1	.085
N of Valid Cases	751		

a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 7.58.

Table 4.34 Father's Alcohol Use * Adolescent Alcohol Consumption Symmetric Measures (N=751)

		Value	Approximate Significance
Nominal by Nominal	Phi	.351	.000
	Cramer's V	.351	.000
N of Valid Cases		751	

A chi-square test of independence and Cramer's V was performed to examine the relationship between father's alcohol use and adolescent alcohol consumption. The relation between these variables is significant, X^2 (2, N = 751) = 92.565, p = .000, φ_{Cramer} = 0.351. Therefore, there is a very strong association between a father's alcohol

use and adolescent alcohol consumption in the current sample. Hence, we accept the hypothesis 'there is a significant association between adolescent alcohol consumption and father's alcohol use in a Turkish sample.'

4.4.8 Relationship Between Alcohol Consumption and Sibling's Alcohol Use in Turkish Adolescents

It is hypothesized that there is a significant association between adolescent alcohol consumption and sibling's alcohol use in a Turkish sample.

Table 4.35 Sibling's Alcohol Use * Adolescent Alcohol Consumption Crosstabulation (N=751)

			Adolescent Alcohol Consumption			
			Yes	No	1-2 times	Total
Sibling's Alcohol Use	No	N	58	557	100	715
		%	7.7%	74.2%	13.3%	95.2%
	Yes	N	20	9	7	36
		%	2.7%	1.2%	0.9%	4.8%
Total		N	78	566	107	751
		%	10.4%	75.4%	14.2%	100.0%

According to Table 4.35, most alcohol-consuming adolescents do not have alcohol-using siblings (N=58). Similarly, most adolescents who consume alcohol (1-2 times) for curiosity purposes also do not have alcohol-using siblings (N=100).

Table 4.36 Sibling's Alcohol use * Adolescent Alcohol Consumption Chi-Square Tests (N=751)

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	87.724[a]	2	.000
Likelihood Ratio	56.059	2	.000
Linear-by-Linear Association	7.125	1	.008
N of Valid Cases	751		

a. 1 cells (16.7%) have expected count less than 5. The minimum expected count is 3.74.

Table 4.37 Sibling's Alcohol Use * Adolescent Alcohol Consumption Symmetric Measures (N=751)

		Value	Approximate Significance
Nominal by Nominal	Phi	.342	.000
	Cramer's V	.342	.000
N of Valid Cases		751	

A chi-square test of independence and Cramer's V was performed to examine the relationship between sibling alcohol use and adolescent alcohol consumption. The relation between these variables is significant, X^2 (2, N=751) = 87.724, p = .000, φ_{Cramer} = 0.342. Therefore, there is a very strong association between sibling alcohol use and adolescent alcohol consumption in the current sample. Hence, we accept the hypothesis 'there is a significant association between adolescent alcohol consumption and sibling's alcohol use in a Turkish sample.'

4.5 Relationship Between Alcohol Consumption and Peer Alcohol Use in Turkish Adolescents

It is hypothesized that there is a significant relationship between alcohol consumption and peer alcohol use in Turkish adolescents. A Chi-square test and Cramer's V will be conducted to examine whether a relationship exists between adolescent alcohol consumption and peer alcohol use.

Table 4.38 Peer Alcohol Use * Adolescent Alcohol Consumption Crosstabulation (N=751)

			Adolescent Alcohol Consumption			
			Yes	No	1-2 times	Total
Peer Alcohol Use	No One	N	6	315	12	333
		%	0.8%	41.9%	1.6%	44.3%
	Close Friend (s)	N	9	16	2	27
		%	1.2%	2.1%	0.3%	3.6%
	A Few	N	34	212	73	319
		%	4.5%	28.2%	9.7%	42.5%
	Most	N	25	21	18	64
		%	3.3%	2.8%	2.4%	8.5%
	All	N	4	2	2	8
		%	0.5%	0.3%	0.3%	1.1%

Table 4.38 cont.

Total	N	78	566	107	751
	%	10.4%	75.4%	14.2%	100.0%

According to Table 4.38, in the current sample, a larger number of alcohol-consuming adolescents have few alcohol-consuming peers (N=34), followed by those who have most of their peers consume alcohol (N=25). Further, a few of the alcohol-consuming adolescents have just close peers who consumed alcohol (N=9) and only (all) alcohol-consuming peers (N=4). A small number of alcohol-using adolescents have no alcohol-consuming peers (N=6). Similarly, most adolescents who have consumed alcohol (1-2 times) for curiosity purposes reported having a few alcohol-consuming peers (N=73), followed by adolescents with most friends who consume alcohol (N=18) and adolescents with no alcohol-consuming peers (N=12). Finally, very few adolescents who engaged in curiosity drinking also reported having all alcohol using peers (N=2).

Table 4.39 Peer Alcohol Use * Adolescent Alcohol Consumption Chi-Square Tests (N=751)

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	192.159[a]	8	.000
Likelihood Ratio	183.633	8	.000

Table 4.39 Continued

Linear-by-Linear Association	13.518	1	.000
N of Valid Cases	751		

a. 4 cells (26.7%) have expected count less than 5. The minimum expected count is .83.

Table 4.40 Peer Alcohol Use * Adolescent Alcohol Consumption Symmetric Measures (N=751)

		Value	Approximate Significance
Nominal by Nominal	Phi	.506	.000
	Cramer's V	.358	.000
N of Valid Cases		751	

A chi-square test of independence and Cramer's V was performed to examine the relationship between peer alcohol use and adolescent alcohol consumption. The relation between these variables is significant, X^2 (8, N = 751) = 192.159, p = .000, φ_{Cramer} = 0.358. Therefore, there is a very strong association between peer alcohol use and adolescent alcohol consumption in the current sample. Hence, we accept the hypothesis 'there is a significant association between adolescent alcohol consumption and peer alcohol use in a Turkish sample.'

4.6 Relationship Between Alcohol Consumption and Each of the School Variables in Turkish Adolescents

It is hypothesized that there is a significant relationship between alcohol consumption and each of the school variables in Turkish adolescents. A Chi-square test and Cramer's V will be conducted to examine whether a relationship exists between adolescent alcohol consumption and each of the school variables.

4.6.1 Relationship Between Alcohol Consumption and School Type in Turkish adolescents

It is hypothesized that there is a significant association between adolescent alcohol consumption and school type in a Turkish sample.

Table 4.41 School Type * Adolescent Alcohol Consumption Crosstabulation (N=751)

			Adolescent Alcohol Consumption			
			Yes	No	1-2 times	Total
School type	Private	N	28	175	48	251
		%	3.7%	23.3%	6.4%	33.4%
	Imam Hatip	N	4	99	5	108
		%	0.5%	13.2%	0.7%	14.4%
	Vocational	N	46	292	54	392
		%	6.1%	38.9%	7.2%	52.2%
Total		N	78	566	107	751
		%	10.4%	75.4%	14.2%	100.0%

According to Table 4.41, most students who consume alcohol attend vocational high schools (N=46), followed by private high schools (N=28). Very few alcohol-consuming adolescents attend Imam Hatip (Islamic vocational) high schools (N=4). Similarly, most adolescents who have consumed alcohol (1-2 times) for curiosity purposes attend vocational high schools (N=54), followed by private high schools (N=48), and Imam Hatip high schools (N=5).

Table 4.42 School Type * Adolescent Alcohol Use Chi-Square Tests (N=751)

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	21.643[a]	4	.000
Likelihood Ratio	25.046	4	.000
Linear-by-Linear Association	2.513	1	.113
N of Valid Cases	751		

a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 11.22.

Table 4.43 School Type * Adolescent Alcohol Use Symmetric Measures (N=751)

		Value	Approximate Significance
Nominal by Nominal	Phi	.170	.000
	Cramer's V	.120	.000
N of Valid Cases		751	

A chi-square test of independence and Cramer's V was performed to examine the relationship between school type and adolescent alcohol consumption. The relation between these variables is significant, X^2 (4, N = 751) = 21.643, p = .000, φ_{Cramer} = 0.120. Therefore, there is a moderate association between school type and adolescent alcohol consumption in the current sample. Hence, we accept the hypothesis 'there is a significant association between adolescent alcohol consumption and school type use in a Turkish sample.'

4.6.2 Relationship Between Alcohol Consumption and School Attendance in Turkish Adolescents

It is hypothesized that there is a significant association between adolescent alcohol consumption and school attendance in a Turkish sample.

Table 4.44 School Attendance * Adolescent Alcohol Consumption Crosstabulation (N=751)

			Adolescent Alcohol Consumption			
			Yes	No	1-2 times	Total
School Attendance	No Missing Days	N	0	8	2	10
		%	0.0%	1.1%	0.3%	1.3%
	1-3 Days Missing	N	4	55	2	61
		%	0.5%	7.3%	0.3%	8.1%
	3-5 Days Missing	N	7	90	10	107
		%	0.9%	12.0%	1.3%	14.2%
	5-10 Days Missing	N	26	213	41	280
		%	3.5%	28.4%	5.5%	37.3%
	10-20 Days Missing	N	22	145	31	198
		%	2.9%	19.3%	4.1%	26.4%

Table 4.44 Continued

	21 Days or More Missing	N	19	55	21	95
		%	2.5%	7.3%	2.8%	12.6%
Total		N	78	566	107	751
		%	10.4%	75.4%	14.2%	100.0%

According to Table 4.44, in the case of school attendance, most alcohol-consuming adolescents have 5-10 days missing (N=26), 10-20 days missing (N=22), and 21 days and more missing (N=19). Relatively fewer alcohol-consuming adolescents have missed 3-5 days of school (N=7) and 1-3 days of school (N=4). It is important to note that there are no alcohol-consuming adolescents who haven't missed at least one day of school. Similarly, most adolescents who have consumed alcohol (1-2 times) for curiosity purposes have missed 5-10 days of school (N=41), 10-20 days of school (N=31), 21 and more days of school (N=21). This is followed by those who have missed 3-5 days of school (N=10), 1-3 days (N=2), and those with no missing days (N=2).

Table 4.45 School Attendance * Adolescent Alcohol Use Chi-Square Tests (N=751)

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	30.787[a]	10	.001
Likelihood Ratio	32.544	10	.000
Linear-by-Linear Association	2.214	1	.137
N of Valid Cases	751		

a. 2 cells (11.1%) have expected count less than 5. The minimum expected count is 1.04.

Table 4.46 School Attendance * Adolescent Alcohol Use Symmetric Measures (N=751)

		Value	Approximate Significance
Nominal by Nominal	Phi	.202	.000
	Cramer's V	.143	.000
N of Valid Cases		751	

A chi-square test of independence and Cramer's V was performed to examine the relationship between missing school attendance and adolescent alcohol consumption. The relation between these variables is significant, X^2 (10, N = 751) = 30.787, p = .001, φ_{Cramer} = 0.143. Therefore, there is a moderate association between missing school attendance and adolescent alcohol consumption in the current sample. Hence, we accept the hypothesis 'there is a significant association between adolescent alcohol consumption and missing school attendance in a Turkish sample.'

4.7 Impact of Demographic, Family, Peer, and School Variables on Adolescent Alcohol Consumption

A multinomial logistic regression analysis was conducted to determine whether each of the demographic variables (gender, age, residence, household income), family variables (parental marital status, mother's education level, father's education level, mother's work status, father's work status, mother's alcohol use, father's alcohol, sibling's alcohol use), peer variable (peer alcohol use), and school variables (school types, school attendance) could predict adolescent alcohol use. As can be observed from Table 4.1, adolescents who do not consume alcohol (N=566) have the highest

frequency and are selected as the base outcome/ reference group for the regression analysis.

Table 4.47 (see appendix c) and Table 4.48 (see appendix c) provide the multinomial logistic regression analysis coefficients and odds ratios. Taking 'do not consume alcohol' as the basis of reference, the independent variables were studied with the dependent variable. We will now look at the variables that significantly predict adolescent alcohol consumption relative to adolescents who do not consume alcohol given all the other variables in the model are constant.

In the case of gender, 'male' was observed to be a significant predictor of adolescent alcohol consumption at ($p<0.1$). From panel 1 of Table 4.47, it can be discerned that the positive coefficient for the gender male (B= 0.632) means that the odds are in favor of adolescents consuming alcohol if they are males compared to females, holding all other variables constant. Further, Table 4.48 provides the odds ratio comparing males to females for adolescent alcohol consumption relative to no alcohol consumption given all the other variables in the model are held constant. For males relative to females, the odds ratio for adolescent alcohol consumption relative to no alcohol consumption would be expected to increase by a factor of 1.882 given the other variables in the model are held constant.

Next, 'age 18' was observed to be a significant predictor of adolescent alcohol consumption at ($p<0.05$). From panel 1 of Table 4.47, it can be discerned that the negative coefficient for age 18 (B= -1.664) means the odds are in favor of adolescents not consuming alcohol if they are 18 years old as compared to their being 20 years old, holding all the other variables constant. Further, Table 4.48 provides the odds ratio comparing age 18 to age 20 for adolescent alcohol consumption relative to no alcohol consumption given that the other variables in the model are held constant. For age 18 relative to age 20, the odds ratios for adolescent alcohol consumption relative to no alcohol consumption would be expected to decrease by 0.189 given the other variables in the model are held constant. Adolescents aged 19 and 17 were not significant for alcohol consumption in this sample.

Residence 'outside Bağcılar' was observed to be a significant predictor of adolescent alcohol consumption at ($p<0.05$). From panel 1 of Table 4.47, it can be discerned that

the negative coefficient for residence outside Bağcılar (B= -0.899) means the odds are in favor of adolescent not consuming alcohol if they reside outside Bağcılar as compared to adolescents residing in Bağcılar, holding all the other variables constant. Further, Table 4.48 provides the odds ratio comparing residence outside Bağcılar to residence in Bağcılar for adolescent alcohol consumption relative to no alcohol consumption given the other variables in the model are held constant. For adolescents residing outside Bağcılar relative to adolescents residing in Bağcılar, the odds ratio for adolescent alcohol consumption relative to no alcohol consumption would be expected to decrease by a factor of 0.407 given the other variables in the models are held constant.

In the case of mother's level of education, being a primary school graduate at ($p<0.01$), middle school graduate at ($p<0.1$), and high school graduate at ($p<0.1$) significantly predict adolescent alcohol consumption. From panel 1 of Table 4.47, it can be discerned that the negative coefficient for primary school graduate mothers (B= -1.897), middle school graduate mothers (B= -1.134), and high school graduate mothers (B= -1.385) mean that the odds are in favor of adolescents not consuming alcohol if they have primary, middle, and high school graduate mothers compared to their having an illiterate mother, holding all other variables constant. Further, Table 4.48 provides the odds ratio comparing mother's education level being primary, middle, and high school graduates to being illiterate for adolescent alcohol consumption relative to no alcohol consumption given that the other variables in the model are held constant. For adolescents with primary school graduate mothers relative to adolescents with illiterate mothers, the odds ratio for adolescent alcohol consumption relative to no alcohol consumption is expected to decrease by a factor of 0.150 given the other variables in the model are constant. For adolescents with middle school graduate mothers relative to adolescents with illiterate mothers, the odds ratio for adolescent alcohol consumption relative to no alcohol consumption is expected to decrease by a factor of 0.322 given the other variables in the model are constant. For adolescents with high school graduate mothers relative to adolescents with illiterate mothers, the odds ratio for adolescent alcohol consumption relative to no alcohol consumption is expected to decrease by a factor of 0.250 given the other variables in the model are constant.

In the case of mother's work status, only 'laborer' mothers were observed to be a significant predictor of adolescent alcohol consumption at ($p<0.1$). From panel 1 of

Table 4.47, it can be discerned that the positive coefficient for laborer mothers (B= 0.713) means that the odds are in favor of adolescents consuming alcohol if they have mothers who are laborers as compared to having unemployed mothers, holding all other variables constant. Further, Table 4.48 provides the odds ratio comparing laborer mothers to unemployed mothers for adolescent alcohol consumption relative to no alcohol consumption given that the other variables in the model are held constant. For laborer mothers relative to unemployed mothers, the odds ratio for adolescent alcohol consumption relative to no alcohol consumption would be expected to increase by a factor of 2.040 given the other variables in the model are held constant. Mother's work status as an officeholder, tradesmen, and retired were not significant predictors of adolescent alcohol consumption in the current sample.

In the case of father's work status, fathers who hold positions of 'laborer' at ($p<0.05$), 'office holder' at ($p<0.01$), 'tradesmen' at ($p<0.05$), and 'retired' at ($p<0.01$) were observed to be a significant predictor of adolescent alcohol consumption. From panel 1 of Table 4.47, it can be discerned that the positive coefficient for laborers (B= 1.888), officeholders (B= 3.14), tradesmen (B= 1.91), and retired fathers (B= 2.329) means that the odds are in favor of adolescent consuming alcohol if they have fathers who hold positions of laborers, officeholders, tradesmen, and retired holding all other variables constant. Further, Table 4.48 provides the odds ratio comparing fathers holding positions of laborers, officeholders, tradesmen, and retired to unemployed fathers for adolescent alcohol consumption relative to no alcohol consumption. For laborer fathers relative to unemployed fathers, the odds ratio for adolescent alcohol consumption relative to no alcohol consumption would be expected to increase by a factor of 6.603 given the other variables in the model are held constant. For office holder fathers relative to unemployed fathers, the odds ratio for adolescent alcohol consumption relative to no alcohol consumption would be expected to increase by a factor of 23.10 given the other variables in the model are held constant. For tradesmen fathers relative to unemployed fathers, the odds ratio for adolescent alcohol consumption relative to no alcohol consumption would be expected to increase by a factor of 6.750 given the other variables in the model are held constant. For retired fathers relative to unemployed fathers, the odds ratio for adolescent alcohol consumption relative to no alcohol consumption would be expected to increase by a factor of 10.27 given the other variables in the model are held constant.

In the case of peer alcohol use, ‘close peers’, ‘some peers’, ‘most peers’, and ‘all peers’ were significant predictors of adolescent alcohol consumption at ($p<0.01$). From panel 1 of Table 4.47, it can be discerned that the positive coefficient for close peers (B=2.729), some peers (B=2.151), most peers (B=4.314), and all peers (B=4.441) means that the odds are in favor of adolescents consuming alcohol if they have peers who consumed alcohol as compared to peers who do not consume at all, holding all other variables constant. Further, Table 4.48 provides the odds ratio comparing close peers, some peers, most peers, and all peers who consume alcohol to peers who do not consume alcohol for adolescent alcohol consumption relative to no alcohol consumption given that the other variables in the model are held constant. For close peers who consume alcohol relative to peers who do not, the odds ratio for adolescent alcohol consumption relative to no alcohol consumption would be expected to increase by a factor of 15.32 given the other variables in the model are held constant. For some peers who consume alcohol relative to peers who do not, the odds ratio for adolescent alcohol consumption relative to no alcohol consumption would be expected to increase by a factor of 8.591 given the other variables in the model are held constant. For most peers who consume alcohol relative to peers who do not, the odds ratio for adolescent alcohol consumption relative to no alcohol consumption would be expected to increase by a factor of 74.74 given the other variables in the model are held constant. For all peers who consume alcohol relative to peers who do not, the odds ratio for adolescent alcohol consumption relative to no alcohol consumption would be expected to increase by a factor of 84.82 given the other variables in the model are held constant.

Apart from these, the father’s alcohol use was also observed to be a significant predictor of adolescent alcohol consumption at ($p<0.05$). From panel 1 of Table 4.47, it can be discerned that the positive coefficient for father’s alcohol use (B= 1.957) means that the odds are in favor of adolescents consuming alcohol if they have fathers who consume alcohol as compared to fathers who do not consume alcohol, holding all other variables constant. Further, Table 4.48 provides the odds ratio comparing father’s alcohol use to fathers who do not consume alcohol for adolescent alcohol consumption relative to no alcohol consumption given that the other variables in the model are held constant. For fathers who consume alcohol relative to fathers who do not, the odds ratio for adolescent alcohol consumption relative to no alcohol consumption would be expected to increase by 7.075 given the other variables in the model are held constant.

Likewise, sibling's alcohol use was observed to be a significant predictor of adolescent alcohol consumption at ($p<0.01$). From panel 1 of Table 4.47, it can be discerned that the positive coefficient of sibling's alcohol use (B= 2.302) means that the odds are in favor of adolescents consuming alcohol if they have siblings who consume alcohol as compared to siblings who do not consume alcohol, holding all other variables constant. Further, Table 4.48 provides the odds ratio comparing siblings who consume alcohol to siblings who do not for adolescent alcohol consumption relative to no alcohol consumption given that the other variables in the model are held constant. For siblings who consume alcohol relative to siblings who do not, the odds ratio for adolescent alcohol consumption relative to no alcohol consumption would be expected to increase by a factor of 9.995 given the other variables in the model are held constant.

CHAPTER V

DISCUSSION

In this chapter, the results obtained from the study are surveyed in detail in the context of relevant literature. Appropriate theories are also applied to further understand the findings and their importance. In the initial sections of this study, a couple of theories related to adolescent behaviors were surveyed. These theories maintained that adolescent behaviors cannot be explained by a single factor, rather it is the result of several interrelated factors. That is, adolescent behaviors are as much the result of personal and genetic factors as environmental and social factors. The findings from this study are perhaps a testament to the nature and process of influence on adolescent behaviors. The results suggested that factors like the area of residence, household income, parental marital status, mother's level of education and work status, family (mother, father, siblings) and peer alcohol use, type of school, and school attendance were associated with adolescent alcohol consumption. Furthermore, the regression results revealed that factors such as being male, being 18 years old, having a residence outside Bağcılar, having mothers with any level of formal education and working as a laborer, having working fathers, having retired fathers, having alcohol-consuming peers, and family members (father and siblings), all significantly predicted adolescent alcohol consumption at varying levels of significance. In this section, the results will be explored in detail with an attempt to substantiate them with existing literature.

5.1 Demographic Variables

Bronfenbrenner (1979) explains adolescent development and behavior in terms of its relationship with social institutions like family, peers, school, and society. The interaction between these different factors is probably one of the main reasons for adolescent emulation of different behaviors. Therefore, these factors must be studied together, rather than separately, in order to gain a comprehensive understanding of adolescent alcohol consumption. Firstly, the demographic variables used in the study

were gender, age, residence, and household income. Taking gender into consideration, not only did the sample reveal that more males consume alcohol than females, but also that male adolescents are more likely than female adolescents to consume alcohol. This finding is generalizable given its consistency with prior research findings, all of which expounds on the idea that there is a clear demarcation in how gender affects alcohol consumption. In other words, drinking behaviors across the globe and especially in Turkey are dominated by males (Akkuş et al., 2017; Arslan et al., 2012; Guler et al., 2009; Şaşmaz et al., 2006). Given Turkey's history with alcohol and the overwhelming presence of males in it, for example, certain Sufi sects who incorporated alcohol into worship (Evered & Evered, 2017), it comes as no surprise that males enjoy a sense of social approval should they chose to drink in Turkey. On the other hand, women experience social sanctions against drinking along with being judged, called out, and humiliated in society if they choose to drink (Griffin et al., 2000; Ögel et al., 2000). Furthermore, certain characteristics of the Turkish culture, such as being a collectivistic society and the patriarchy underlying it, reinforce drinking behaviors in males and the lack thereof in females. Looking further into the possible reasons why more adolescent males drink than females, it is understood that adolescent attitudes and behaviors are implicitly tied to parenting techniques and peer pressure. For example, when faced with parental support or disciplinary actions, males understand it as an attack on their autonomy while females don't necessarily take it that way. Adolescent males then attempt to re-establish their autonomy by engaging in deviant behaviors like alcohol consumption (Marshal & Chassin, 2000). These males are also susceptible to peer pressure that requires them to conform to the drinking culture whereas female adolescents are not (Nolen-Hoeksema & Hilt, 2006). Instead, for female adolescents, parental involvement can buffer peer pressure on alcohol use (Marshal & Chassin, 2000). Here we can see an interrelation of peer and family domains in deciding adolescent behaviors. Further, drinking behaviors are also strongly associated with externalizing behaviors, which are in turn related to the male gender (Bolland et al., 2013; Squeglia et al., 2017). Therefore, the relationship between the male gender and alcohol consumption cannot be contested.

Next is age as a demographic variable. It has been observed in the sample that most alcohol-consuming adolescents are aged 18 and 19. But, the sample does not in any way indicate the age of alcohol initiation. This means that alcohol initiation in the

current sample could have happened at an earlier age or would happen later in adulthood. Whatever be the case, the current study does not provide the opportunity to make an assumption about the age of alcohol initiation among Turkish adolescents. The findings of this study revealed adolescents aged 18 are less likely than 20-year-olds to consume alcohol. That is, in this context young adults aged 20 are more likely to consume alcohol. Hence, it is safe to assume that, alcohol consumption may not be as prevalent during adolescence (17-18 years), but it is prevalent among young adults in a Turkish sample. However, this claim is not conclusive until further studies establish the same finding. These findings can be compared to previous studies that describe alcohol use as tied to an age-related trajectory, from early adolescence to late adulthood. In other words, alcohol consumption has been identified to increase during adolescence, but it is during adulthood that it stabilizes into recurring behavior (Bolland et al., 2013; Arslan et al., 2012). Again, this assumption is not conclusive until further studies are made.

These findings are, however, somewhat contradictory to previous literature that has stated adolescence as highly implicated in alcohol initiation and consumption. Due to characteristics specific to the adolescence period in a child's life, deviant behaviors like alcohol use or substance use are more likely to take hold during this age. Factors like cognitive immaturity, identity conflicts, fluctuations in self-esteem, need for autonomy, indulgence in risk-taking behaviors, and poor self-control are some of the reasons why adolescents engage in drinking behaviors (Alberts et al., 2006; Griffin et al., 2000). The current findings can however be put in perspective if we consider the stringent laws put in place by the Turkish government to curb alcohol sales, advertising, and underage drinking. In other words, it's easier for adults to gain access to alcohol than adolescents, explaining the current findings to some degree. Furthermore, the analysis results also reveal that ages 17 and 19 are not significant in predicting adolescent alcohol consumption in the current sample. One possible reason for the lack of significance could be the disproportionate sample size, which consists largely of participants who do not consume alcohol compared to those who consume alcohol.

Among the demographic variables, residence is also implicated in adolescent alcohol consumption. The results from the current study reveal that most of the participants

consuming alcohol reside in Bağcılar. This finding is further strengthened by the regression results that state adolescents living outside Bağcılar are less likely to consume alcohol than those residing in Bağcılar. Not surprisingly, the limited literature found in Turkey on the subject of alcohol and substance use has focused on the district of Bağcılar in Istanbul. That is, most studies in Turkey report adolescent alcohol consumption and substance use to be more prevalent in Bağcılar than elsewhere in Istanbul (Gurbuz & Solakoglu, 2017; Ünlü & Evcin, 2014), thereby substantiating the current results. This is because Bağcılar is easily the most populous district in Istanbul and is an urbanized working-class suburban (Orak & Solakoglu, 2017). Apart from housing various industries, media houses, and textile stores, the district also accommodates a decent number of liquor stores. This heavily urbanized setting of Bağcılar offers more opportunities for adolescents to get acquainted with alcohol. Another factor to be noted is that Bağcılar is one of the few districts in Istanbul that is heavily populated with an immigrant class (Williams et al., 2020). The amalgamation of different cultures in the district could therefore contribute to the prevalence of adolescent alcohol use within the district and lack thereof outside it. This could be the reason why substance use studies in Istanbul are generally centralized around Bağcılar and for those studies to establish a prevalence of adolescent consumption of alcohol in the district. Hence, the current finding that adolescents outside Bağcılar are less likely than adolescents in Bağcılar to consume alcohol seems accurate. However, it is important to note that the archival data used here is limited in specifying the exact regions outside Bağcılar where the participants are from. Therefore, a conclusive assumption cannot be made about the reasons for the lower likelihood of alcohol use among participants outside Bağcılar.

Next, we come to the household income of participants and their families. The findings reveal that most of the participants who reported alcohol consumption had an average household income of 1600 TL and more. The results also reveal that household income is associated with alcohol use in adolescents but is not a predictor of the same. Prior studies have sufficiently highlighted the importance of household income and financial status in determining adolescent deviance, substance use, and alcohol consumption. These studies have shown that adolescent alcohol consumption is more prevalent and more frequent in higher-income households (Patrick et al., 2012; Melotti et al., 2011; Humensky, 2010; Tot et al., 2004). This is because higher-income households are of

higher social standing and can easily afford alcoholic beverages despite the heavy prices (Spijkerman et al., 2008). A social event where alcohol is abundantly available is also easily accessible to families of higher social standing. Although adolescents from higher-income families report more alcohol consumption, the current study was unable to establish a cause-and-effect relationship between both variables. That is, it cannot be conclusively claimed that it is because of a higher household income that these adolescents consume alcohol.

5.2 Family Domain Variables

Going back to the theories mentioned in the above sections of this paper, family socialization and influence is a very strong indicator of alcohol consumption among children. Both the ecological systems theory and social learning theory establish the importance of socializing agents like family members and their interaction with other socializing agents like the school and/or peers in developing adolescent attitudes and behaviors. The results from the current study also suggest the same, as factors like mother's level of education and work status, father's work status, father's alcohol use, and sibling's alcohol use were found to predict adolescent alcohol consumption at varying levels of significance. Behavior is learned, modeled, and finessed. This is especially the case for adolescents, who are constantly exposed to the consequences of parental education, their occupations, and their attitudes and behaviors regarding deviant behaviors like alcohol use.

A mother's level of education is strongly associated with adolescent alcohol consumption and is identified to predict the behavior as well. The nature of this relationship is such that adolescents with educated (primary, middle, and high school graduate) mothers are less likely to consume alcohol compared to those with illiterate mothers. Prior literature divulges on the finding that a higher level of education in parents can predict delinquent behaviors among adolescents, and naturally, this includes alcohol use (Maggs et al., 2008; Aras et al., 2007). More importantly, having educationally qualified mothers is associated with a higher prevalence of alcohol consumption among adolescents (Alikaþifoðlu et al., 2004; Tot et al., 2004). This finding highlights the importance of education in hampering deviant behaviors in children. Educated parents can identify the dangers of early drinking behaviors and are

hence able to educate their children appropriately. However, since mothers are usually the primary caretakers, being educated is a huge advantage in managing adolescent behaviors. Education provides mothers with a well-equipped arsenal that can be used to discipline, monitor, and curb adolescent alcohol use. Educationally qualified mothers would have the resources necessary to keep adolescent behaviors in check and delay alcohol initiation. Not surprisingly, adolescents with low education level parents are liable to have the wrong ideas about alcohol, such as it being harmless or not constituting a drug/substance (Tur, 2003). Adolescents with educated parents may have ambitions themselves that would require them to lead a disciplined life away from alcohol use and other risky behaviors (Humensky, 2010). Parental education is also instrumental in deciding the communication strategies that parents use with adolescents (Ennet et al., 2001). Effective communication strategies are important in conveying to adolescents the negative effects of alcohol consumption and potentially buffer external negative influences on them.

Next is the relationship between adolescent alcohol consumption and a mother's work status. The findings signal a strong association between these two variables, with most alcohol-consuming adolescents in the current sample having unemployed mothers. Moreover, alcohol consumption in adolescents is significantly predicted by having mothers working as laborers. That is, adolescents with mothers employed as laborers are more likely to consume alcohol compared to adolescents with unemployed mothers. A mother's work status as a laborer signifies a potential financial risk within the family given labor work is considered unskilled employment. This also reflects poorly on adolescents who may not have sufficient maternal supervision, paving way for deviant behaviors to emerge. There is also the possibility that such families are struggling to make ends meet, and therefore are unable to manage their families well, further leading to a risk of alcohol consumption among children/adolescents (Shortt et al., 2007). A mother's occupation within the labor force says something about her level of education and socioeconomic status. Such a family would be in possession of very limited social and economic resources and lack the social control necessary to keep deviant behaviors at bay (Shaw & McKay, 1943). Moreover, it is already established how adolescents with mothers from a low education background or a low socioeconomic background are more likely to consume alcohol (Torikka et al., 2016; Goodman et al., 2003; Goodman & Huang, 2002). This is also because children from

such households are unable to understand the dangers of alcohol consumption nor are their parents able to rightly guide them.

Perhaps the most substantial of findings is the relationship between family alcohol use and adolescent alcohol use. One of the main reasons for adolescents emulating drinking behaviors is because they witness the same from socializing family agents. The current study looked into the drinking behaviors of fathers, mothers, and siblings to reveal a strong association between adolescent alcohol use and family alcohol use. However, only father's and sibling's alcohol use separately predicted alcohol use among adolescents. In other words, adolescents are more likely to consume alcohol if they have fathers and siblings who consume alcohol. This finding is well supported by prior studies. Studies done in Turkey reveal that adolescents are at a higher risk of alcohol consumption should their immediate family members also consume alcohol (Donovan 2004; Stryker et al., 2003; Herken et al., 2000). Alcohol consumption within family members normalizes drinking culture within the family, encouraging adolescents to pick up similar habits. Ryan and colleagues (2010) alluded to the idea that allowing alcohol to be consumed at home with family members is associated with early alcohol initiation in adolescents. Although studies have looked into the influence of both fathers and mothers on adolescent drinking behaviors, these results have come out inconclusive (Scholte et al., 2008; Tot et al., 2004). Likewise, in the current study, although both parents' alcohol use was significantly related to adolescent alcohol use, only father's use significantly predicted alcohol use in adolescents.

Along with the sibling influences established in this study, the importance of social learning is highlighted more than ever. It is important to note that siblings, especially older ones, have a stronger influence on adolescents than do parents (Whiteman et al., 2007; Fagan & Najman, 2005). Siblings, on the occasion of having grown together and having shared life experiences, are likely to influence each other's attitudes, beliefs, and behaviors. Older siblings provide adolescents with opportunities that make alcohol consumption possible (Windle, 2000). Elder siblings occupy a position of certain authority and power, hence making their level of influence even more substantial. To think that older siblings are solely responsible for adolescent socialization to alcohol would, however, be a wrong statement to make. Sibling pairs, irrespective of who is elder or younger, can naturally influence each other given they share a warm and close

relationship (East & Khoo, 2005). Here, power or authority is not a necessary factor for influence. Therefore, the current finding, that adolescent alcohol consumption is significantly predicted by sibling alcohol use, is sufficiently backed by literature. This study is a prime example of how social learning works in deciding adolescent behavior. Children mimic the adults around them, establishing behavioral markers that would later be used in various contexts. In this way, they become vulnerable to the attitudes and behaviors of people around them.

Lastly, some of the other family variables used in the study were also found to be associated with adolescent alcohol consumption although causality could not be established. Firstly, the relationship between parental marital status and adolescent alcohol consumption was looked into. The results indicate that most alcohol-consuming adolescents have married (living together) parents. As such, parental marital status and adolescent alcohol consumption were found to be strongly related, however, the regression analysis revealed that there was no significant causal relationship between the two variables. This means it cannot establish that the marital status of the parents had anything to do with adolescent alcohol consumption or lack thereof. As can be understood from the literature section of this paper, most studies that have looked into parental marital status have shown that adolescents with divorced (Kristjansson et al., 2009; Thompson et al., 2008; Jeynes, 2001), single parents (Vanassche et al., 2014; Strycker et al., 2003) and step-parents (Amato, 2001; Flewelling & Bauman, 1990) are at a higher risk of alcohol consumption. Unfortunately, the current sample consisted mostly of adolescents with married parents, which could affect the significance of the results. This could be one of the reasons that a causal relationship was not established between parental marital status and adolescent alcohol use.

5.3 Peer Domain Variable

Now that parental and sibling influences on adolescent alcohol use is explored in detail, peer influence is the next implicating factor. Peer influence is perhaps even more powerful in terms of the impact it has on driving adolescent behavior. The reason why peer influence is more compelling to adolescents is that adolescents identify strongly with peer groups at this age, more so than with their parents or siblings.

Consequently, the current results revealed that peer alcohol use and adolescent alcohol use are strongly associated with each other. The results also revealed that adolescents with alcohol using peers are more likely to consume alcohol than adolescents with peers who do not use alcohol. This finding comes as no surprise given its similarity to previous findings. Prior studies have made it clear that adolescents with alcohol/substance-using peers are at a higher risk of early alcohol initiation and consumption (Strycker et al., 2003; Maxwell, 2002; Windle, 2000). In Turkey as well, studies allude to the idea that having a large group of substance/alcohol-using peers and spending large amounts of time with them, further the risk of alcohol consumption among adolescents (Ünlü & Evcin, 2014; Shortt et al., 2007).

Adolescents are driven by the need to fit in with a crowd, and so, they are easily attracted to peers who offer them a place, should they conform to peer behaviors like alcohol use (Simons-Morton, 2004). Peer influence works under the socialization/modeling mechanism for which friendship or identification with the deviant peer is necessary. These friendships do not have to be bilateral, rather a perceived friendship with the deviant peer(s) is enough for adolescents to pick up similar habits (Bot et al., 2005). Likewise, peer acceptance and the quality of perceived friendship with peers are instrumental in adolescent modeling of peer behaviors. In simpler terms adolescents are more likely to consume alcohol given they identify with alcohol-consuming peers, perceive a strong relationship with alcohol-consuming peers, and/or feel the need to conform to peer drinking behaviors in order to be socially accepted (Urberg et al., 2003). Peers and influencers in social media platforms are also observed to drive adolescents into partaking in drinking behaviors (Huang et al., 2014). This is especially concerning given the influx of adolescent social media users, who form the wrong ideas about drinking culture. Therefore, schools must be able to maintain a safe environment for students and make sure that such peer groups are not gaining momentum within and outside of school compounds. As such, the current finding that adolescent alcohol consumption is associated with and predicted by peer alcohol use is substantiated with literature findings.

5.4 School Domain Variables

Finally, we come to school variables, amongst which the type of school attended by the participants and their school attendance were studied. Taking school types into consideration, the study made use of participants from three different types of schools; private, vocational, and Islamic vocational (Imam Hatip) high schools. Most adolescents in the current sample, who reported alcohol consumption, responded as attending vocational high schools followed by private high schools. As expected only a few students from Imam Hatip (Islamic vocational) high school reported alcohol consumption. It is understood that the religion of Islam prohibits alcohol consumption and so, it was expected that students attending schools providing Islamic value-based education would not engage in drinking behaviors. The current findings also reveal that the type of school and adolescent alcohol consumption was moderately associated with each other. This finding is of the essence given it directly implicates the Turkish high schools and the students attending these schools. Different kinds of schools have different environments and cultures, which fosters different behaviors in students. Each of these schools also has students coming in from different socioeconomic backgrounds and together they create a unique culture within each school. Moreover, schools may also differ in the kind of disciplinary policies they have in order to maintain a certain decorum within school compounds. Some private schools may enforce strict rules and disciplinary measures that discourage any and every type of deviant behavior within the student population. This may not be the case in vocational schools where rules are flexible and students have more freedom to experiment. Likewise, schools offering valued added religious education would not, under any circumstance, accept even the smallest disturbance within its student population.

Turkish studies have revealed that adolescents attending vocational schools and private schools are at a higher risk of deviant behaviors like alcohol use, while those attending Imam Hatip high schools would be the least likely to engage in such behaviors (Akkuş et al., 2017; Ünlü et al., 2014; Vanassche et al., 2013; Aras et al., 2007). These findings are similar to this study and reflect the nature of school environments in honing adolescent behaviors. Vocational schools are probably the worst off in terms of the teaching staff and resources available to better student development. These schools are often overcrowded and understaffed or staffed with teachers without sufficient

training. Therefore, they are unable to keep a check on adolescent behaviors. Imam Hatip (Islamic vocational) high schools on the other hand inculcate religious teachings and valued-based education into their curriculum. These schools are strict in disciplinary measures, ensuring that students keep away from risky behaviors. It is very important to understand the nature of different types of schools within Turkey so that harmful behaviors like alcohol consumption and substance use can be controlled. Schools need certain systems in place that can make up for any other shortcomings they might have in terms of the resources available. Students who are not able to afford quality education in high-end institutions also need the assurance that they will be provided a safe and healthy learning environment.

School attendance is another variable that was studied with adolescent alcohol consumption. In the current study, it was found that all alcohol-consuming adolescents have missed at least 1-3 days of school and at the most, 21 days and more. School attendance is a huge indicator of school engagement, which in turn, is implicated in the development of deviant behaviors in adolescents. In this study, missing school attendance was moderately associated with adolescent alcohol use, however, causality could not be established. Literature maintains that students who are not engaged in school activities are at a higher risk of alcohol consumption or substance use in general (Akkuş et al., 2017; Hirschfield & Gasper, 2010; Wildhagen, 2007). It is important to note that although school attendance and adolescent alcohol consumption are related to each other, we cannot say that it is because of missing school that adolescents consume alcohol or vice versa.

The findings mentioned above paint a holistic picture of the nature of influence on adolescent alcohol-related behaviors. All of these factors, from family to school, are social systems that impact an adolescent at varying levels. Alcohol-consuming parents and peers can steer adolescents to do the same. Working mothers pose a risk but not working fathers. Lenient schools pose the same risk but strict schools don't. These findings reveal the intricacies of an adolescent's relationship to each of these social institutions. Understanding these relationships and their impact on adolescent behavior opens various possibilities in curbing unwanted or potentially dangerous behaviors like alcohol consumption. These findings are therefore an important addition to the existing literature.

CHAPTER VI

CONCLUSION

6.1 Conclusion

This study helps shed light on the current scenario of adolescent alcohol consumption among Turkish adolescents living in Istanbul. As is understood from the various studies done on the topic, alcohol consumption is an extremely dangerous and unhealthy behavior, and especially so for adolescents. Apart from the myriad of different problems it poses on their physical, mental, and emotional health, it can also pave the way for later dependence. Therefore, it is pertinent that we try to understand the different factors affecting alcohol use in the adolescent population. The current study focused on Turkish adolescents from different schools in Istanbul, intending to explore the relationship between adolescent alcohol consumption and each of the demographic, family, peer, and school variables used in the study. Given, Turkey consists largely of Muslims, exploring adolescent alcohol consumption in such a context makes this study all the more important. The current sample of Turkish adolescents revealed that being male, 18 years of age, and residing in Bağcılar along with having educated mothers, mothers working as laborers, working or retired fathers, and alcohol using family members (father, mother, siblings) predicted alcohol use. Consequently, it is understood that alcohol influence on adolescents operates within an interrelated web of various demographic, family, peer, and school factors. At varying levels of significance, each of these factors is either related to or impacts adolescent alcohol consumption in a Turkish sample.

Identifying the underlying factors of alcohol consumption in adolescents is quite important in tailoring remedial and intervention strategies. From this study, we can conclude that alcohol consumption in Turkey is indeed relatively lower as compared to the rest of Europe. This may have to do with the overwhelmingly large Muslim population in the country since alcohol use is prohibited in Islam. Culture and religion

play an important role in how adolescents behave and emulate behaviors. The overarching culture of a country or community feels its way into smaller sections of the society, the family, and school structures. And these social structures sculpt adolescent attitudes and behaviors. Naturally, the overall political, cultural, and religious values of a community will impact the individuals on some level. As was observed from the findings of the current study, the types of schools and the culture and religion they promote or don't promote have a significant effect on student behaviors. Similar to the influence that the school climate has on adolescent behaviors, family systems, and peer behaviors also influence adolescent behavior. What is even more important is that the findings in the current study are unique to the Turkish population.

6.2 Limitations and Recommendations

The current study has some limitations. Firstly, the data used is archival data which was collected before the conception of this particular study. The questionnaire was designed to elicit information on adolescent alcohol use, smoking, and substance use within Turkey. However, this particular study only had the scope to explore alcohol consumption. Consequently, only select items from the questionnaire, related to alcohol consumption, were used. If at all the current study had the scope to explore smoking and substance use along with alcohol consumption, the findings would have been more enriching. This would allow for an understanding of the full extent of deviant behaviors as exhibited by Turkish adolescents. Future studies in Turkey would benefit from investigating these behaviors and how they are related to each other. This would essentially help in improving public policies and programs aimed at reducing underage drinking, smoking, and substance use.

Since the questionnaire was already set and the data collected, there was little room to make clarifications regarding the items in the questionnaire and the data. Furthermore, the data presented a huge disparity in the number of participants consuming alcohol and not, in the number of participants living in Bağcılar and outside, in the age groups of the participants, and other similar variables. This could have affected the significance of the results obtained. The data must be balanced in order to obtain accurate results. Also, by including only high school students aged 17 to 20 potentially

informative findings making use of the entire adolescence age spectrum was not addressed in the current study. As is known, alcohol initiation begins as early as 12-13 among adolescents. It would have been better to include this age group as well to gather supplementary information regarding alcohol behaviors in Turkish adolescents. The age group of 17-20 provides us with a rather minuscule window to study any form of deviant behaviors. Future studies should make sure to include a wide range of age groups to ensure a holistic understanding of alcohol behaviors. Speaking of age groups, our findings revealed that for the sample used in this study, young adults or 20-year-olds are more likely to drink than adolescents. As previous studies have navigated the trend of alcohol use from early adolescence to late adulthood, future studies with a Turkish sample would benefit from a similar approach. The limitations in the current research must be remedied in future studies. Steps to ensure a well-distributed sample size across the number of adolescents and their demographic features can warrant better results. The use of archival data must also be carefully navigated since archival data reflects the adolescent behaviors of a certain period, however, people and society, in general, undergo microscopic changes across years. Studies that measure attitudes and behaviors must be period-specific and that is why such studies constantly require regeneration.

In terms of the results obtained from this research work, there is space to elicit recommendations for future studies, awareness drives, and governmental policies.

- According to the findings, males and individuals in their late adolescence or young adulthood are implicated, raising the need for increased intervention policies aimed at this specific demographic in Turkey.
- Likewise, their socioeconomic status, parents' education and occupation are also implicated. Focusing on a demographic that fits the findings from this study in particular, and other similar studies can help in predicting adolescent behaviors early on.
- Middle schools and high schools would benefit from specific behavioral committees that could monitor student deviant behaviors and identify at-risk students showing markers of potential alcohol consumption. According to this study, these markers can be family alcohol use, parental education and work status, socioeconomic status, peer alcohol use, or school engagement.

- These committees could work hand-in-hand with counselors, teachers, and other administrative staff while also maintaining communication with at-risk students, their peers, and parents.
- They could also provide alcohol awareness drives, and implement support systems for the students in the form of counseling centers, thereby helping students navigate the turbulent waters of adolescent experiences.
- Schools should actively work with the community and families in raising awareness about the dangers of adolescent alcohol use. For families who are unable to obtain this information elsewhere should be able to access these "community-wide programs" despite their children not attending said school. That is, these programs aiming for awareness should be open to all.

However, designing policies and intervention strategies requires sufficient information regarding the drinking motives of Turkish adolescents. The current study falls short of extracting the reasons why the participants consume alcohol, if they did. As mentioned previously religious ideologies and attitudes could also have been measured to gain an adequate understanding of the possible protective factors delaying or curbing alcohol initiation and consumption among Turkish adolescents. Religious elements are especially important in the current sample since the number of adolescents consuming alcohol in Islamic vocational/Imam Hatip high schools are minuscule. This legitimizes the idea that Islam does have something to do with reduced alcohol consumption. As such, various researchers have established as much in their studies. Future studies could make use of these recommendations.

REFERENCES

Agnew, R. (1992). Foundation for a general strain theory of crime and delinquency. Criminology, 30(1), 47–88. doi:10.1111/j.1745-9125.1992.tb01093.x

Akkuş, D., Karaca, A., Şener, D. K., & Ankaralı, H. (2017). Lise öğrencileri arasında sigara ve alkol kullanma sıklığı ve etkileyen faktörler. Anadolu Kliniği, 22(1), 36-45. doi: 10.21673/anadoluklin.245632.

Alberts, A., Elkind, D., & Ginsberg, S. (2006). The Personal Fable and Risk-Taking in Early Adolescence. Journal of Youth and Adolescence, 36(1), 71–76. doi:10.1007/s10964-006-9144-4

Alikaþifoðlu, M., Erginöz, E., Ercan, O., Uysal, Ö., Albayrak-Kaymak, D., & Ýlter, Ö. (2004). Alcohol drinking behaviors among Turkish high school students. The Turkish journal of pediatrics, 46, 44-53.

Amato, P. R. (2001). Children of divorce in the 1990s: An update of the Amato and Keith (1991) meta-analysis. Journal of Family Psychology, 15(3), 355–370. doi:10.1037/0893-3200.15.3.355

Aras, S., Günay, T., Özan, S., & Orcin, E. (2007). Izmir ilinde lise ögrencilerinin riskli davranislari/Risky behaviors among high school students in Izmir. Anadolu Psikiyatri Dergisi, 8(3), 186.

Arslan, H. N., Terzi, O., Dabak, S., & Peksen, Y. (2012). Substance, Cigarette and Alcohol Use Among High School Students in the Provincial Center of Samsun, Turkey. Erciyes Tıp Dergisi/Erciyes Medical Journal, 34(2), 79–84. doi:10.5152/etd.2012.19

Aslanargun, E., Kilic, A., & Bozkurt, S. (2014). Parental Expectation and Religious Education in State Schools in Turkey: The Case of Imam Hatip High Schools. International Journal of Instruction, 7(1), 135-150.

Aunola, K., Stattin, H., & Nurmi, J. E. (2000). Adolescents' achievement strategies, school adjustment, and externalizing and internalizing problem behaviors. Journal of youth and adolescence, 29(3), 289-306. doi: 10.1023/a:1005143607919

Barnes, G. M., Hoffman, J. H., Welte, J. W., Farrell, M. P., & Dintcheff, B. A. (2006). Adolescents' time use: Effects on substance use, delinquency and sexual activity. Journal of Youth and Adolescence, 36(5), 697–710. doi:10.1007/s10964-006-9075-0

Barnes, G. M., Reifman, A. S., Farrell, M. P., & Dintcheff, B. A. (2000). The Effects of Parenting on the Development of Adolescent Alcohol Misuse: A Six-Wave Latent Growth Model. Journal of Marriage and Family, 62(1), 175–186. doi:10.1111/j.1741-3737.2000.00175.x

Barnes, G. M., Welte, J. W., & Hoffman, J. H. (2002). Relationship of Alcohol Use to Delinquency and Illicit Drug Use in Adolescents: Gender, Age, and Racial/Ethnic Differences. Journal of Drug Issues, 32(1), 153–178. doi:10.1177/002204260203200107

Barrett, A. E., & Turner, R. J. (2005). Family Structure and Mental Health: The Mediating Effects of Socioeconomic Status, Family Process, and Social Stress. Journal of Health and Social Behavior, 46(2), 156–169. doi:10.1177/002214650504600203

Baumrind, D., & Moselle, K. A. (1985). A Developmental Perspective on Adolescent Drug Abuse. Advances in Alcohol & Substance Abuse, 4(3-4), 41–66. doi:10.1300/j251v04n03_03

Bekman, N. M., Anderson, K. G., Trim, R. S., Metrik, J., Diulio, A. R., Myers, M. G., & Brown, S. A. (2011). Thinking and drinking: Alcohol-related cognitions across stages of adolescent alcohol involvement. Psychology of Addictive Behaviors, 25(3), 415–425. doi:10.1037/a0023302

Bellis, M. A., Hughes, K., Morleo, M., Tocque, K., Hughes, S., Allen, T., … Fe-Rodriguez, E. (2007). Predictors of risky alcohol consumption in schoolchildren and their implications for preventing alcohol-related harm. Substance Abuse Treatment, Prevention, and Policy, 2(1). doi:10.1186/1747-597x-2-15

Bisset, S., Markham, W. A., & Aveyard, P. (2007). School culture as an influencing factor on youth substance use. Journal of Epidemiology & Community Health, 61(6), 485–490. doi:10.1136/jech.2006.048157

Bjork, J. M., Hommer, D. W., Grant, S. J., & Danube, C. (2004). Impulsivity in abstinent alcohol-dependent patients: relation to control subjects and type 1–/type 2–like traits. Alcohol, 34(2-3), 133–150. doi:10.1016/j.alcohol.2004.06.012

Bolland, K. A., Bolland, J. M., Tomek, S., Devereaux, R. S., Mrug, S., & Wimberly, J. C. (2013). Trajectories of Adolescent Alcohol Use by Gender and Early Initiation Status. Youth & Society, 48(1), 3–32. doi:10.1177/0044118x13475639

Borawski, E. A., Ievers-Landis, C. E., Lovegreen, L. D., & Trapl, E. S. (2003). Parental monitoring, negotiated unsupervised time, and parental trust: the role of perceived parenting practices in adolescent health risk behaviors. Journal of Adolescent Health, 33(2), 60–70. doi:10.1016/s1054-139x(03)00100-9

Bot, S. M., Engels, R. C., Knibbe, R. A., & Meeus, W. H. (2005). Friend's drinking behaviour and adolescent alcohol consumption: The moderating role of friendship characteristics. Addictive behaviors, 30(5), 929-947. doi:10.1016/j.addbeh.2004.09.012

Bray, J. H., Adams, G. J., Getz, J. G., & Baer, P. E. (2001). Developmental, family, and ethnic in influences on adolescent alcohol usage: A growth curve approach. Journal of Family Psychology, 15(2), 301–314. doi:10.1037/0893-3200.15.2.301

Brenner, A. B., Bauermeister, J. A., & Zimmerman, M. A. (2011). Neighborhood Variation in Adolescent Alcohol Use: Examination of Socioecological and Social Disorganization Theories*. Journal of Studies on Alcohol and Drugs, 72(4), 651–659. doi:10.15288/jsad.2011.72.651

Brody, G. H., Ge, X., Katz, J., & Arias, I. (2000). A Longitudinal Analysis of Internalization of Parental Alcohol-Use Norms and Adolescent Alcohol Use. Applied Developmental Science, 4(2), 71–79. doi:10.1207/s1532480xads0402_2

Bronfenbrenner, U. (1977). Toward an experimental ecology of human development. American Psychologist, 32(7), 513–531. doi:10.1037/0003-066x.32.7.513

Bronfenbrenner, U. (1979). The ecology of human development: Experiments by nature and design. Harvard university press.

Brook, J. S., Balka, E. B., Crossman, A. M., Dermatis, H., Galanter, M., & Brook, D. W. (2010). The Relationship between Parental Alcohol Use, Early and Late Adolescent Alcohol Use, and Young Adult Psychological Symptoms: A Longitudinal Study. The American Journal on Addictions, 19(6), 534–542. doi:10.1111/j.1521-0391.2010.00083.x

Brook, J. S., Whiteman, M., Gordon, A. S., Nomura, C., & Brook, D. W. (1986). Onset of Adolescent Drinking: Advances in Alcohol & Substance Abuse, 5(3), 91–110. doi:10.1300/j251v05n03_07

Bülbül, K., & Odacı, H. (2018a). Lise öğrencilerinde umutsuzluk, bağlanma stili ve aile yapısının madde kullanma eğilimini yordama gücü. Klinik Psikiyatri Dergisi, 21(4), 360-369.

Bülbül, K., & Odacı, H. (2018b). Liseli Ergenlerde Madde Kullanma Eğiliminin Kişisel, Sosyal ve Akademik Değişkenler Açısından Karşılaştırılması. Addicta: The Turkish Journal on Addictions, 5(4). doi:10.15805/addicta.2018.5.4.0026

Carlson, P. (2019). Declining alcohol consumption among adolescents and schools in Stockholm, 2010–2016. Nordic Studies on Alcohol and Drugs, 36(4), 344–356. doi:10.1177/1455072519835710

Chaplin, T. M., Sinha, R., Simmons, J. A., Healy, S. M., Mayes, L. C., Hommer, R. E., & Crowley, M. J. (2012). Parent–adolescent conflict interactions and adolescent alcohol use. Addictive Behaviors, 37(5), 605–612. doi:10.1016/j.addbeh.2012.01.004

Chappell, N. L., & Penning, M. J. (2005). Family Caregivers: Increasing Demands in the Context of 21st-century Globalization? The Cambridge Handbook of Age and Ageing, 455–462. doi:10.1017/cbo9780511610714.048

Charro Baena, B., Meneses, C., Caperos, J. M., Prieto, M., & Uroz, J. (2018). The Role of Religion and Religiosity in Alcohol Consumption in Adolescents in Spain. Journal of Religion and Health, 58(5), 1477–1487. doi:10.1007/s10943-018-0694-z

Chartier, K. G., Hesselbrock, M. N., & Hesselbrock, V. M. (2010). Development and Vulnerability Factors in Adolescent Alcohol Use. Child and Adolescent Psychiatric Clinics of North America, 19(3), 493–504. doi:10.1016/j.chc.2010.03.004

Chen, C.-Y., Dormitzer, C. M., Gutiérrez, U., Vittetoe, K., González, G. B., & Anthony, J. C. (2004). The adolescent behavioral repertoire as a context for drug exposure: behavioral autarcesis at play. Addiction, 99(7), 897–906. doi:10.1111/j.1360-0443.2004.00774.x

Chen, P., & Jacobson, K. C. (2012). Developmental Trajectories of Substance Use From Early Adolescence to Young Adulthood: Gender and Racial/Ethnic Differences. Journal of Adolescent Health, 50(2), 154–163. doi:10.1016/j.jadohealth.2011.05.013

Chuang, Y.-C., Ennett, S. T., Bauman, K. E., & Foshee, V. A. (2005). Neighborhood Influences on Adolescent Cigarette and Alcohol Use: Mediating Effects through Parent and Peer Behaviors. Journal of Health and Social Behavior, 46(2), 187–204. doi:10.1177/002214650504600205

Crosnoe, R. (2006). The Connection Between Academic Failure and Adolescent Drinking in Secondary School. Sociology of Education, 79(1), 44–60. doi:10.1177/003804070607900103

Curcio, A. L., & George, A. M. (2011). Selected impulsivity facets with alcohol use/problems: The mediating role of drinking motives. Addictive Behaviors, 36(10), 959–964. doi:10.1016/j.addbeh.2011.05.007

Çiftçi Demirci, A., Erdoğan, A., Yalçın, Ö., Yıldızhan, E., Koyuncu, Z., Eseroğlu, T., … Evren, C. (2014). Sociodemographic characteristics and drug abuse patterns of adolescents admitted for substance use disorder treatment in Istanbul. The American Journal of Drug and Alcohol Abuse, 41(3), 212–219. doi:10.3109/00952990.2014.973961

Doksat, N., Ciftci, A., Zahmacioglu, O., Tekden, M., Ozbek, F., Gunay, G., … Erdogan, A. (2016). Trends and gender differences in alcohol and substance use among children and adolescents admitted to an addiction treatment center in Turkey: comparison of 2014 with 2011. Anatolian Journal of Psychiatry, 17(4), 325. doi:10.5455/apd.201477

DONOVAN, J. (2004). Adolescent alcohol initiation: A review of psychosocial risk factors. Journal of Adolescent Health, 35(6), 529.e7. doi:10.1016/s1054-139x(04)00066-7

DONOVAN, K., DONOVAN, R., HOWAT, P., & WELLER, N. (2007). Magazine alcohol advertising compliance with the Australian Alcoholic Beverages Advertising Code. Drug and Alcohol Review, 26(1), 73–81. doi:10.1080/09595230601037026

Dube, S. R., Anda, R. F., Felitti, V. J., Edwards, V. J., & Croft, J. B. (2002). Adverse childhood experiences and personal alcohol abuse as an adult. Addictive Behaviors, 27(5), 713–725. doi:10.1016/s0306-4603(01)00204-0

Dube, S. R., Miller, J. W., Brown, D. W., Giles, W. H., Felitti, V. J., Dong, M., & Anda, R. F. (2006). Adverse childhood experiences and the association with ever using alcohol and initiating alcohol use during adolescence. Journal of Adolescent Health, 38(4), 444.e1–444.e10. doi:10.1016/j.jadohealth.2005.06.006

Duncan, S. C., Duncan, T. E., & Strycker, L. A. (2006). Alcohol use from ages 9 to 16: A cohort-sequential latent growth model. Drug and Alcohol Dependence, 81(1), 71–81. doi:10.1016/j.drugalcdep.2005.06.001

East, P. L. (2009). Adolescents' Relationships with Siblings. Handbook of Adolescent Psychology. doi:10.1002/9780470479193.adlpsy002003

East, P. L., & Khoo, S. T. (2005). Longitudinal pathways linking family factors and sibling relationship qualities to adolescent substance use and sexual risk behaviors. Journal of Family Psychology, 19(4), 571–580. doi:10.1037/0893-3200.19.4.571

Elkind, D. (1967). Egocentrism in Adolescence. Child Development, 38(4), 1025. doi:10.2307/1127100

Engels, R. C. M. E., Wiers, R., Lemmers, L., & Overbeek, G. (2005). Drinking Motives, Alcohol Expectancies, Self-Efficacy, and Drinking Patterns. Journal of Drug Education, 35(2), 147–166. doi:10.2190/6q6b-3lma-vmva-l312

Englund, M. M., Egeland, B., Oliva, E. M., & Collins, W. A. (2008). Childhood and adolescent predictors of heavy drinking and alcohol use disorders in early adulthood: a longitudinal developmental analysis. Addiction, 103(s1), 23–35. doi:10.1111/j.1360-0443.2008.02174.x

Ennett, S. T., Bauman, K. E., Foshee, V. A., Pemberton, M., & Hicks, K. A. (2001). Parent-Child Communication About Adolescent Tobacco and Alcohol Use: What Do Parents Say and Does It Affect Youth Behavior? Journal of Marriage and Family, 63(1), 48–62. doi:10.1111/j.1741-3737.2001.00048.x

Ennett, S. T., Foshee, V. A., Bauman, K. E., Hussong, A., Cai, L., Reyes, H. L. M., … DuRant, R. (2008). The Social Ecology of Adolescent Alcohol Misuse. Child Development, 79(6), 1777–1791. doi:10.1111/j.1467-8624.2008.01225.x

Erdem, G., Eke, C. Y., Ögel, K., & Taner, S. (2006). LİSE ÖĞRENCİLERİNDE ARKADAŞ ÖZELLİKLERİ VE MADDE KULLANIMI. Journal of Dependence, 7, 111-116.

ESPAD: The European School Survey Project on Alcohol and Other Drugs. Turkey (6 cities): Key results 2003. Last edited: 5/21/2012. http://www.espad.org/turkey; last accessed on 2/27/14.

Evered, E. Ö., & Evered, K. T. (2017). From rakı to ayran: regulating the place and practice of drinking in Turkey. Drugs, Law, People, Place and the State, 39–58. doi:10.4324/9781315204468-4

Evren, C., Evren, B., Bozkurt, M., & Ciftci-Demirci, A. (2015). Effects of lifetime tobacco, alcohol and drug use on psychological and behavioral problems among 10th grade students in Istanbul. International Journal of Adolescent Medicine and Health, 27(4), 405–413. doi:10.1515/ijamh-2014-0040

Evren, C., Ogel, K., Demirci, A. C., Evren, B., Yavuz, B. G., & Bozkurt, M. (2014). Prevalence of Lifetime Tobacco, Alcohol and Drug Use Among 10th Grade Students in Istanbul. Klinik Psikofarmakoloji Bülteni-Bulletin of Clinical Psychopharmacology, 24(3), 201–210. doi:10.5455/bcp.20140131023259

Fagan, A. A., & Najman, J. M. (2005). The Relative Contributions of Parental and Sibling Substance Use to Adolescent Tobacco, Alcohol, and other Drug Use. Journal of Drug Issues, 35(4), 869–883. doi:10.1177/002204260503500410

Fergus, S., & Zimmerman, M. A. (2005). ADOLESCENT RESILIENCE: A Framework for Understanding Healthy Development in the Face of Risk. Annual Review of Public Health, 26(1), 399–419. doi:10.1146/annurev.publhealth.26.021304.144357

Fisher, L. B., Miles, I. W., Austin, S. B., Camargo, C. A., & Colditz, G. A. (2007). Predictors of initiation of alcohol use among US adolescents: findings from a prospective cohort study. Archives of Pediatrics & Adolescent Medicine, 161(10), 959-966.

FLEMING, K., THORSON, E., & ATKIN, C. K. (2004). Alcohol Advertising Exposure and Perceptions: Links with Alcohol Expectancies and Intentions to Drink or Drinking in Underaged Youth and Young Adults1. Journal of Health Communication, 9(1), 3–29. doi:10.1080/10810730490271665

Flewelling, R. L., & Bauman, K. E. (1990). Family Structure as a Predictor of Initial Substance Use and Sexual Intercourse in Early Adolescence. Journal of Marriage and the Family, 52(1), 171. doi:10.2307/352848

Fredricks, J. A., Blumenfeld, P. C., & Paris, A. H. (2004). School Engagement: Potential of the Concept, State of the Evidence. Review of Educational Research, 74(1), 59–109. doi:10.3102/00346543074001059

Glanville, J. L., & Wildhagen, T. (2007). The Measurement of School Engagement. Educational and Psychological Measurement, 67(6), 1019–1041. doi:10.1177/0013164406299126

Global status report on alcohol and health 2018. (2018). World Health Organization. https://www.who.int/publications/i/item/9789241565639

Goodman, E., & Huang, B. (2002). Socioeconomic Status, Depressive Symptoms, and Adolescent Substance Use. Archives of Pediatrics & Adolescent Medicine, 156(5), 448. doi:10.1001/archpedi.156.5.448

Goodman, E., Slap, G. B., & Huang, B. (2003). The Public Health Impact of Socioeconomic Status on Adolescent Depression and Obesity. American Journal of Public Health, 93(11), 1844–1850. doi:10.2105/ajph.93.11.1844

Gottfredson, G. D., Gottfredson, D. C., Payne, A. A., & Gottfredson, N. C. (2005). School Climate Predictors of School Disorder: Results from a National Study of Delinquency Prevention in Schools. Journal of Research in Crime and Delinquency, 42(4), 412–444. doi:10.1177/0022427804271931

GRANT, J. D., SCHERRER, J. F., LYNSKEY, M. T., LYONS, M. J., EISEN, S. A., TSUANG, M. T., … BUCHOLZ, K. K. (2005). Adolescent alcohol use is a risk factor for adult alcohol and drug dependence: evidence from a twin design. Psychological Medicine, 36(1), 109–118. doi:10.1017/s0033291705006045

Griffin, K. W., Scheier, L. M., Botvin, G. J., & Diaz, T. (2000). Ethnic and gender differences in psychosocial risk, protection, and adolescent alcohol use. Prevention Science, 1(4), 199-212.

Guler, N., Güler, G., Ulusoy, H., & Bekar, M. (2009). Lise öğrencileri arasında sigara, alkol kullanımı ve intihar düşüncesi sıklığı. Cumhuriyet Tıp Dergisi, 31(4), 340-345.

Gurbuz, S., Solakoglu, O., & Lo, C. C. (2017). Family's role in adolescents' alcohol use in Bagcilar, Turkey. Journal of Substance Use, 23(2), 169–174. doi:10.1080/14659891.2017.1378738

Gunn, R. L., & Smith, G. T. (2010). Risk factors for elementary school drinking: Pubertal status, personality, and alcohol expectancies concurrently predict fifth grade alcohol consumption. Psychology of Addictive Behaviors, 24(4), 617–627. doi:10.1037/a0020334

Hamilton, H. A., Noh, S., & Adlaf, E. M. (2009). Perceived financial status, health, and maladjustment in adolescence. Social Science & Medicine, 68(8), 1527–1534. doi:10.1016/j.socscimed.2009.01.037

Hawkins, J. D., & Weis, J. G. (1985). The social development model: An integrated approach to delinquency prevention. The Journal of Primary Prevention, 6(2), 73–97. doi:10.1007/bf01325432

Heath, A. C., Madden, P. A. F., Bucholz, K. K., Bierut, L. J., Whitfield, J. B., Dinwiddie, S. H., … Martin, N. G. (2001). Towards a molecular epidemiology of alcohol dependence: Analysing the interplay of genetic and environmental risk factors. British Journal of Psychiatry, 178(S40), s33–s40. doi:10.1192/bjp.178.40.s33

Herken, H., ÖZKAN, A. S. Ç., & BODUR, S. (2000). Ögrencilerde Alkol Kullanım Sıklığı ve Sosyal Öğrenme ile ilişkisi. Düşünen Adam, 13(2), 87-91.

Hingson, R., Heeren, T., Zakocs, R., Winter, M., & Wechsler, H. (2003). Age of first intoxication, heavy drinking, driving after drinking and risk of unintentional injury among U.S. college students. Journal of Studies on Alcohol, 64(1), 23–31. doi:10.15288/jsa.2003.64.23

Hirschfield, P. J., & Gasper, J. (2010). The Relationship Between School Engagement and Delinquency in Late Childhood and Early Adolescence. Journal of Youth and Adolescence, 40(1), 3–22. doi:10.1007/s10964-010-9579-5

HOPFER, C. J., CROWLEY, T. J., & HEWITT, J. K. (2003). Review of Twin and Adoption Studies of Adolescent Substance Use. Journal of the American Academy of Child & Adolescent Psychiatry, 42(6), 710–719. doi:10.1097/01.chi.0000046848.56865.54

Huang, G. C., Unger, J. B., Soto, D., Fujimoto, K., Pentz, M. A., Jordan-Marsh, M., & Valente, T. W. (2014). Peer Influences: The Impact of Online and Offline Friendship Networks on Adolescent Smoking and Alcohol Use. Journal of Adolescent Health, 54(5), 508–514. doi:10.1016/j.jadohealth.2013.07.001

Humensky, J. L. (2010). Are adolescents with high socioeconomic status more likely to engage in alcohol and illicit drug use in early adulthood? Substance Abuse Treatment, Prevention, and Policy, 5(1). doi:10.1186/1747-597x-5-19

Ilhan, M. N., Arikan, Z., Kotan, Z., Tuncoglu, T., Pinarci, M., Tasdemir, A., … Kocak, N. (2016). Prevalence and Socio-Demographic Determinants of Tobacco, Alcohol, Substance Use and Drug Misuse in General Population in Turkey. Noro Psikiyatri Arsivi, 53(3), 205–212. doi:10.5152/npa.2015.10050

Isaac, S., & Michael, W. B. (1997). Handbook in research and evaluation: A collection of principles, methods, and strategies useful in the planning, design, and evaluation of studies in education and the behavioral sciences. (3rd Ed.). San Diego: Education

JESSOR, R. (1992). Risk behavior in adolescence: A psychosocial framework for understanding and action*1. Developmental Review, 12(4), 374–390. doi:10.1016/0273-2297(92)90014-s

Jessor, R., Donovan, J. E., & Costa, F. M. (1994). Beyond adolescence: Problem behaviour and young adult development. Cambridge University Press.

Jeynes, W. H. (2001). The effects of recent parental divorce on their children's consumption of alcohol. Journal of Youth and Adolescence, 30(3), 305-319. doi:10.1023/a:1010440111698

Johnston, L. D., O'Malley, P. M., Bachman, J. G., & Schulenberg, J. E. (2011). Monitoring the future national results on adolescent drug use: Overview of key findings, 2010. Institute for Social Research.

Kara, B., Hatun, Ş., Aydoğan, M., Babaoğlu, K., & Gökalp, A. S. (2003). Kocaeli ilindeki lise öğrencilerinde sağlık açısından riskli davranışların değerlendirilmesi. Çocuk Sağlığı ve Hastalıkları Dergisi, 46(1), 30-7.

Karatay, G., & Kubilay, G. (2004). SOSYOEKONOMİK DÜZEYİ FARKLI İKİ LİSEDE MADDE KULLANMA DURUMU VE ETKİLEYEN FAKTÖRLERİN BELİRLENMESİ. Hemşirelikte Araştırma Geliştirme Dergisi, 6(1), 57-70.

Keenan, K. L., & Yeni, S. (2003). Ramadan Advertising in Egypt: A Content Analysis With Elaboration on Select Items. Journal of Media and Religion, 2(2), 109–117. doi:10.1207/s15328415jmr0202_04

Kelly, J. B. (2000). Children's adjustment in conflicted marriage and divorce: A decade review of research. Journal of the American Academy of Child & Adolescent Psychiatry, 39(8), 963-973. doi:10.1097/00004583-200008000-00007

Kendler, K. S., Karkowski, L. M., Neale, M. C., & Prescott, C. A. (2000). Illicit Psychoactive Substance Use, Heavy Use, Abuse, and Dependence in a US Population-Based Sample of Male Twins. Archives of General Psychiatry, 57(3), 261. doi:10.1001/archpsyc.57.3.261

Kilpatrick, D. G., Acierno, R., Saunders, B., Resnick, H. S., Best, C. L., & Schnurr, P. P. (2000). Risk factors for adolescent substance abuse and dependence: Data from a national sample. Journal of Consulting and Clinical Psychology, 68(1), 19–30. doi:10.1037/0022-006x.68.1.19

Kliewer, W., & Murrelle, L. (2007). Risk and Protective Factors for Adolescent Substance Use: Findings from a Study in Selected Central American Countries. Journal of Adolescent Health, 40(5), 448–455. doi:10.1016/j.jadohealth.2006.11.148

Kling, J. R., Liebman, J. B., & Katz, L. F. (2007). Experimental Analysis of Neighborhood Effects. Econometrica, 75(1), 83–119. doi:10.1111/j.1468-0262.2007.00733.x

Knafo, A., & Schwartz, S. H. (2003). Parenting and adolescents' accuracy in perceiving parental values. Child development, 74(2), 595-611.

Kraus, L., & Nociar, A. (2016). ESPAD report 2015: results from the European school survey project on alcohol and other drugs. European Monitoring Centre for Drugs and Drug Addiction.

Kristjansson, A. L., Sigfusdottir, I. D., Allegrante, J. P., & Helgason, A. R. (2009). Parental divorce and adolescent cigarette smoking and alcohol use: assessing the importance of family conflict. Acta Paediatrica, 98(3), 537–542. doi:10.1111/j.1651-2227.2008.01133.x

Kulbok, P. A., & Cox, C. L. (2002). Dimensions of adolescent health behavior. Journal of Adolescent Health, 31(5), 394–400. doi:10.1016/s1054-139x(02)00422-6

Kuntsche, E., von Fischer, M., & Gmel, G. (2008). Personality factors and alcohol use: A mediator analysis of drinking motives. Personality and Individual Differences, 45(8), 796–800. doi:10.1016/j.paid.2008.08.009

Kuntsche, E., Wicki, M., Windlin, B., Roberts, C., Gabhainn, S. N., van der Sluijs, W., … Demetrovics, Z. (2015). Drinking Motives Mediate Cultural Differences but Not Gender Differences in Adolescent Alcohol Use. Journal of Adolescent Health, 56(3), 323–329. doi:10.1016/j.jadohealth.2014.10.267

Lee, C. M., Maggs, J. L., Neighbors, C., & Patrick, M. E. (2011). Positive and negative alcohol-related consequences: Associations with past drinking. Journal of Adolescence, 34(1), 87–94. doi:10.1016/j.adolescence.2010.01.009

Li, F., Duncan, T. E., Duncan, S. C., & Hops, H. (2001). Piecewise Growth Mixture Modeling of Adolescent Alcohol Use Data. Structural Equation Modeling: A Multidisciplinary Journal, 8(2), 175–204. doi:10.1207/s15328007sem0802_2

Li, Y., & Lerner, R. M. (2011). Trajectories of school engagement during adolescence: Implications for grades, depression, delinquency, and substance use. Developmental Psychology, 47(1), 233–247. doi:10.1037/a0021307

Li, Y., Zhang, W., Liu, J., Arbeit, M. R., Schwartz, S. J., Bowers, E. P., & Lerner, R. M. (2011). The role of school engagement in preventing adolescent delinquency and substance use: A survival analysis. Journal of Adolescence, 34(6), 1181–1192. doi:10.1016/j.adolescence.2011.07.003

Litt, D. M., & Stock, M. L. (2011). Adolescent alcohol-related risk cognitions: The roles of social norms and social networking sites. Psychology of Addictive Behaviors, 25(4), 708–713. doi:10.1037/a0024226

Maggs, J. L., Patrick, M. E., & Feinstein, L. (2008). Childhood and adolescent predictors of alcohol use and problems in adolescence and adulthood in the National Child Development Study. Addiction, 103(s1), 7–22. doi:10.1111/j.1360-0443.2008.02173.x

Mares, S. H. W., Lichtwarck-Aschoff, A., & Engels, R. C. M. E. (2013). Alcohol-specific parenting, adolescent alcohol use and the mediating effect of adolescent alcohol-related cognitions. Psychology & Health, 28(7), 833–848. doi:10.1080/08870446.2012.762453

Marshal, M. P., & Chassin, L. (2000). Peer Influence on Adolescent Alcohol Use: The Moderating Role of Parental Support and Discipline. Applied Developmental Science, 4(2), 80–88. doi:10.1207/s1532480xads0402_3

Maxwell, K. A. (2002). Friends: The Role of Peer Influence Across Adolescent Risk Behaviors. Journal of Youth and Adolescence, 31(4), 267–277. doi:10.1023/a:1015493316865

Melotti, R., Heron, J., Hickman, M., Macleod, J., Araya, R., & Lewis, G. (2011). Adolescent Alcohol and Tobacco Use and Early Socioeconomic Position: The ALSPAC Birth Cohort. PEDIATRICS, 127(4), e948–e955. doi:10.1542/peds.2009-3450

Meltzer, H., Gatward, R., Goodman, R., & Ford, T. (2003). Mental health of children and adolescents in Great Britain. International Review of Psychiatry, 15(1-2), 185–187. doi:10.1080/0954026021000046155

Merline, A., Jager, J., & Schulenberg, J. E. (2008). Adolescent risk factors for adult alcohol use and abuse: stability and change of predictive value across early and middle adulthood. Addiction, 103(s1), 84–99. doi:10.1111/j.1360-0443.2008.02178.x

Mezzich, A. C., Tarter, R. E., Giancola, P. R., & Kirisci, L. (2001). The Dysregulation Inventory: A New Scale to Assess the Risk for Substance Use Disorder. Journal of Child & Adolescent Substance Abuse, 10(4), 35–43. doi:10.1300/j029v10n04_04

Mostofsky, E., Mukamal, K. J., Giovannucci, E. L., Stampfer, M. J., & Rimm, E. B. (2016). Key Findings on Alcohol Consumption and a Variety of Health Outcomes From the Nurses' Health Study. American Journal of Public Health, 106(9), 1586–1591. doi:10.2105/ajph.2016.303336

Nagasawa, R., Qian, Z., & Wong, P. (2000). Social Control Theory as a Theory of Conformity: The Case of Asian/Pacific Drug and Alcohol Nonuse. Sociological Perspectives, 43(4), 581–603. doi:10.2307/1389549

Najman, J. M., Clavarino, A., McGee, T. R., Bor, W., Williams, G. M., & Hayatbakhsh, M. R. (2010). Timing and Chronicity of Family Poverty and Development of Unhealthy Behaviors in Children: A Longitudinal Study. Journal of Adolescent Health, 46(6), 538–544. doi:10.1016/j.jadohealth.2009.12.001

Nash, S. G., McQueen, A., & Bray, J. H. (2005). Pathways to adolescent alcohol use: family environment, peer influence, and parental expectations. Journal of Adolescent Health, 37(1), 19–28. doi:10.1016/j.jadohealth.2004.06.004

Newton, N. C., Barrett, E. L., Swaffield, L., & Teesson, M. (2014). Risky cognitions associated with adolescent alcohol misuse: Moral disengagement, alcohol expectancies and perceived self-regulatory efficacy. Addictive Behaviors, 39(1), 165–172. doi:10.1016/j.addbeh.2013.09.030

Nixon, K., & McClain, J. A. (2010). Adolescence as a critical window for developing an alcohol use disorder: current findings in neuroscience. Current Opinion in Psychiatry, 23(3), 227–232. doi:10.1097/yco.0b013e32833864fe

Nolen-Hoeksema, S. (2004). Gender differences in risk factors and consequences for alcohol use and problems. Clinical Psychology Review, 24(8), 981–1010. doi:10.1016/j.cpr.2004.08.003

Nolen-Hoeksema, S., & Hilt, L. (2006). Possible Contributors to the Gender Differences in Alcohol Use and Problems. The Journal of General Psychology, 133(4), 357–374. doi:10.3200/genp.133.4.357-374

Oakes, J. M., & Rossi, P. H. (2003). The measurement of SES in health research: current practice and steps toward a new approach. Social Science & Medicine, 56(4), 769–784. doi:10.1016/s0277-9536(02)00073-4

Odabasi, Y., & Argan, M. (2009). Aspects of Underlying Ramadan Consumption Patterns in Turkey. Journal of International Consumer Marketing, 21(3), 203–218. doi:10.1080/08961530802202891

Odgers, C. L., Caspi, A., Nagin, D. S., Piquero, A. R., Slutske, W. S., Milne, B. J., … Moffitt, T. E. (2008). Is It Important to Prevent Early Exposure to Drugs and Alcohol Among Adolescents? Psychological Science, 19(10), 1037–1044. doi:10.1111/j.1467-9280.2008.02196.x

Oesterle, S., Hill, K. G., Hawkins, J. D., Guo, J., Catalano, R. F., & Abbott, R. D. (2004). Adolescent heavy episodic drinking trajectories and health in young adulthood. Journal of Studies on Alcohol, 65(2), 204–212. doi:10.15288/jsa.2004.65.204

Orak, U., & Solakoglu, O. (2017). Alcohol Consumption Among Turkish Adolescents: An Empirical Test of General Strain Theory. Journal of Child & Adolescent Substance Abuse, 26(4), 293–302. doi:10.1080/1067828x.2017.1305931

Ögel, K., Tamar, D., Evren, C., & Çakmak, D. (2000). İstanbul'da lise gençleri arasında sigara, alkol ve madde kullanım yaygınlığı. Klinik psikiyatri, 3(4), 242-245.

Ögel, K., Taner, S., & Eke, C. Y. (2006). Onuncu sınıf öğrencileri arasında tütün, alkol ve madde kullanım yaygınlığı: İstanbul örneklemi. Bağımlılık Dergisi, 7(1), 18-23.

Özbay, Ö., & Özcan, Y. Z. (2006). A Test of Hirschi's Social Bonding Theory. International Journal of Offender Therapy and Comparative Criminology, 50(6), 711–726. doi:10.1177/0306624x05283525

Patrick, M. E., Wightman, P., Schoeni, R. F., & Schulenberg, J. E. (2012). Socioeconomic Status and Substance Use Among Young Adults: A Comparison Across Constructs and Drugs. Journal of Studies on Alcohol and Drugs, 73(5), 772–782. doi:10.15288/jsad.2012.73.772

Pinderhughes, E. E., Dodge, K. A., Bates, J. E., Pettit, G. S., & Zelli, A. (2000). Discipline responses: influences of parents' socioeconomic status, ethnicity, beliefs about parenting, stress, and cognitive-emotional processes. Journal of family psychology, 14(3), 380. doi: 10.1037/0893-3200.14.3.380

Poelen, E. A. P., Scholte, R. H. J., Willemsen, G., Boomsma, D. I., & Engels, R. C. M. E. (2007). Drinking by parents, siblings, and friends as predictors of regular alcohol use in adolescents and young adults: a longitudinal twin-family study. Alcohol and Alcoholism, 42(4), 362–369. doi:10.1093/alcalc/agm042

Pumariega, A. J., Burakgazi, H., Unlu, A., Prajapati, P., & Dalkilic, A. (2014). Substance Abuse: Risk Factors for Turkish Youth. Klinik Psikofarmakoloji Bülteni-Bulletin of Clinical Psychopharmacology, 24(1), 5–14. doi:10.5455/bcp.20140317061538

Rende, R., Slomkowski, C., Lloyd-Richardson, E., & Niaura, R. (2005). Sibling effects on substance use in adolescence: social contagion and genetic relatedness. Journal of Family Psychology, 19(4), 611–618. doi:10.1037/0893-3200.19.4.611

Roebroek, L., & Koning, I. M. (2016). The Reciprocal Relation Between Adolescents' School Engagement and Alcohol Consumption, and the Role of Parental Support. Prevention Science, 17(2), 218–226. doi:10.1007/s11121-015-0598-z

Ryan, S. M., Jorm, A. F., & Lubman, D. I. (2010). Parenting Factors Associated with Reduced Adolescent Alcohol Use: A Systematic Review of Longitudinal Studies. Australian & New Zealand Journal of Psychiatry, 44(9), 774–783. doi:10.1080/00048674.2010.501759

Satan, A. (2011). Ergenlerde akran baskısı, benlik saygısı ve alkol kullanımı arasındaki ilişkilerin incelenmesi.

Scheier, L. M., & Botvin, G. J. (1996). Effects of early adolescent drug use on cognitive efficacy in early-late adolescence: A developmental structural model. Journal of Substance Abuse, 8(2), 271–273. doi:10.1016/s0899-3289(96)90315-6

Scheier, L. M., Botvin, G. J., Griffin, K. W., & Diaz, T. (2000). Dynamic Growth Models of Self-Esteem and Adolescent Alcohol Use. The Journal of Early Adolescence, 20(2), 178–209. doi:10.1177/0272431600020002004

Scholte, R. H. J., Poelen, E. A. P., Willemsen, G., Boomsma, D. I., & Engels, R. C. M. E. (2008). Relative risks of adolescent and young adult alcohol use: The role of drinking fathers, mothers, siblings, and friends. Addictive Behaviors, 33(1), 1–14. doi:10.1016/j.addbeh.2007.04.015

Schulenberg, J. E., & Maggs, J. L. (2002). A developmental perspective on alcohol use and heavy drinking during adolescence and the transition to young adulthood. Journal of Studies on Alcohol, Supplement, (s14), 54–70. doi:10.15288/jsas.2002.s14.54

Shaw, C. R., & McKay, H. D. (1943). Juvenile Delinquency and Urban Areas. Harvard Law Review, 56(4), 681. doi:10.2307/1334446

SHORTT, A. L., HUTCHINSON, D. M., CHAPMAN, R., & TOUMBOUROU, J. W. (2007). Family, school, peer and individual influences on early adolescent alcohol use: first-year impact of the Resilient Families programme. Drug and Alcohol Review, 26(6), 625–634. doi:10.1080/09595230701613817

Sieving, R. E., Perry, C. L., & Williams, C. L. (2000). Do friendships change behaviors, or do behaviors change friendships? Examining paths of influence in young adolescents' alcohol use. Journal of Adolescent Health, 26(1), 27-35. doi: 10.1016/s1054-139x(99)00056-7

Simons-Morton, B. (2004). Prospective association of peer influence, school engagement, drinking expectancies, and parent expectations with drinking initiation among sixth graders. Addictive Behaviors, 29(2), 299–309. doi:10.1016/j.addbeh.2003.08.005

Siyez, D. M., & Aysan, F. (2007). Ergenlerde görülen problem davranışların psiko-sosyal risk faktörleri ve koruyucu faktörler açısından yordanması. Uludağ Üniversitesi Eğitim Fakültesi Dergisi, 20(1), 145-171. S

Slomkowski, C., Rende, R., Conger, K. J., Simons, R. L., & Conger, R. D. (2001). Sisters, Brothers, and Delinquency: Evaluating Social Influence during Early and Middle Adolescence. Child Development, 72(1), 271–283. doi:10.1111/1467-8624.00278

Spear, L. P. (2000). The adolescent brain and age-related behavioral manifestations. Neuroscience & Biobehavioral Reviews, 24(4), 417–463. doi:10.1016/s0149-7634(00)00014-2

Spijkerman, R., van den Eijnden, R. J. J. M., & Huiberts, A. (2008). Socioeconomic Differences in Alcohol-Specific Parenting Practices and Adolescents' Drinking Patterns. European Addiction Research, 14(1), 26–37. doi:10.1159/000110408

Squeglia, L. M., Ball, T. M., Jacobus, J., Brumback, T., McKenna, B. S., Nguyen-Louie, T. T., … Tapert, S. F. (2017). Neural Predictors of Initiating Alcohol Use During Adolescence. American Journal of Psychiatry, 174(2), 172–185. doi:10.1176/appi.ajp.2016.15121587

Stattin, H., & Kerr, M. (2000). Parental Monitoring: A Reinterpretation. Child Development, 71(4), 1072–1085. doi:10.1111/1467-8624.00210

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

Strycker, L. A., Duncan, S. C., & Pickering, M. A. (2003). The Social Context of Alcohol Initiation Among African American and White Youth. Journal of Ethnicity in Substance Abuse, 2(1), 35–42. doi:10.1300/j233v02n01_03

ŞAŞMAZ, T., BUĞDAYCI, R., TOROS, F., KURT, A. Ö., TEZCAN, H., ÖNER, S., & ÇAMDEVİREN, H. (2006). ERGENLERDE ALKOL İÇME PREVALANSI VE OLASI RİSK FAKTÖRLERİ: OKUL TABANLI, KESİTSEL BİR ÇALIŞMA. TAF Preventive Medicine Bulletin, 5(2).

TELEF, B. B. (2014). Ergenlerde olumlu ve olumsuz duygular ile riskli davranişlar arasindaki ilişkinin incelenmesi. Kastamonu Eğitim Dergisi, 22(2), 591-604.

Thatcher, D. L., & Clark, D. B. (2008). Adolescents at risk for substance use disorders: Role of psychological dysregulation, endophenotypes, and environmental influences. Alcohol Research & Health, 31(2), 168.

The Alcohol Advertising Law in Turkey. (2020, April 5). Movendi International. https://movendi.ngo/news/2020/04/04/the-alcohol-advertising-law-in-turkey/

Thompson, R. G., Lizardi, D., Keyes, K. M., & Hasin, D. S. (2008). Childhood or adolescent parental divorce/separation, parental history of alcohol problems, and offspring lifetime alcohol dependence. Drug and Alcohol Dependence, 98(3), 264–269. doi:10.1016/j.drugalcdep.2008.06.011

Tot, Ş., Yazıcı, K., Yazıcı, A., Metin, Ö., Bal, N., & Erdem, P. (2004). Psychosocial correlates of substance use among adolescents in Mersin, Turkey. Public Health, 118(8), 588–593. doi:10.1016/j.puhe.2004.02.009

Trucco, E. M., Colder, C. R., & Wieczorek, W. F. (2011). Vulnerability to peer influence: A moderated mediation study of early adolescent alcohol use initiation. Addictive Behaviors, 36(7), 729–736. doi:10.1016/j.addbeh.2011.02.008

Trucco, E. M., Connery, H. S., Griffin, M. L., & Greenfield, S. F. (2007). The Relationship of Self-Esteem and Self-Efficacy to Treatment Outcomes of Alcohol-Dependent Men and Women. American Journal on Addictions, 16(2), 85–92. doi:10.1080/10550490601184183

Torikka, A., Kaltiala-Heino, R., Luukkaala, T., & Rimpelä, A. (2016). Trends in Alcohol Use among Adolescents from 2000 to 2011: The Role of Socioeconomic Status and Depression. Alcohol and Alcoholism, 52(1), 95–103. doi:10.1093/alcalc/agw048

TUIK. (2013). Türkiye İstatistik Kurumu Retrieved from www.tuik.gov.tr (2013).

Turkey Overview. (n.d.). World Bank. Retrieved February 25, 2021, from https://www.worldbank.org/en/country/turkey/overview

Turkey rises the national minimum wage. (2021, February 5). Countryeconomy.Com. https://countryeconomy.com/national-minimum-wage/turkey

TURKSTAT. (2013). Türkiye İstatistik Kurumu. Retrieved from www. tuik.gov.tr (2013).

Turner, K., West, P., Gordon, J., Young, R., & Sweeting, H. (2006). Could the peer group explain school differences in pupil smoking rates? An exploratory study. Social Science & Medicine, 62(10), 2513–2525. doi:10.1016/j.socscimed.2005.11.017

Uludağlı, N. P., & Sayıl, M. (2009). Orta ve ileri ergenlik döneminde risk alma davranışı: Ebeveyn ve akranların rolü. Türk Psikoloji Yazıları, 12(23), 14-24.

Underage Drinking | National Institute on Alcohol Abuse and Alcoholism (NIAAA). (2020, October). National Institute on Alcohol Abuse and Alcoholism (NIAAA). https://www.niaaa.nih.gov/publications/brochures-and-fact-sheets/underage-drinking

Urberg, K. A., Luo, Q., Pilgrim, C., & Degirmencioglu, S. M. (2003). A two-stage model of peer influence in adolescent substance use: individual and relationship-specific differences in susceptibility to influence. Addictive Behaviors, 28(7), 1243–1256. doi:10.1016/s0306-4603(02)00256-3

Ünlü, A., & Evcin, U. (2014). 2008 ve 2010 Yılları Arasında İstanbul Bağcılar İlçesinde Gençler Arasında Madde Kullanım Yaygınlığı, Risk ve Koruma Faktörlerinin Değerlendirilmesi. Anadolu University Journal of Social Sciences, 14(3).

Ünlü, A., Evcin, U., Dalkilic, A., & Pumariega, A. J. (2014). Substance Use Prevalence According to Public High School Types in Istanbul. Addictive Disorders & Their Treatment, 13(2), 75–86. doi:10.1097/adt.0b013e31829111b6

Vanassche, S., Sodermans, A. K., Matthijs, K., & Swicegood, G. (2013). The Effects of Family Type, Family Relationships and Parental Role Models on Delinquency and Alcohol Use Among Flemish Adolescents. Journal of Child and Family Studies, 23(1), 128–143. doi:10.1007/s10826-012-9699-5

Vermeiren, R., Schwab-Stone, M., Deboutte, D., Leckman, P. E., & Ruchkin, V. (2003). Violence Exposure and Substance Use in Adolescents: Findings From Three Countries. PEDIATRICS, 111(3), 535–540. doi:10.1542/peds.111.3.535

Webb, J. A., Bray, J. H., Getz, J. G., & Adams, G. (2002). Gender, perceived parental monitoring, and behavioral adjustment: Influences on adolescent alcohol use. American Journal of Orthopsychiatry, 72(3), 392–400. doi:10.1037/0002-9432.72.3.392

Whiteman, S. D., Jensen, A. C., Mustillo, S. A., & Maggs, J. L. (2016). Understanding sibling influence on adolescents' alcohol use: Social and cognitive pathways. Addictive behaviors, 53, 1-6. doi:10.1016/j.addbeh.2015.09.007

Whiteman, S. D., McHale, S. M., & Crouter, A. C. (2007). Competing Processes of Sibling Influence: Observational Learning and Sibling Deidentification. Social Development, 16(4), 642–661. doi:10.1111/j.1467-9507.2007.00409.x

WHO. (2014). Global status report on alcohol and health. Retrieved from http://www.who.int/substance_abuse/publi cations/global_alcohol_report/en/

Wiles, N. J., Lingford-Hughes, A., Daniel, J., Hickman, M., Farrell, M., Macleod, J., … Lewis, G. (2007). Socio-economic status in childhood and later alcohol use: a systematic review*. Addiction, 102(10), 1546–1563. doi:10.1111/j.1360-0443.2007.01930.x

Williams, J. L., Cubukcu, S., Sadri, M., Rodeheaver, D. G., & Akhter, M. (2020). Social Capital and Delinquency in Bagcilar, Turkey. International Criminal Justice Review, 105756772095042. doi:10.1177/1057567720950425

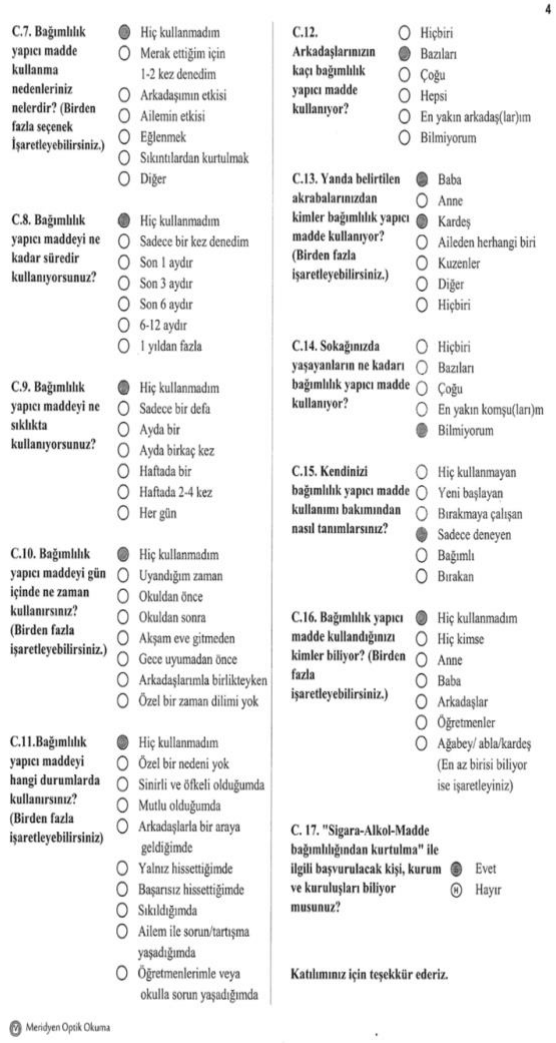
Windle, M. (2000). Parental, Sibling, and Peer Influences on Adolescent Substance Use and Alcohol Problems. Applied Developmental Science, 4(2), 98–110. doi:10.1207/s1532480xads0402_5

Wong, S. K. (2005). The Effects of Adolescent Activities on Delinquency: A Differential Involvement Approach. Journal of Youth and Adolescence, 34(4), 321–333. doi:10.1007/s10964-005-5755-4

Yuksek, D. A., & Solakoglu, O. (2016). The Relative Influence of Parental Attachment, Peer Attachment, School Attachment, and School Alienation on Delinquency among High School Students in Turkey. Deviant Behavior, 37(7), 723–747. doi:10.1080/01639625.2015.1062683

APPENDICES

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 akrabalarınızdan 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.
Katılımınız için teşekkür ederiz…

Örnek kodlama ●

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
- 1
- 2
- 3
- 4
- 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
- 1
- 2
- 3
- 4 ve üzeri

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

A.13. Anneniz;
- Çalışmıyor
- İşçi
- Memur
- Emekli
- Esnaf

A.14. Babanız;
- Çalışmıyor
- İşçi
- Memur
- Emekli
- Esnaf

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

Evrak Tarih ve Sayısı: 26.03.2021-2266

İBN HALDUN ÜNİVERSİTESİ

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

Sayı : E-71395021-020-2266
Konu : Liyana THABASSUM-Etik Kurul Kararı

İLGİLİ MAKAMA

Kurulumuza başvuran Liyana THABASSUM'un "Adolescent Alcohol Consumption: Trends in Istanbul, Turkey" isimli projesi; amaç, araştırma türü, veri toplama araçları, süreç ve işlemler, veri analizleri dikkate alınmak suretiyle 22.02.2021 tarihinde değerlendirilerek 2021/02-4 karar numarası ile etik açıdan uygun bulunmuştur.

Bilgilerinizi arz/rica ederim.

Prof. Dr. Ali YEŞİLIRMAK
Başkan

Bu belge, güvenli elektronik imza ile imzalanmıştır.

Belge Doğrulama Kodu :BEKA6F4E
Belge Doğrulama Adresi: http://belge.ibnhaldun.edu.tr/enVision/Validate_Doc.aspx

Adres:Başak Mah. Ordu Cad. No:3 P.K. 34480 Başakşehir / İstanbul
Telefon:0212 692 0212 Faks0212 551 6464
Kep:ihu@hs01.kep.tr e-Posta:info@ihu.edu.tr Elektronik Ağ:www.ihu.edu.tr

Bilgi için: Neslihan Pala
Unvanı: Sekreter

Bu belge, güvenli elektronik imza ile imzalanmıştır.

APPENDIX C

Table C.1 Demographic Characteristics (N=751)

Demographic characteristics	N	%
Gender		
Male	358	47.7
Female	393	52.3
Age		
17	9	1.2
18	562	74.8
19	154	20.5
20	26	3.5
School Type		
Private	251	33.4
İmam Hatip (religious)	108	14.4
Vocational	392	52.2
Residence		
Bağcılar	553	73.6
Outside Bağcılar	198	26.4
Household Income		
No Fixed Income	110	14.6
0-1600 TL	127	16.9
1600 TL and more	514	68.4
Drinking Status		
Yes	78	10.4
No	566	75.4
Consumed alcohol 1-2 times	107	14.2

APPENDIX D

Table D.1 Multinomial Logistic Regression (N=751)

Alcohol use	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
Male	.632	.359	1.76	.078	-.071	1.336	*
Age							
b. 20 years	0	.	.	.	.	.	
19 years	-1.343	.822	-1.63	.102	-2.954	.268	
18 years	-1.664	.791	-2.10	.035	-3.214	-.115	**
17 years	-14.826	930.956	-0.02	.987	-1839.4	1809.81	
Residence							
b. Bağcılar	0	.	.	.	.	.	
Outside Bağcılar	-.899	.383	-2.35	.019	-1.65	-.148	**
School Type							
b. Private high school	0	.	.	.	.	.	
Imam Hatip high school	.06	.744	0.08	.936	-1.398	1.518	
Vocational high school	.295	.39	0.76	.449	-.469	1.06	
Marital Status							
b. Living together	0	.	.	.	.	.	
Not divorced, separated	.11	1.134	0.10	.922	-2.113	2.334	
Divorced, separated	.857	.715	1.20	.23	-.543	2.258	
Divorced, living together	-13.069	3708.62	-0.00	.997	-7281.8	7255.69	
Passed away	.78	1.129	0.69	.489	-1.432	2.993	
Mother's Education Status							
b. Illiterate	0	.	.	.	.	.	
Primary school grad	-1.897	.587	-3.23	.001	-3.047	-.746	***
Middle school grad	-1.134	.633	-1.79	.073	-2.375	.107	*
High school grad	-1.385	.728	-1.90	.057	-2.812	.042	*
University grad	.113	1.333	0.08	.933	-2.5	2.726	
Father's Education Status							
b. Illiterate	0	.	.	.	.	.	
Primary school grad	-1.256	1.256	-1.00	.318	-3.718	1.206	
Middle school grad	-1.798	1.294	-1.39	.165	-4.333	.738	
High school grad	-1.649	1.335	-1.24	.217	-4.266	.968	
University grad	-2.311	1.522	-1.52	.129	-5.294	.671	
Household Income							
b. No fixed income	0	.	.	.	.	.	

0-1600tl	-.032	.722	-0.04	.965	-1.447	1.384	
More than 1600tl	.805	.545	1.48	.14	-.264	1.873	
Mother's Work Status							
b. Unemployed	0	.	.	.	.	.	
laborer	.713	.387	1.84	.065	-.045	1.471	*
Office holder	-1.164	1.655	-0.70	.482	-4.408	2.081	
Retired	-.026	1.299	-0.02	.984	-2.571	2.52	
Tradesmen	.543	.997	0.54	.586	-1.412	2.498	
Father's Work Status							
b. Unemployed	0	.	.	.	.	.	
laborer	1.888	.767	2.46	.014	.384	3.391	**
Office holder	3.14	1.038	3.02	.002	1.105	5.174	***
Retired	2.329	.836	2.78	.005	.69	3.968	***
Tradesmen	1.91	.851	2.24	.025	.242	3.577	**
Peer Alcohol Use							*
b. None	0	.	.	.	.	.	
Closest peers	2.729	.761	3.59	0	1.238	4.22	***
Some peers	2.151	.547	3.93	0	1.079	3.223	***
Most peers	4.314	.636	6.78	0	3.067	5.561	***
All peers	4.441	1.189	3.73	0	2.11	6.771	***
School Missing Attendance							*
b. none	0	.	.	.	.	.	
1-3 days	14.763	808.413	0.02	.985	-1569.6	1599.22	
3-5 days	14.626	808.413	0.02	.986	-1569.8	1599.09	
5-10 days	15.169	808.413	0.02	.985	-1569.3	1599.63	
10-20 days	15.125	808.413	0.02	.985	-1569.3	1599.59	
21 days and more	15.776	808.413	0.02	.984	-1568.7	1600.24	
Family Alcohol Use							
No one	-.139	.849	-0.16	.87	-1.803	1.525	
Mother	1.931	1.28	1.51	.132	-.579	4.44	

Father	1.957	.814	2.40	.016	.362	3.551	**
Sibling	2.302	.81	2.84	.005	.714	3.891	***
Constant	-17.904	808.414	-0.02	.982	-1602.4	1566.6	
Male	0	.	.	.	.	.	
Age							
b. 20 years	0	.	.	.	.	.	
19 years	0	.	.	.	.	.	
18 years	0	.	.	.	.	.	
17 years	0	.	.	.	.	.	
Residence							
b. Bağcılar	0	.	.	.	.	.	
Outside Bağcılar	0	.	.	.	.	.	
School Type							
b. Private high school	0	.	.	.	.	.	
Imam Hatip high school	0	.	.	.	.	.	
Vocational high school	0	.	.	.	.	.	
Marital Status							
b. Living together	0	.	.	.	.	.	
Not divorced, separated	0	.	.	.	.	.	
Divorced, separated	0	.	.	.	.	.	
Divorced, living together	0	.	.	.	.	.	
Passed away	0	.	.	.	.	.	
Mother's Education Status							
b. Illiterate	0	.	.	.	.	.	
Primary school grad	0	.	.	.	.	.	
Middle school grad	0	.	.	.	.	.	
High school grad	0	.	.	.	.	.	
University grad	0	.	.	.	.	.	
Father's Education Status							
b. Illiterate	0	.	.	.	.	.	
Primary school grad	0	.	.	.	.	.	
Middle school grad	0	.	.	.	.	.	
High school grad	0	.	.	.	.	.	
University grad	0	.	.	.	.	.	
Household Income							
b. No fixed income	0	.	.	.	.	.	
0-1600tl	0	.	.	.	.	.	
More than 1600tl	0	.	.	.	.	.	
Mother's Work Status							
b. Unemployed	0	.	.	.	.	.	
laborer	0	.	.	.	.	.	
Office holder	0	.	.	.	.	.	
Retired	0	.	.	.	.	.	
Tradesmen	0	.	.	.	.	.	
Father's Work Status							
b. Unemployed	0	.	.	.	.	.	

laborer	0	.	.	.	.	.	
Office holder	0	.	.	.	.	.	
Retired	0	.	.	.	.	.	
Tradesmen	0	.	.	.	.	.	
Peer Alcohol Use							
b. None	0	.	.	.	.	.	
Closest peers	0	.	.	.	.	.	
Some peers	0	.	.	.	.	.	
Most peers	0	.	.	.	.	.	
All peers	0	.	.	.	.	.	
School Missing Attendance							
b. None	0	.	.	.	.	.	
1-3 days	0	.	.	.	.	.	
3-5 days	0	.	.	.	.	.	
5-10 days	0	.	.	.	.	.	
10-20 days	0	.	.	.	.	.	
21 days and more	0	.	.	.	.	.	
Family Alcohol Use							
No one	0	.	.	.	.	.	
Mother	0	.	.	.	.	.	
Father	0	.	.	.	.	.	
Sibling	0	.	.	.	.	.	
o. Constant	0	.	.	.	.	.	
Male	.322	.26	1.24	.216	-.188	.832	
Age							
b. 20 years	0	.	.	.	.	.	
19 years	.507	.862	0.59	.557	-1.184	2.197	
18 years	.051	.85	0.06	.952	-1.616	1.718	
17 years	-14.079	955.18	-	.988	-1886.2	1858.0	
Residence		4	0.01			5	
b. Bağcılar	0	.	.	.	.	.	
Outside Bağcılar	-.209	.283	-	.46	-.763	.345	
School Type			0.74				
b. Private high school	0	.	.	.	.	.	
Imam Hatip high school	-1.026	.575	-	.074	-2.153	.101	*
			1.78				
Vocational high school	-.284	.277	-	.306	-.827	.259	
Marital Status			1.02				
b. Living together	0	.	.	.	.	.	
Not divorced, separated	-.219	.945	-	.817	-2.071	1.633	
			0.23				
Divorced, separated	.423	.639	0.66	.507	-.828	1.675	
Divorced, living together	-12.638	3166.4	-	.997	-6218.7	6193.4	
		1	0.00			2	
Passed away	-.422	1.198	-	.724	-2.77	1.925	
Mother's Education Status			0.35				
b. Illiterate	0	.	.	.	.	.	
Primary school grad	.718	.666	1.08	.282	-.589	2.024	
Middle school grad	.68	.696	0.98	.329	-.685	2.045	
High school grad	1.008	.734	1.37	.17	-.43	2.446	

University grad	2.028	1.05	1.93	.053	-.029	4.085	*
Father's Education Status							
b. Illiterate	0	.	.	.	.	.	
Primary school grad	-2.307	1.196	-1.93	.054	-4.651	.036	*
Middle school grad	-2.202	1.195	-1.84	.065	-4.544	.141	*
High school grad	-2.143	1.224	-1.75	.08	-4.543	.256	*
University grad	-2.933	1.348	-2.18	.03	-5.574	-.292	* *
Household Income							
b. No fixed income	0	.	.	.	.	.	
0-1600tl	-.439	.539	-0.82	.415	-1.495	.616	
More than 1600tl	.323	.382	0.85	.398	-.426	1.071	
Mother's Work Status							
b. Unemployed	0	.	.	.	.	.	
laborer	-.206	.33	-0.62	.533	-.853	.441	
Office holder	-.198	1.05	-0.19	.851	-2.255	1.86	
Retired	.926	1.036	0.89	.371	-1.105	2.957	
Tradesmen	1.204	.68	1.77	.077	-.129	2.538	*
Father's Work Status							
b. Unemployed	0	.	.	.	.	.	
laborer	1.144	.721	1.59	.113	-.27	2.558	
Office holder	1.381	.902	1.53	.126	-.386	3.148	
Retired	.84	.811	1.04	.3	-.749	2.429	
Tradesmen	1.045	.767	1.36	.173	-.459	2.549	
Peer Alcohol Use							
b. None	0	.	.	.	.	.	
Closest peers	.324	.865	0.37	.708	-1.372	2.02	
Some peers	1.998	.343	5.83	0	1.327	2.67	* * *
Most peers	2.874	.474	6.06	0	1.945	3.803	* * *
All peers	2.198	1.298	1.69	.09	-.347	4.743	*
School Missing Attendance							
b. None	0	.	.	.	.	.	
1-3 days	-1.099	1.236	-0.89	.374	-3.521	1.323	
3-5 days	.091	1.033	0.09	.93	-1.934	2.116	
5-10 days	.745	.99	0.75	.452	-1.196	2.685	
10-20 days	.797	1.005	0.79	.428	-1.173	2.766	
21 days and more	1.303	1.018	1.28	.201	-.692	3.297	
Family Alcohol Use							
No one	-.259	.815	-0.32	.751	-1.856	1.338	

Mother	1.677	1.377	1.22	.223	-1.022	4.375	
Father	.673	.82	0.82	.411	-.933	2.28	
Sibling	.62	.849	0.73	.465	-1.043	2.284	
Constant	-3.292	1.628	-2.02	.043	-6.483	-.102	**

Mean dependent var	1.039	SD dependent var	0.495
Pseudo r-squared	0.327	Number of obs	751.000
Chi-square	356.585	Prob > chi2	0.000
Akaike crit. (AIC)	905.846	Bayesian crit. (BIC)	1303.287

*** *p<.01*, ** *p<.05*, * *p<.1*

APPENDIX E

Table E.1 Multinomial Logistic Regression Coefficients and Odd Ratios (N=751)

VARIABLES	(1) Logit coeff	(2) Logit coeff	(3) Logit coeff	(4) Odds ratio	(5) Odds ratio	(6) Odds ratio
Male	0.632*		0.322	1.882*		1.380
	(0.359)		(0.260)	(0.675)		(0.359)
Age						
19 years old	-1.343		0.507	0.261		1.660
	(0.822)		(0.862)	(0.215)		(1.431)
18 years old	-1.664**		0.0511	0.189**		1.052
	(0.791)		(0.850)	(0.150)		(0.895)
17 years old	-14.83		-14.08	3.64e-07		7.69e-07
	(931.0)		(955.2)	(0.000339)		(0.000734)
Residence						
Outside Bağcılar	-0.899**		-0.209	0.407**		0.811
	(0.383)		(0.283)	(0.156)		(0.229)
Imam Hatip school	0.0601		-1.026*	1.062		0.358*
	(0.744)		(0.575)	(0.790)		(0.206)
Vocational high school	0.295		-0.284	1.344		0.753
	(0.390)		(0.277)	(0.524)		(0.209)
Marital Status						
Not divorced, separated	0.110		-0.219	1.117		0.803
	(1.134)		(0.945)	(1.267)		(0.759)
Divorced, separated	0.857		0.423	2.357		1.527
	(0.715)		(0.639)	(1.684)		(0.975)
Divorced, living together	-13.07		-12.64	2.11e-06		3.25e-06
	(3,709)		(3,166)	(0.00783)		(0.0103)
One parent passed away	0.780		-0.422	2.182		0.655
	(1.129)		(1.198)	(2.464)		(0.785)
Mother's Education Status						
Primary school grad	-1.897***		0.718	0.150***		2.049
	(0.587)		(0.666)	(0.0881)		(1.366)
Middle school grad	-1.134*		0.680	0.322*		1.974
	(0.633)		(0.696)	(0.204)		(1.375)
High school grad	-1.385*		1.008	0.250*		2.739
	(0.728)		(0.734)	(0.182)		(2.010)
University grad	0.113		2.028*	1.119		7.601*
	(1.333)		(1.050)	(1.492)		(7.978)
Father's Education Status						
Primary school grad	-1.256		-2.307*	0.285		0.0995*
	(1.256)		(1.196)	(0.358)		(0.119)

Middle school grad	-1.798	-2.202*	0.166	0.111*
	(1.294)	(1.195)	(0.214)	(0.132)
High school grad	-1.649	-2.143*	0.192	0.117*
	(1.335)	(1.224)	(0.257)	(0.144)
University grad	-2.311	-2.933**	0.0991	0.0532**
	(1.522)	(1.348)	(0.151)	(0.0717)
Household Income				
0-1600tl income	-0.0319	-0.439	0.969	0.644
	(0.722)	(0.539)	(0.700)	(0.347)
More than 1600tl income	0.805	0.323	2.236	1.381
	(0.545)	(0.382)	(1.218)	(0.527)
Mother's Work Status				
Laborer	0.713*	-0.206	2.040*	0.814
	(0.387)	(0.330)	(0.789)	(0.269)
Office holder	-1.164	-0.198	0.312	0.821
	(1.655)	(1.050)	(0.517)	(0.861)
Retired	-0.0256	0.926	0.975	2.525
	(1.299)	(1.036)	(1.266)	(2.616)
Tradesmen	0.543	1.204*	1.721	3.335*
	(0.997)	(0.680)	(1.717)	(2.268)
Father's Work Status				
Laborer	1.888**	1.144	6.603**	3.140
	(0.767)	(0.721)	(5.065)	(2.265)
Office holder	3.140***	1.381	23.10***	3.978
	(1.038)	(0.902)	(23.98)	(3.586)
Retired	2.329***	0.840	10.27***	2.316
	(0.836)	(0.811)	(8.586)	(1.878)
Tradesmen	1.910**	1.045	6.750**	2.844
	(0.851)	(0.767)	(5.742)	(2.182)
Peer Alcohol Use				
Closest peer's alcohol use	2.729***	0.324	15.32***	1.383
	(0.761)	(0.865)	(11.65)	(1.197)
Some peer's alcohol use	2.151***	1.998***	8.591***	7.378***
	(0.547)	(0.343)	(4.699)	(2.529)
Most peer's alcohol use	4.314***	2.874***	74.74***	17.71***
	(0.636)	(0.474)	(47.55)	(8.394)
All peer's alcohol use	4.441***	2.198*	84.82***	9.007*
	(1.189)	(1.298)	(100.9)	(11.69)
School Attendance				
1-3 days missing	14.76	-1.099	2.578e+06	0.333
	(808.4)	(1.236)	(2.084e+09)	(0.412)
3-5 days missing	14.63	0.0913	2.250e+06	1.096
	(808.4)	(1.033)	(1.819e+09)	(1.132)

5-10 days missing	15.17	0.745	3.871e+06	2.106
	(808.4)	(0.990)	(3.129e+09)	(2.085)
10-20 day missing	15.13	0.797	3.705e+06	2.218
	(808.4)	(1.005)	(2.995e+09)	(2.228)
21 days and more missing	15.78	1.303	7.104e+06	3.679
	(808.4)	(1.018)	(5.743e+09)	(3.743)
Family Alcohol Use				
No one	-0.139	-0.259	0.870	0.772
	(0.849)	(0.815)	(0.739)	(0.629)
Mother	1.931	1.677	6.893	5.347
	(1.280)	(1.377)	(8.826)	(7.363)
Father	1.957**	0.673	7.075**	1.961
	(0.814)	(0.820)	(5.757)	(1.607)
Sibling	2.302***	0.620	9.995***	1.860
	(0.810)	(0.849)	(8.101)	(1.578)
Male	-		-	
Age 19	-		-	
Age 18	-		-	
Age 17	-		-	
Residence Outside Bağcılar	-		-	
School Type				
Imam Hatip school	-		-	
Vocational high school	-		-	
Marital Status				
Not divorced, separated	-		-	
Divorced, separated	-		-	
Divorced, living together	-		-	
One passed away	-		-	
Mother's Education				
Primary school grad	-		-	
Middle school grad	-		-	
High school grad	-		-	
University grad	-		-	
Father's Education				
Primary school grad	-		-	
Middle school grad	-		-	
High school grad	-		-	
University grad	-		-	
Household Income				
0-1600tl	-		-	
More than 1600tl	-		-	
Mother Work Status				
Laborer	-		-	
Office holder	-		-	

Retired		-			-	
Tradesmen		-			-	
Father Work Status						
Laborer		-			-	
Office holder		-			-	
Retired		-			-	
Tradesmen		-			-	
Peer Alcohol Use						
Closest peers		-			-	
Some peers		-			-	
Most peers		-			-	
All peers		-			-	
School Attendance						
1-3 days missing		-			-	
3-5 days missing		-			-	
5-10 days missing		-			-	
10-20 days missing		-			-	
21 and more missing		-			-	
Family Alcohol Use						
No one		-			-	
Mother		-			-	
Father		-			-	
Sibling		-			-	
o. cons		0			1	
		(0)			(0)	
0						
1						
2						
Constant	-17.90		-3.292**	1.68e-08		0.0372**
	(808.4)		(1.628)	(1.36e-05)		(0.0605)
Observations	751	751	751	751	751	751

Standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Post-Analysis Logistics			
Log-Lik Intercept Only:	-545.215	Log-Lik Full Model:	-368.458
D(592):	736.916	LR(82):	353.515
	Prob > LR:	0.000	
McFadden's R2:	0.324	McFadden's Adj R2:	0.033
Maximum Likelihood R2:	0.375	Cragg & Uhler's R2:	0.490
Count R2:	0.796	Adj Count R2:	0.173
AIC:	1.405	AIC*n:	1054.916
BIC:	-3182.956	BIC':	189.441

CURRICULUM VITAE

Personal Information:

Name - Surname: Liyana Thabassum

Education:

2015-2018 BSc honors in Psychology, Christ (Deemed to be) University, Bangalore, India

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

Experience:

2019 – 2021 Research Assistant, Ibn Haldun University, Turkey

April – May 2017 Clinical Psychology Intern, General Hospital Ernakulam, India

October 2016 Human Resource Management Intern, Fluiconnecto Manuli, Dubai

Publications:

Bulut, S., & Thabassum, L. (2020). Effectiveness of mindfulness-based counseling on social anxiety disorder among adolescents. EC Psychology and Psychiatry.

Nazir, T., Bulut, S., & Thabassum, L. (2020). The guiding force for moral behaviour and the role of religion to sustain it: A comparative study through a psychological lens. Ortadoğu Etütleri, 12(1), 140-153.

Nazir, T , Thabassum, L . (2021). THE ROLE OF SOCIAL SYSTEMS IN THE CONCEPTION AND PERPETUATION OF BULLYING CULTURE IN INDIA. International Journal of Current Approaches in Language, Education and Social Sciences, 3 (1) , 70-83 . Retrieved from https://dergipark.org.tr/en/pub/caless/issue/61943/867302

Thabassum, L. (2020). Phubbing: A literature review of the technological invasion that has changed lives for the last decade, Psychology Research on Education and Social Sciences, 2 (1), 11-18. Retrieved from https://dergipark.org.tr/en/pub/press/issue/58384/847262