NEAR EAST UNIVERSITY
GRADUATE SCHOOL OF SOCIAL SCIENCES
CLINICAL PSYCHOLOGY
MASTER'S PROGRAMME

MASTER'S THESIS

THE RELATIONSHIP BETWEEN DEMOGRAPHIC CHARACTERISTICS, PSYCHOACTIVE SUBSTANCE USE AND IMPULSE CONTROL LEVEL AMONG ADOLESCENTS DIAGNOSED WITH ATTENTION DEFICIT HYPERACTIVITY DISORDER

İPEK UÇKAN

NICOSIA
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NEAR EAST UNIVERSITY

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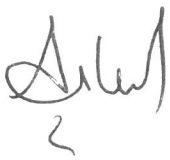

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Approval of the Graduate School of Sciences
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ABSTRACT

THE RELATIONSHIP BETWEEN DEMOGRAPHIC CHARACTERISTICS, PSYCHOACTIVE SUBSTANCE USE AND IMPULSE CONTROL LEVEL AMONG ADOLESCENTS DIAGNOSED WITH ATTENTION DEFICIT HYPERACTIVITY DISORDER

İPEK UÇKAN

Graduate School of Social Sciences Clinical Psychology Master's Thesis

Supervisor: Asst. Prof. Dr. İrem ERDEM ATAK

June, 2016

Objective: The aim of this study is to reveal the relationship between demographic characteristics, psychoactive substance use and impulse control levels of adolescents and determine whether there is a comorbidity with Depressive disorder, Anxiety disorder, ODD and CD among adolescents diagnosed with ADHD. In line with this basic aim, answers to the other questions are searched. **Methods:** In this study participants include 60 adolescents diagnosed with ADD/HD by Child and Adolescent Psychiatrists between the ages of 10 and 19 applied to Barış Mental Health Hospital Child and Adolescence Psychiatry Service. In order to asses ADD/HD according to DSM-5 diagnostic criteria, these measurement tools are used to collect the data in this study; Patient Consent Form, Demographic Information Form, Child and Adolescent Behavior Disorders Screening and Rating Scale based on DSM-IV, K-Sads-Pl-T and BIS-II. Statistical analysis is performed with IBM SPSS Statistics version 20.0. **Results:** Descriptive statistical techniques were used to figure out demographic information of adolescents who are diagnosed with ADHD and their parents. Another datas were compared with Chi-square statistical method and an Independent sample T-test method was used to examine the relationship between impulsivity levels and tobacco, alcohol and other substance use. **Discussion:** In this section, findings of the present study are discussed in the light of the relevant literature. Strengths and limitations of the study as well as clinical implications and recommendations for future researches were provided.

Keywords: Adolescent, Attention Deficit Hyperactivity Disorder (ADHD), Psychoactive Substance Use, Impulse Control.

ÖZ

DİKKAT EKSİKLİĞİ HİPERAKTİVİTE BOZUKLUĞU TANISI ALAN ERGENLERİN DEMOGRAFİK ÖZELLİKLERİ, PSİKOAKTİF MADDE KULLANIMI VE DÜRTÜ KONTROL DÜZEYLERİ ARASINDAKİ İLİŞKİ

İPEK UÇKAN

Sosyal Bilimler Enstitüsü Klinik Psikoloji Master Tezi

Tez Danışmanı: Yrd. Doç. Dr. İrem ERDEM ATAK

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Amaç: Bu çalışmanın temel amacı, DEHB tanısı konmuş ergenlerin demografik özelliklerini; psikoaktif madde kullanımı ve dürtü kontrol düzeyleri arasındaki ilişkileri ayrıca depresif bozukluklar, anksiyete bozuklukları, karşı olma karşıt gelme bozukluğu ve davranım bozukluklarını eş zamanlılık bağlamında ortaya koymaktır. Bu temel amaç doğrultusunda diğer sorulara yanıt aranmıştır. **Yöntem:** Çalışmaya, Barış Ruh ve Sinir Hastalıkları Hastanesi, Çocuk ve Ergen Psikiyatri Servisi' ne başvurmuş olup Çocuk ve Ergen Psikiyatrisi Uzmanları tarafından DEB/HB tanısı almış 10-19 yaşları arasında 60 ergen örneklem olarak alınmıştır. Araştırmada, sırası ile Aydınlatılmış Onam Formu, Demografik Bilgi Formu, Çocuk ve Ergenlerde Davranış Bozuklukları İçin DSM-IV'e Dayalı Tarama ve Değerlendirme Ölçeği (ÇEDBÖ), K-Sads-Pl-T ve BIS-II uygulanmıştır. Verilerin istatistiksel analizi sırasında IBM 20.0. istatistik programı kullanılmıştır. **Bulgular:** Ergen ve ailelerin demografik verilerini değerlendirmek için betimsel istatistik yöntemi kullanılmıştır. Bu çalışmada ayrıca Dikkat eksikliği Hiperaktivite Bozukluğu tanısı alan ergenlerin sigara, alkol ve madde kullanımları açısından Chisquare istatistik yöntemi ile dürtüsellik ve madde ile ilişkilerini değerlendirmek amacı ile Bağımsız t-test örneklem yöntemi kullanılmıştır. **Tartışma:** Bulgular literatür ile uyumlu bulunmuş ve benzer araştırmalarla desteklenmiş; sınırlılıklar ve önerilere yer verilmiştir.

Anahtar Kelimeler: Ergenlik, Dikkat Eksikliği Aşırı Hareketlilik Bozukluğu (DEHB), Madde Kullanımı, Dürtü Kontrolü.

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Psychologist, İpek UÇKAN

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LIST OF ABBREVIATIONS

ADHD: Attention Deficit Hyperactivity Disorder

ADD: Attention Deficit Disorder

ADHD-C: Attention Deficit Hyperactivity Disorder-Combine Type

ADHD-A: Attention Deficit Hyperactivity Disorder/Attetion Predominant Type

ADHD-H: Attention Deficit Hyperactivity Disorder/Hyperactivity Predominant Type

BIS-II: Barratt Impulsiveness Scale

CD: Conduct Disorder

HD: Hyperactivity Disorder

HI: Hyperactivity Impulsivity

ICD: International Classification of Diseases

IA: Impulsivity of attentiveness

IP: Inability to plan

DSM: The Diagnostic and Statistical Manual of Mental Disorders

APA: American Psychiatric Association

IQ: Intelligence Quotient

TRNC: Turkish Republic of Northern Cyprus

K-SADS-PL-T: Affective Disorders and Schizophrenia for School Age Children Present and Lifetime Turkish Version

MI: Motor impulsivity

ODD: Oppositional Defiant Disorder

TRNC: Turkish Republic of North Cyprus

1. INTRODUCTION

Adolescence is a critical period characterized by neurobiological and physical maturation leading to enhanced psychological awareness and higher level social, cognitive and emotional responses. It is period of maturation between childhood and adulthood heralded by the psychological signs and surging hormones of puberty and a time of accelerated social and psychosexual exploration, culminating in an integrated concept of 'self'. Therefore, adolescence becomes a period in which many crisis (Pataki, p. 3356, Elemek, 2006).

Attention Deficit Hyperactivity Disorder (ADHD) was defined as a behavioral disorder in classification systems since 1980s. International Classification of Diseases (ICD) describes ADHD as a "Hyperkinetic Disorder" and American Psychiatric Association (APA) began to use the term "Attention Deficit Hyperactivity Disorder" for the condition (American Psychiatric Publishing). ADHD is now listed in the new category of 'Neurodevelopmental Disorders', acknowledging the growing body of scientific evidence supporting brain development correlations with ADHD (APA, 2013). ADHD is among the most common psychiatric conditions estimated to affect 5-10% of all children and predisposes them to impaired academic, familial, social, vocational and emotional functioning if it is untreated (Pliszka, 2007). Frequency of comorbid neuropsychiatric disorders in cases diagnosed with ADHD is at least 65%. It is noted that these comorbid disorders have crucial effects on treatment and prognosis (Biederman et al., 1991). In North Cyprus, no studies on the prevalence and frequency of ADHD have been conducted before. Therefore, there are no statistical data showing the prevalence and frequency of ADHD in TRNC.

American Psychological Association, disorders related with substance include substance dependence, substance abuse, substance intoxication and substance deprivation (APA, 2000). Tobacco, alcohol and substance use disorders are defined as a disease which affect many individuals and have expensive consequences (Yüncü & Aydın, 2008, p. 554).

Many research showed that ADHD increase the risk of psychoactive substance use. It is thought that children with ADHD display inappropriate behaviors in order to satisfy their self confidence problems and emotions of incompetence, and they can easily develop addiction because of their impulsive behaviors. Besides, comorbidity of other psychiatric conditions is an important factor for the increase in the risk of addiction (Öztürk & Başgül, 2015, p. 103). Impulsivity is a risk factor for trying the substance, maintaining and not quitting the substance (Tarter et al., 2007). Studies show that 30-40% of adolescents with conduct disorder and ADHD are subject to drug and alcohol abuse (Kewley, 2011, p. 23).

2. LITERATURE REVIEW

The literature firstly review presents a description of adolescence and secondly comprehensive overview of ADHD, its historical background, the diagnostic criterias, definitions, prevalance and frequency, its etiology, its causes, comorbid problems associated with disorder and description of substance use disorder and mentioned impulse control.

2.1. Description of Adolescence

2.1.1 Definition of Adolescence

According to some authors, adolescence is defined as a second birth. French Psychoanalyst Françoise Dolto stated that adolescence is a sensitive and weak period and adolescents are fragile and unstable as new born babies. He regarded adolescents as a crab. Crabs are weak and vulnerable in the period that they change shell and if they get hurt in this period; they will carry this throughout their lives (Parman, 2010, p. 20; Yavuzer, 2005).

Adolescence is a critical period characterized by neurobiological and physical maturation leading to enhanced psychological awareness and higher level social, cognitive and emotional responses. Adolescence period is the period of maturation between childhood and adulthood heralded by the psychological signs and surging hormones of puberty and a time of accelerated social and psychosexual exploration, culminating in an integrated concept of 'self' (Pataki, p. 3356).

In this period which is named as a transition period from childhood into adulthood, several changes are experienced rapidly. Adolescent is neither a child nor and adult. Adolescents sometimes feel themselves as child and display such childish behaviors and they also experience emotion and behaviors as the same way adults do (Öztürk, 2006).

Adolescence is the time to bond with peers, experiment with new beliefs and styles fall in love for the first time and explore creative ideas for future endeavors. While the adolescents try to understand the changes in their bodies, they try to adapt to new social environment at the same time. These rapid changes can not be easily tolerated by them.

Therefore, adolescence becomes a period in which many crisis and depression (Elemek, 2006).

2.1.1. Explanation of Normal Adolescence

Adolescence is a period of behavior regulation, displacement of ego functions. The most frequent adolescents experience enduring severe psychological distress, intense depressive syptoms, severe mood lability, and a distruption of their usual conduct was not supported by epidemiological studies. Although certain psychiatric disorders, such as eating disorders such as anorexia or bulimia nervosa; major depression, schizophrenia and bipolar disorders, emerge with grater frequency in adolescents than younger children, the majority of adolecents are free of psychiatric disorders. Adolescents are associated with serious negative consequences and can take many forms, including drug and alcohol use, unsafe sexual practices, self-injurious behaviors and reckless driving. Alcohol is the most commonly used substance among adolecents and is associated with a multitude of coexisting high-risk behaviors (Pataki, p. 3357; Martin & Volkmar, 2007).

ADHD becomes more crucial with problems including increased independence and incompliant behaviors special to adolescence, social and physical changes and identity seek. Increased expectations also increase pressure in adolescence. Academic and social problems become more complicated. In this period, self-esteem is more vulnerable. While family effect decrease, peer effect increases. Independence, freedom emotions are very high. Interest in tobacco, alcohol, substance use and sexual activities increases. All these changes constitute an appropriate basis for risky behaviors (Lalonde, Turgay & Hudson, 1998).

In this study, ADHD and substance use disorder studied. It is claimed that since adolescents can not control their psychological states they need to control the substance and therefore illegal substance use among adolescents occur. Hyperactivity leads to the removal of energy and therefore they can cope with arousal (Parman, 2013, p. 101).

There are two basic reasons which make adolescents vulnerable to substance use.

The first reason is adolescents' seeking for a way which relieves them and eliminate the rise and falls in their psychological states and the second is being in a peer group which use substance (Öztürk, 2006).

Anxiety and attention problems continue in the period of adolescence. Impulsivity arises from the tendency for illegal experiences (Weiss & Weiss, 2003).

The prevalence of problem behaviors increase in adolescence and early adulthood but persistence in problem behaviors such as substance use or antisocial behavior usually is associated with difficulties in earlier childhood (Arnett, 1992, p. 279).

Impulsivity is a risk factor for trying the substance, maintaining and not quitting the substance (Tarter et al., 2007).

Age of onset for beginning alcohol and substance use and treatment duration is lower and relapse is higher among individuals with higher levels of impulsivity (Moller et al. 2001; Tarter et al., 2007; Kollins, 2002).

In the literature, there are studies revealing a relationship between substance use and impulsivity (Verdejo, Lawrence & Clark, 2008).

Studies reveal that individuals who use substance are more impulsive than individuals who do not use any substance (Moller et al. 2001; Madden, Petry, Badger & Bickel, 1997).

Impulsivity is defined as a tendency to respond in a rapid and unplanned way to an internal or external stimulant and ignore negative consequences (Moller et al. 2001).

Impulsivity is a multi-dimensional concept and it is considered that different dimensions of impulsivity reflect different underlying processes (Patton & Standford, 1995; Barratt, Eysenck & Eysenck).

Barratt associated impulsivity with risk taking, not making plans and making rapid decisions. In Barratt Impulsivity scale, impulsivity is regarded as having three dimensions. Motor impulsivity reveales behaving based on the present motivation without thinking; being unplanned includes preference of a smaller reward at the present time for a greater reward in the future and related with not being able to plan

and predict the future; inattention comprises the cognitive aspect of impulsivity and it is related with making rapid decisions (Patton, Standford & Barratt) Impulsivity is a risk factor for trying, maintaining and not quitting the substance (Tarter et al. 2007).

2.2. Description of Attention Deficit Hyperactivity Disorder (ADHD)

2.2.1. Historical Background of Attention Deficit Hyperactivity Disorder

Attention Deficit Hyperactivity Disorder (ADHD) has existed through the ages, but the first clinical account of the disorder was published by Doctor Melchior Adam Weikard in 1770 in the medicine book in a chapter titled as "attention deficit". Then, Scottish Doctor Crichton mentioned about attention deficit problems among young children in 1790 (Motovallı, 2015, p. 1). In the nineteenth century, psychologist William James' (1890) description of children with ''explosive will'' came out. Following this, German physician and author Heinrich Hoffman' s poem ''The Story of Fidgety Philip'' (1847) also described hyperactive children. In 1902, George Still, an English pediatrician, presented cases from his clinical practice of children who had what he described as a ''defect of moral control'' and ''volitional inhibition'' to the Royal Society of Medicine. George Still believed that these might have a biological basis rather than being a purely social or ethical failure. Doctor Still stated that the characteristics of this clinical table are associated with emotional dysregulation problems, hyperactivity, impulse control problem and concentration disorder (Peirce, 2008, p. 5). Dr. Still then claimed that radical bad parenting is not responsible from these problems. Instead, he considered about subtle brain injury. This theory gained greater acceptance after the epidemic of viral encephalitis in 1917-1918, when doctors observed that the infection led to impairments in attention, memory and impulse control in children. In the 1940s and 1950s and studies conducted with soldiers who had experienced head injuries in World War II and the same group of symptoms were called Minimal Brain Damage and later Minimal Brain Dysfunction (Holowenko, 1999, p. 13).

When the history of ADHD is reviewed, it is seen that this is not a new concept in fact and it is defined in a book chapter within medical literature even 300 years ago. Attention deficit hyperactivity disorder is a real, life-long condition characterized by core symptoms of inattention, distractibility, impulsivity and hyperactivity. ADHD is a neuro-developmental disorder which is a behavioral condition that makes focusing on everyday request and routines challenging. Individuals with ADHD typically have trouble with being organized, staying focused, making realistic plans and thinking before acting. They may be fidgety, noisy and unable to adapt to changing situations as well (APA).

Symptoms of ADHD might change during the life span. At first, day dreaming and careless mistakes in childhood might occur and these might become inner restlessness, failure to plan for the future, incomplete projects and forgetfulness in adulthood. In general, it is mentioned that individuals with ADHD experience attention problems such as difficulties in focusing on a task, easily distracted with stimulus from the environment, frequently losing things and toys, forgetting the tasks, homework and duties and; impulsive behaviors such as experiencing difficulties in delaying their demands and waiting for their turns and interrupting others; significant increase in activity affecting their relationships with others when compared to their peers and hyperactivity (Kayaalp, 2008).

2.2.2. Definition of Attention Deficit Hyperactivity Disorder

Attention Deficit Hyperactivity Disorder (ADHD) was defined as a behavioral disorder in classification systems since 1980s. International Classification of Diseases (ICD) describes ADHD as a "Hyperkinetic Disorder" and American Psychiatric Association (APA) began to use the term "Attention Deficit Hyperactivity Disorder" for the condition. According to ICD-10, the condition named as ADHD in DSM is classified as "Hyperkinetic Disorder" emphasizing the hyperactivity symptoms. The diagnostic criteria for attention deficit/hyperactivity disorder (ADHD) in DSM-5 are similar to those in DSM-IV. The same 18 symptoms are used as in DSM-IV and continue to be divided into two symptom domains (in-attention and hyperactivity/impulsivity) of which at least six symptoms in one domain are required for diagnosis at least 6 months (American Psychiatric Publishing).

DSM-5 has been updated to more accurately characterise the experience of adolescents and adults with ADHD. Adults and adolescents (aged ≥17) are required to present with a minimum of five (rather than six) symptoms, and in DSM-IV-TR as stated in criterion B, age of onset of some hyperactive-impulsive or inattentive symptoms that caused impairment were present before the age of 7 years. DSM-5 has changed this criterion and raised the age of onset to 12 (Köroğlu, 2005, p. 57; Köroğlu, 2013, p. 31). The descriptions will help clinicians to identify typical ADHD symptoms at each stage of patients' lives better (APA).

ADHD is now listed in the new category of 'Neurodevelopmental Disorders', acknowledging the growing body of scientific evidence supporting brain development correlations with ADHD. DSM-5 notes that although motor symptoms of hyperactivity become less obvious in adolescence and adulthood, difficulties persist with restlessness, inattention, poor planning, and impulsivity. DSM-5 also acknowledges that a substantial proportion of children remain relatively impaired into adulthood (APA, 2013).

Table 1.

Diagnostic Criteria of F.90 Hyperkinetic Disorders According to ICD-10

G1. Demonstrable abnormality of attention, activity and impulsivity at home, for the age and developmental level of the child, as evidenced by (1), (2) and (3):
(1) at least three of the following attention problems:
(a) short duration of spontaneous activities;
(b) often leaving play activities unfinished;
(c) over-frequent changes between activities;
(d) undue lack of persistence at tasks set by adults;
(e) unduly high distractibility during study e.g. homework or reading assignment;
(2) plus at least three of the following activity problems:
(a) very often runs about or climbs excessively in situations where it is inappropriate; seems unable to remain still;
(b) markedly excessive fidgeting & wriggling during spontaneous activities;
(c) markedly excessive activity in situations expecting relative stillness (e.g. mealtimes, travel, visiting, church);
(d) often leaves seat in classroom or other situations when remaining seated is expected;
(e) often has difficulty playing quietly.
(3) plus at least one of the following impulsivity problems:

(a) often has difficulty awaiting turns in games or group situations;

(b) often interrupts or intrudes on others (e.g. butts in to others' conversations or games);

(c) often blurts out answers to questions before questions have been completed.

G2. Demonstrable abnormality of attention and activity at school or nursery (if applicable), for the age and developmental level of the child, as evidenced by both (1) and (2):

(1) at least two of the following attention problems:

(a) undue lack of persistence at tasks;

(b) unduly high distractibility, i.e. often orienting towards extrinsic stimuli;

(c) over-frequent changes between activities when choice is allowed;

(d) excessively short duration of play activities;

(2) and by at least three of the following activity problems:

(a) continuous (or almost continuous) and excessive motor restlessness (running, jumping, etc.) in situations allowing free activity;

(b) markedly excessive fidgeting and wriggling in structured situations;

(c) excessive levels of off-task activity during tasks;

(d) unduly often out of seat when required to be sitting;

(e) often has difficulty playing quietly.

G3. Directly observed abnormality of attention or activity. This must be excessive for the child's age and developmental level. The evidence may be any of the following:

(1) direct observation of the criteria in G1 or G2 above, i.e. not solely the report of parent or teacher;

(2) observation of abnormal levels of motor activity, or off-task behaviour, or lack of persistence in activities, in a setting outside home or school (e.g. clinic or laboratory);

(3) significant impairment of performance on psychometric tests of attention.

G4. Does not meet criteria for pervasive developmental disorder (F84), mania (F30), depressive (F32) or anxiety disorder (F41).

G5. Onset before the age of seven years.

G6. Duration of at least six months.

G7. IQ above 50.

Reference: (ICD-10, 1992)

Table 2.

DSM-5 Diagnostic Criteria For Attention Deficit Hyperactivity Disorder

Must meet criteria for Inattention, Hyperactivity/Impulsivity, or Both 1. Inattention 17 and younger: Six or more of these symptoms must be present for at least 6 months, be inconsistent with the child's developmental level, and have a negative effect on their social and academic activities. To be endorsed, the following must occur "often": a. Fails to pay close attention to details b. Has trouble sustaining attention c. Doesn't seem to listen when spoken to directly d. Fails to follow through on instructions and fails to finish schoolwork or chores e. Has trouble getting organized f. Avoids or dislikes doing things that require sustained focus/thinking g. Loses things frequently h. Easily distracted by other things i. Forgets things 2. Hyperactivity and Impulsivity Six or more of these symptoms must be present for at least 6 months, be inconsistent with the child's developmental level, and have a negative effect on their social and academic activities. To be endorsed, the following must occur "often": a. Fidgets with hands/feet or squirms in chair b. Frequently leaves chair when seating is expected c. Runs or climbs excessively d. Trouble playing/engaging in activities quietly e. Acts "on the go" and as if "driven by a motor" f. Talks excessively g. Blurts out answers before questions are completed h. Trouble waiting or taking turns i. Interrupts or intrudes on what others are doing ADHD Predominantly Inattentive Presentation (ADHD-PI) ADHD Predominantly Hyperactive-Impulsive Presentation (ADHD-PHI) ADHD Combined Presentation (Inattentive & Hyperactive-Impulsive) (ADHD-C) Specify if: Mild: Six or only slightly more symptoms are endorsed and impairment in social or school functioning is minor Moderate: Symptoms or impairment is between mild and severe Severe: (Many symptoms are above required 6 are endorsed and/or symptoms are severe; impairment in social or school functioning is severe)

Reference: (APA, 2013).

2.2.3. Epidemiology of Attention Deficit Hyperactivity Disorder

2.2.3.1. Prevalence and Frequency of Attention Deficit Hyperactivity Disorder

Epidemiology of ADHD has been entirely examined throughout the world and it is still being examined. Attention deficit hyperactivity disorder is among the most common psychiatric conditions estimated to affect 5-10% of all children and predisposes them to impaired academic, familial, social, vocational and emotional functioning if it is untreated (Pliszka, 2007).

Prevalence might change in different geographic, gender, ethnic or racial populations. For instance, it has been shown that boys are affected 3 or 6 times more commonly than girls. Some authorities have estimated the prevalence as high as 10% and even 20% in school children between 5 and 12 years of age. Besides, in a report it is shown that there were a total number of 3 million children with ADHD in the United States (Millichap, 2010). On the other hand, according to a meta-analysis study; pooled prevalence of ADHD around the world is 5.29% (Polanczyk & Jensen 2008).

It is generally known that ADHD and conduct disorder are the most frequent diagnostic group in child and adolescent mental health services (Yolga, 2003). ADHD is a neuro-developmental disorder which is prevalent in early childhood period and frequently seen in every age group in the society and it shows significant improvements with treatment (Semerci, 2007a, p. 41).

There is a limited number of prevalence studies for ADHD in the literature. When the frequency of ADHD is examined, there are different frequencies throughout the world and it is indicated that there is a broad range between 2 and 17 (Scahill & Stone, 2000). Recent estimates of the percentage of children with ADHD in the United States changes between 3.5% and 7% and the ratio of boys to girls with ADHD is usually about 3 to 1. In general, women and girls with ADHD are less hyperactive and more inattentive than males and boys with the disorder. In epidemiological sample, while this

proportion is 3:1 for boys and girls, in clinical sample this is higher namely 9:1 (Polanczyk, Lima, Horta, Biederman & Rohde, 2007). It is noted that this difference is because of higher frequency among treatment applications by boys (Polanczyk & Jensen, 2008).

Many research showed that ADHD which is attention deficit is predominant is more frequent and ADHD combined type and ADHD which is hyperactivity-impulsivity is predominant follows this trend. In addition to this, while all sub-types are more frequently seen in boys; ADHD which is attention deficit is predominant is more frequently seen in girls when compared to other sub-types of ADHD (Skounti, Philalithis & Galanakis, 2007).

For instance, ADHD prevalence was figured out as 8% in a study conducted in Denizli City Center with children at primary school age. In a 4-year longitudinal study conducted in İzmir according to DSM-IV diagnostic criteria, ADHD prevalence was found as 8-13%. When sub-types of ADHD are evaluated, it is seen that combined type is the most frequent type and the sub-type in which hyperactivity and impulsivity are predominant is the least frequent type. The prevalence of ADHD-C is shown as 4,7%, prevalence of ADHD-A as 2,4% and prevalence of ADHD-H as 0,8% (Zorlu, 2012; Ercan, Kandulu, Uslu et al. 2000). In addition, it is seen that ADHD is the most frequent diagnostic group with percentage of 27,3 (n:81) (Çelik, 2007).

In a study conducted by Nolan and colleagues (2001), it is revealed that hyperactivity-impulsivity symptoms of ADHD reduce after pre-school period; however inattentive symptoms increase (Nolan, Gadow & Sprafkin, 2001).

Rohde and colleagues (1999) examined the frequency of ADHD in adolescence and figured out that general frequency of ADHD is 5,8%; combined-type of ADHD is 52,2%, ADHD type in which attention deficit is predominant is 34,8% and ADHD type in which hyperactivity-impulsivity is predominant is 13% among adolescents between the ages of 12 and 14. Nevertheless, it is also shown that disruptive behavior disorders highly comorbid with ADHD. Among these disorders, it is noted that frequency of Conduct Disorder is 26% and frequency of Oppositional Defiant Disorder is 21,7% (Rohde, Biederman & Busnello, 1999).

In North Cyprus, no studies on the prevalence and frequency of ADHD have been conducted before. Therefore, there are no statistical data showing the prevalence and frequency of ADHD in TRNC.

2.3. Etiology of ADHD

2.3.1. Genetic and Biological Explanations of ADHD

The syptoms of ADHD are multidimensional, including an interaction of neuroanatomical and neurochemical systems. The current evidence for the neurobiological factors suggests that genetics and neurochemistry play crucial roles (Greenhill & Hechtman, p. 3560).

Particularly, the DRD4 and DRD5 genes are found to be associated with occurrence of ADHD and there is evidence from GWAS studies that other genes regulating neurotransmission and neurodevelopment such as SNAP-25 and CDH-13 are also involved. In a research conducted in Turkey, it is shown that individuals carrying the sub-types of DRD4, DRD5 and DAT dopamine serial genes experience more symptoms of ADHD (Yazgan, 2013, p. 195). 457 first-degree relatives of children showed a significantly higher risk of ADHD as well as a greater risk of antisocial and mood disorders in comparison to the subjects in the control group (Biederman, 1990). Many research showed that DRD4 and DAT1 genes are frequently associated with ADHD (Gücüyener, 2008, p. 369).

The neurobiological basis for ADHD is thought to be result of problems with the chemical neurotransmitters of the brain particularly dopamine, norepinephrine and serotonin (Quinn, 2012, p. 2). It is claimed that these might account for hyperactivity, inattentiveness and other symptoms of ADHD.

ADHD is a largely heritable disorder which begins in childhood and often persists into adulthood. Family genetics studies, including twin, sibling, adoption and family studies have all suggested that genetic factors play an important role in ADHD.

Family, twin and adoption studies have had a major contribution to the way that we perceive ADHD. Twin studies have shown that monozygotic twins are more concordant for ADHD syptoms of hyperactivity, inattention and impulsivity than are same sex dizgotic twins. Twin studies suggest that 75 percent of the variance in the transmission of ADHD is attributable to genetics. On the other hand; first-degree relatives of children with ADHD have a 20 to 25 percent risk for ADHD, compared with 4 to 5 percent for relatives of controls (Greenhill & Hechtman, p. 3560)

In a study, the frequency of ADHD among the parents of children diagnosed with ADHD was investigated. It was figured out that mothers diagnosed with ADHD during childhood were found to be significantly associated with ADHD in children when compared to control group. Therefore, the inheritable characteristic of ADHD was supported and it is also shown that there is a relationship with the frequency of ADHD and increase in the symptoms of ADHD among parents (Camcıoğlu, 2009, p. 59).

According to Hergüner and Hergüner (2011), psychiatric comorbidity in children and adolescents with ADHD is very high as it was shown in previous studies (Hergüner, Hergüner, 2011). Biederman (1990) compared the risks of ADHD between the patients who had first degree relatives with ADHD and the general population. The research has demonstrated a significant difference between the adolescents with first degree relatives and the general population.

Furthermore, genetic studies have contributed to our understanding of the development of comorbid disorders such as education and employment problems, high accident rates and risk for the development of anxiety, depression, drug and alcohol addiction and antisocial behavior (Asherson, 2010).

2.3.2. Comorbidity of ADHD

Frequency of comorbid neuropsychiatric disorders in cases diagnosed with ADHD is at least 65%. It is noted that these comorbid disorders have crucial effects on treatment and prognosis (Biederman et al., 1991). Appearance and severity of comorbid symptoms in the period of adolescence is different from symptoms in childhood. While learning disability, enuresis-encopresis, anxiety disorder and opposional defiant

disorder is frequently comorbid with ADHD in childhood; conduct disorder and opposional defiant disorder are predominant in adolescence (Aynev & Öner, 2001).

Adolescents experiencing social problems diagnosed with ADHD have increased risk for depression, anxiety, disruptive behavior disorder, smoking and substance abuse (Biederman, et al., 1990). In addition, it has been shown that there is a genetic tendency for ADHD and psychoactive substance use (Milberger, Faraone, Biederman, Chu & Wilens, 2010).

Risk of substance abuse is higher among cases in which ADHD and conduct disorder is together with an early onset when compared to cases with only ADHD (Deborah, 2007, pp. 3470-3490).

In a study examining ADHD and other psychiatric symptoms among the parents of children diagnosed with ADHD, it was found that mothers of ADHD group have more psychiatric symptoms than the control group. Besides, fathers of ADHD group have more obsessive, depressive, paranoid symptoms and interpersonal sensitivity (Şimşek & Gökcen, 2012).

According to a twin study, it is revealed that substance abuse is not seen in cases in which ADHD is present but conduct disorder is not present (Disney, Elkins, Gue & Lacono, 1999).

In a study; it has been shown that childhood diagnosis of ADHD is a risk factor for psychoactive substance use disorder and nicotine dependence in adolescence and comorbid conduct disorder and oppositional defiant disorder further increases the risk of developing psychoactive substance use disorder and nicotine dependence (Groenman, et al., 2013).

Furthermore, research suggest that impulsivity is a risk factor for trying the substance, continuing to use it and not quitting and individuals with higher impulsivity levels begin to use alcohol and substance at earlier ages as well (Tarter, Kirisci, Feske & Vanyukov M, 2007; Kollins, 2002).

According to another study examining the relationship between ADHD and substance use, it was figured out that individuals with ADHD especially having mother with a history of alcohol use are more likely to use substance (Önal, Ögel & Eke, 2011).

In a study ADHD symptoms among alcohol and substance addicts were examined and it has been shown that attention deficit and problems comorbid with ADHD are more frequent among alcohol addicts (Ongun, 2010, p. 52).

A significant relationship was also found between substance use and ADHD symptoms; internet addiction, conduct disorder symptoms and tobacco use in a research conducted in Turkey (Meşeli, 2014).

It is also very obvious that there is a relationship between early anti-social behavior and substance use disorder (Yünci & Aydın, 2008 p. 554).

When there are other comorbid disorders with ADHD, treatment becomes more difficult and additional problems occur. When some problems occurring with ADHD is not treated in childhood, they increase in adolescence and adulthood (Semerci, 2010). Knowing all comorbid disorders is crucial for treatment approach and treatment outcomes.

2.3.3. Psychosocial Factors of ADHD

The role of psychosocial factors in ADHD is more preparatory and accelerative than being a basic factor. It is emphasized that children with ADHD are more likely to be from a broken family, lack of harmony, psychiatric disorders in mother or father and being single or first child of the family are more than among children with ADHD when compared to controls (Gücüyener, 2015, p. 371).

It was assumed that various distortions in family functioning and parent-child relationship play a role in the etiology of ADHD. However, many studies have recently shown that these factors are not primary reasons in the etiology of ADHD but they have an important role in the etiology of oppositional defiant disorder and conduct disorder which frequently comorbid with ADHD (Cantwell, 1996). In another study, chronic conflict, parent attitudes and existing pathology in the mother is more frequent among

the families of individuals with ADHD (Biederman et al., 2005; 2002).

In a study examining the familial evaluation of adolescents diagnosed with conduct disorder, it has been shown that fathers of children with conduct disorder have higher levels of trait anger and lower levels of anger management (Ölçek, 2010). It is also shown that parents with higher levels of stress are more likely to use punishment and this increase the aggressive and impulsive behavior among children (Pouretemad, Khooshabi, Roshanbin & Jadidi, 2009).

In another study, how personality characteristics of parents affect ADHD and oppositional defiant disorder symptoms of the child was examined and it was figured out that there was a significant relationship between personality characteristics of parents and attention deficit and oppositional defiant disorder symptoms in children (Usta, 2010). One study emphasized the importance of maternal factors such as higher depression and anxiety symptoms, lower tolerance, lower adaptation regarding its association with presence and the severity of ADHD and comorbid symptoms of children (Evinç, 2004).

2.4. Description of Substance Use Disorders

2.4.1. History of Substance Use Disorders

It is known for centuries that drugs are used for pleasure, pain relief and treatment. Opium and marijuana were accepted as gifts from God sent for health and happiness. Psychoactive substances such as hallucinogen plants, opium and marijuana inspirations were used to reach different consciousness levels named as "altered consciousness state" in treatment ceremonies of primitive societies, in addition to methods such as dance, meditation social and sensory isolation (Ögel, 2001). Similarly, it is also known that since the beginning of human history, drugs have been used for pain killer, healing diseases and abolish negative emotions, in other words, for medical purposes (Ögel, 1997, p. 13). Alcohol and substances are also located in mythological stories, legends, primitive religion, poems, songs, novels. These led alcohol and substance subculture to born, spread and develope in social processes (Köknel, 1998, p. 21).

2.4.2. Definition of Substance Use Disorders

According to DSM-IV-TR classification of American Psychological Association, disorders related with substance include substance dependence, substance abuse, substance intoxication and substance deprivation (APA, 2000). Tobacco, alcohol and substance use disorders are defined as a disease which affect many individuals and have expensive consequences (Yüncü & Aydın, 2008, p. 554).

The term dependence can be used in one of two ways discussing substance use disorders. Substance dependence is continuous use of a substance despite it's clear problems experienced by the individual. As presented in more detail below, substance dependence can refer to a syndrome of problematic use, with various features captured in diagnostic criteria sets (Yüncü & Aydın, 2008).

Substance deprivation is substance specific situation which occurs because of quitting the substance or reducing the amount of it in the cases of long-time use of the substance. This situation leads to clinically significant problems and disruptions in social or occupational functioning (Yüncü & Aydın, 2008; Strain, Anthony & James p. 1242).

The DSM-5 does not separate the diagnoses of substance abuse and dependence as in DSM-IV. The DSM-5 eliminates the terms "abuse" and "dependence" from diagnostic categories and uses under one category called "Substance Use Disorder".

Recurrent legal problems criterion for substance in DSM-IV has been removed drom DSM-5 and instead of this, a new criterion, craving or a strong desire or urge to use a substance, has been included. In addition, the threshold for substance use disorder diagnosis is set at two or more criteria in DSM-5, in contrast to a threshold of one or more criteria for a diagnosis of DSM-IV substance abuse and three or more for DSM-IV substance dependence.

Furthermore, cannabis and caffeine withdrawal are new concepts for DSM-5. The criteria for DSM-5 tobacco use disorder are the same as those for other substance use disorders. In contrast, DSM-IV did not have a category for tobacco abuse, so these criteria in DSM-5 are also new for tobacco (APA, 2000).

Table 3.

F1X.2 Criterias of Dependence Syndrome According to the ICD-10

A- Define diagnosis of dependence should usually be made only if three or more of the following have been present together at some time during the previous year:
(a) a strong desire or sense of compulsion to take the substance;
(b) difficulties in controlling substance-taking behavior in terms of its onset, termination, or levels of use;
(c) a physiological withdrawal state (see F1x.3 and F1x.4) when substance use has ceased or been reduced, as evidenced by: the characteristic withdrawal syndrome for the substance; or use of the same (or a closely related) substance with the intention of relieving or avoiding withdrawal symptoms;
(d) evidence of tolerance, such that increased doses of the psychoactive substances are required in order to achieve effects originally produced by lower doses (clear examples of this are found in alcohol- and opiate-dependent individuals who may take daily doses sufficient to incapacitate or kill non-tolerant users);
(e) progressive neglect of alternative pleasures or interests because of psychoactive substance use, increased amount of time necessary to obtain or take the substance or to recover from its effects;
(f) persisting with substance use despite clear evidence of overtly harmful consequences, such as harm to the liver through excessive drinking, depressive mood states consequent to periods of heavy substance use, or drug-related impairment of cognitive functioning; efforts should be made to determine that the user was actually, or could be expected to be, aware of the nature and extent of the harm.

Reference: (ICD-10, 1992)

Table 4.

Criterias of Substance Use Disorders According to the DSM-5

A. A problematic pattern of substance use leading to clinically significant impairment or distress, as manifested by at least two of the following, occurring within a 12 month period:

1. The substance is often taken in larger amounts or over a longer period than was intended.
2. There is a persistent desire or unsuccessful efforts to cut down or control the substance use.
3. A great deal of time is spent in activities necessary to obtain the substance, use the substance, or recover from it's effects.
4. Craving, or a strong desire or urge to use the substance.
5. Recurrent substance use resulting in a failure to fulfill major role obligations at work, school, or home.
6. Continued Substance use despite having persistent or recurrent social or interpersonal problems caused or exacerbated by the effects of the substance.
7. Important social, occupational, or recreational activities are given up or reduced because of substance use.
8. Recurrent substance use in situations in which it is physically hazardous.
9. Substance use is continued despite knowledge of having a persistent or recurrent physical or psychological problem that is likely to have been caused or exacerbated by the substance.
10. Tolerance, as defined by either of the following:
    a. A need for markedly increased amounts of the substance to achieve intoxication or desired effect.
    b. A markedly diminished effect with continued use of the same amount of the substance.
11. Withdrawal, as manifested by either of the following:
    a. The characteristic withdrawal syndrome for the substance (refer to criteria A and B of the criteria set for alcohol or other substances withdrawal)
    b. Substance (or closely related substance, such as benzodiazepine with alcohol) is taken to relieve or avoid withdrawal symptoms.

Specify;

With physiological dependence: evidence of tolerance or withdrawal (i.e. either item 4 or 5 is present.

Without physiological dependence: no evidence of tolerance or withdrawal (i.e. neither item 4 or 5 is present.

Reference: (DSM-5, 2014)

2.4.3. Psychodynamic Explanation of Substance Related Disorders

First explanations on substance dependence were made by psychoanalyst theoreticians. The role of oral regression, need for satisfaction, hedonis and self-destructive impulses were discussed. Then, this view was changed and it was mentioned that substance dependence serve for adaptation and defense aims against strong emotional states including shame, depression and anger instead of regression. It was also stated that substance dependence originates from insufficiency of self-protective methods instead of self-destructive impulses. Incomplete internalization of mother and father images because of early developmental problems were regarded as the reason for this insufficiency (Gabbard, 1990, pp. 225-266).

Although there are no studies by Freud which handled dependence as basic topic, it is seen that he provided various opinions related with this topic in some of his work. In his "Three Try" work, Freud stated that oral stage which is the first stage of psychosexual stages is crucial for the emergence of dependence in adult life. In this stage, fixation, incomplete oral satisfaction and failing to earn the basic trust emotion might lead to a personality structure which is vulnerable to dependence (Freud, pp. 123-245). Classic psychoanalytical theory hypothesizes that at least some alcoholic people may have become fixated at the oral stage of development and use alcohol to relieve their frustrations by taking the substance by mouth (Sadock & Sadock, p. 386, 2007).

Furthermore in psychoanalytic literature the behavior of persons addicted to narcotics has been described in terms of libidinal fixation, with regression to pregenital, oral or even more archaic levels of psychosexual development. The need to explain the relation of drug abuse, defense mechanisms, impulse control, affective disturbances, and adaptive mechanisms led to the shift from psychosexual formulations to formulations emphasizing ego psychology. Problems of the relation between the ego and affects emerge as a key area of difficulty (Sadock & Sadock, 2007, p. 446).

Researchers have identified several factors in the childhood histories of persons with later alcohol-related disorders and in children at high risk for having an alcohol-related disorder because one or both of their parents are affected. (Sadock, & Sadock, p. 392, 2007).

Recent psychodynamic views emphasize the relation between substance abuse and depression (Tosun, 2008).

According to sexual drive theory of Freud, every drive has an aim, object and source. Aim of the drive is to deplete and satisfy. Object is anything that might lead to this depletion and satisfaction. Source is body parts (oral, anal, genital parts) which is known as sexual pleasure parts (libidinal or erogenic zone). According to psychosexual development theory, carrying the characteristics of a stage in adulthood indicates a fixation from that stage (Sadock, Sadock, 2007; Öztürk, 1998).

In a stage, excessive oral gratifications or deprivation might result in libidinal fixations that contribute to pathological traits. Such traits can include excessive optimism, narcissism, pessimism is often seen in depressive states, and demandingness. Oral characters are often excessively dependent and require others to look after them. Oral characters are often extremely dependent on objects for the maintenance of their self-esteem. Envy and jealousy are often associated with oral traits. Successful resolution of the oral phase provides a basis in character structure for capacities to give to and receive from others without excessive dependence or envy and a capacity to rely on others with a sense of trust as well as with a sense of self-reliance and self-trust (Sadock & Sadock, 2007; Öztürk, 1998).

2.5. Classification of Legal ve Illegal Psychoactive Drugs

Substances dependence and classification of them is a comprehensive issue. Since relation between tobacco, alcohol and other illegal drug use and ADHD is discussed in this study, classification of legal and illegal psychoactive substances are provided. When the literature is examined, there are classifications for substances leading to dependence. In general, substance dependence is classified in this way.

Legal substances leading to dependence:

1. Cigarette/Tobacco
2. Alcohol
3. Volatile substances: Benzol, Toluen (Thinner, Bali etc.)
4. Opioids:

Natural: Morphine, Codeine

Semi-synthetic: Heroine

Synthetic: Methadone, Meperidine (Dolantine)

5. Pain relievers
6. Green-red-nonprescriptions
7. Ketamine (Veterinary medicine)
8. Weight loss pills, Cafeine, Rat poison, Steroid etc.

Illegal substances:

1. Stimulants: Cocaine, Amphetamine, Ephedrine
2. Cannabis
3. Hallucinogens: LSD (Lysergic Acid Diethylamid), Phencyclidine (PCP/Angel Dust), Ectacy Mescaline, Psylocybe, DMT (Dimethyltryptamine), DET (Dietiltriptalmin), DOM (Dimetoksimetil amphetamine)
4. Sedative hypnotics/Benzodiazepines: Diazepam (Diazem, Nervium) Lorazepam (Ativan), Clonazepam (Riyotril), Barbiturates (Luminal, Nembutal) etc.
5. Anticholinergic Anthropine, Biperiden (Akineton) (AMATEM, 1997; Öğel, 2001; Ögel, Tamar, Karalı & Çakmak, 1998).

Some drugs are used for treatment and some of them are only used for their delighting or stimulating effects. Drugs used for treatment are also misused because of their sedative and delighting effects out of doctor control and lead to dependence

Legal and illegal substances leading to dependence are provided above. These substances are explained in brief in the following section. However, tobacco, alcohol and drugs are discussed in this study (Ball, 2005, pp. 84-102).

2.5.1. Tobacco

Tobacco is one of the most widely used in the world recently. The original ingredient of tobacco is nicotine. Tobacco contains nicotine, tar and carbon monoxide. Appetite suppressant, risk of heart attack and heart disease, causes blood vessels to

tighten and restricts blood flow are the side effects of using tobacco (Ögel, 2010, p. 7). Nicotine has both stimulative and sedative effects. 70% of tobacco users begin to use again in the first month (Ögel, et al. 1998).

2.5.2. Alcohol

Alcohol has both stimulative and sedative effects as nicotine. Becaue of easy access, increasing use in the society and slow intoxication after a long time use, alcohol constitutes a big social danger (Kurupınar, 2012).

2.5.3. Cannabis

Cannabis is a plant including psychoactive chemical tetrahidrokanibal (THC). It is obtained from cannabis sativa and it includes 421 chemical substances. It's smoke generally inhaled, however different ways of use are also preferred.

Lymbic system which enables learning, memory and perceptions to integrate with emotion and motivation is affected. Learned behaviors linked to hippocampus are disrupted (Yargıç, 2006). When it is inhaled at higher doses, a psychotic table characterized with paranoid hallucinations might be seen. When it is inhaled at very higher doses, toxic delirium with confusion and amnesia might develop. Hyperactivity, aggression, uneasiness, anxiousness and loss of appetite might be seen (Ögel, et al. 1998).

Psychological effects of cannabis change based on the psychological state of the person, amount of it, setting and previous experiences (Köroğlu & Cengiz, 2007, p.175).

2.5.4. Opioids

Substances such as opium, heroine, morphine, methadone and codeine are regarded as opioids. Morphine is an opioid obtained through natural ways. It is obtained from processing of opium poppy with acid anhydride and it is a semi-synthetic opioid. It is generally inhaled or filled in filter tipped cigarette. Apart from this, another way of use is inhaling from nostrils as dust. Therefore, heroine gets mixed into bloodstream

through mucosa tissue. Methadone is a synthetic opioid (Köroğlu & Cengiz, 2007, p. 175; Arıkan, 1997).

2.5.5. Hallucinogens

In this group, LSD (Lysergic Acid Diethylamid), Phencyclidine (PCP/Angel Dust), Ectacy Mescaline, Psylocybe, DMT (Dimethyltryptamine), DET (Dietiltriptalmin) and DOM (Dimetoksimetil amphetamine) are included.

LSD is the most known about these substances (Köroğlu & Cengiz, 2007). LSD (Lysergic Acid Diethylamid) is known with its confusing effect. LSD is a tasteless and odorless substance and it is produced from Lysergic Acid which is a type of mushroom grown up in rye and other cereals and component of ergo plant (Ercan, 2004).

Ecstasy, it's chemical name is MDMA (metilendioksimetamfetamin), is a drug taken by mouth. Drugs are found in different shapes and brands. MDMA are sometimes are sold as dust. While some ecstacy tablets do not include MDMA, they can include stimulants such as MDA, caffeine or amphetamine and anaesthetics such as ketamine or dekstometorfan (DXM) in addition to MDM (Ercan, 2004). They are mostly found in entertainment venues. They take effect in 20-60 minutes and lasts for 4-6 hours. Exhilaration, hyperactivity, increases in energy, closeness to opposite sex, trust, temperature and changes in perception are seen (Köroğlu & Cengiz, 2007).

Amphetamines are central nervous system stimulants. They are made from core of Phenethylamine (Köknel, 1998, p. 148). In the case of deprivation, sense of space, tiredness, headache and dizziness are frequently observed, risk of developing tolerance is average and potential for dependence is low (Ögel, et al., p. 18).

2.5.6. Sedative hypnotics/Benzodiazepines

Benzodiazepines are effective as anxiolytic, muscle relaxant, sedative / hypnotic and anti-convulsant (Alioğlu et al., 1996). They are generally taken by mouth. Relaxation, decrease in anxiety, sleep mode and disinhibition are frequently observed (Köroğlu & Cengiz, 2007). They are sold with green prescription and xanax, rivotril and diazem are some examples. Long time use with higher doses lead to dependence. When it is taken at higer doses; long time sleeping, ataxia, deceleration in breath, coma and death might be seen. In case of deprivation, anxiety, aggression, shaking, nausea, hypertension,

tachycardia and epileptic attacks are frequently seen. It is also known that tolerance and risk of dependence is low (Ögel, et al., 1998, p. 20).

2.6. Epidemiology of Substance Use Diorders

2.6.1. Frequency and Prevalance of Substance Dependency

Studies examining the prevalence of alcohol and substance use are crucial in spite of some methodological limitations (Bachman, Johnston & O'Malley, 2001).

It is noted that many adolescents in United States use alcohol and substance. Every one in five adolescents use alcohol and one in thirteen adolescents use drug-stimulative substances (Pumarega, Kilgus & Rodriguez, 2005).

In the United Kingdom, frequency of regular alcohol drinking rise from 3% of 11 year olds to 11 years old to 38% of 15 years old, with boys and girls nearly equal until age 15. Similar to smoking and drinking the prevalence of substance abuse in adolescence increases sharply with age. In 1998, only 1% of 11 year olds in England had ever tried drugs when compared with 31% of 15 year old (Viner & Booy, p. 412).

In North Cyprus, according to the data from Barış Mental Health Hospital which is the second large hospital in North Cyprus, ratio of patients with dependence syndrome who had residential treatment was 20% in 2011 and this ratio has risen to 34% in 2014. Alcohol-substance dependence has risen to first place among psychiatric diagnosis in 2014. Therefore, it can be said that there was a 112% increase in the number of patients who received residential treatment for dependence syndrome in the last 4 years. This increase was 48% for alcohol and 370% for other substances (Akbirgün, 2015).

Prevalence of addiction in North Cyprus was examined in detail. Çakıcı (1996) conducted a prevalence research among all second grade high school students in Turkish Republic of Northern Cyprus (TRNC). The results showed that 47.2% of the adolescents have tried cigarette at least one time, 80.8% of them have tried alcohol at least one time during their lifetime. In addition, lifetime use of marijuana was 1.6%, lifetime use of heroine was 0.5%, lifetime use of inhalant substance was 4.6% and use of sedatives was 3.2%. Çakıcı (1999) also investigated the prevalence of substance use

among secondary school students in Turkish Republic of Northern Cyprus. The results of this study revealed that approximately one quarter of the secondary school students (19.7%) have tried cigarette at least one time and cigarette use is more prevalent among boys when compared to girls. Besides, at least once lifetime use of alcohol was figured out 61.9% among the same student which is a large ratio (Çakıcı & Çakıcı, 2001). When the studies conducted in 1996 and 1999 in North Cyprus are examined, it is seen that substance use increase among adolescents (Çakıcı & Çakıcı, 1996; Çakıcı & Çakıcı, 1999).

Finally, it has been shown that substance use has entirely increased in TRNC. Generally, it was figured out that lifetime use of all legal and illegal substances among women was lower when compared to men and especially the prevalence is high among males and adolescent population. In recent years, there were no distinct increases in cigarette and alcohol use. However, there has been an observable increase in other psychoactive substance use when compared to earlier years (Çakıcı, 2015). Nevertheless, another study showed that male students are more likely to try substances when compared to girl students including all high school students in TRNC. Results of this research also showed that psychoactive substance use was lower when compared to European countries. However, it has been also indicated that there is a tendency to increase in psychoactive substance use as well.

2.7. Etiology of Substance Use Disorder

There are many factors influencing substance use among adolescents. Specifically, socio-demographic characteristics, psycho-social health, quality of familial relations and perceived friend and family support has a predictive role in tobacco, alcohol and substance use among adolescents (Piko, 2000).

2.7.1. Determinant Factors in Alcohol and Substance Use

2.7.1.1. Genetic Reasons

Jung examined the relationship between alcohol use frequency of adolescents and their parents and figured out that there are important similarities between boys and their fathers' alcohol use frequency (Jung, 1995). Twin and adoption studies have shown that genetic factors play an important role in the etiology of alcohol abuse (Sadock & Sadock, 2000).

Molecular genetics applications have recently become a current issue in substance use disorders. Dopamine D2 gene was examined in some of these studies. Although a relationship has not been revelaed yet in all studies, it is determined that this gene leads to differences between individuals using substance and healthy individuals. On the other hand, it is stated that there is a need for more studies in order to discover the genetic etiology of Alcohol, Substance Use Disorder (Sadock & Sadock, 2000, pp. 1724-1725; Yüncü & Haluk, 2007).

2.7.1.2. Environmental and Familial Factors

Cultural factors, social attitudes, peer behaviors, laws, and drug cost availability all influence initial experimentation of substances. Social and environmental factors also influence continued use, although individual vulnerability and psychopathology are probably more important determinants of the development of dependence (Eric, Strain, James & Anthony).

Family environment is also frequently studied in relation with substance use. Substance use among a family member is generally related with other members' substance use. Divorce, conflict, inadequacy of family authority, negative form of communication, inconsistent discipline, domestic violence, excessive protection and control, unresolved bereavement and excessive emotional distance among family members are risk factors for substance use (Tosun, 2008).

Adolescents who have substance abuse problem have friends similar to them (Ennett, et al.). Peers and friend groups encourage substance use. Unemployment, homelessness

and other financial problems might be also effective in substance use (Hawkins, Arthur & Catalano, 1995, pp. 343-426).

2.7.1.3. The Relationship Between ADHD and Substance Use

Many research showed that ADHD increase the risk of psychoactive substance use. It is thought that children with ADHD display inappropriate behaviors in order to satisfy their self confidence problems and emotions of incompetence, and they can easily develop addiction because of their impulsive behaviors. Besides, comorbidity of other psychiatric conditions is an important factor for the increase in the risk of addiction (Öztürk & Başgül, 2015, p. 103). It is important to note that individuals diagnosed with ADHD especially in adolescence are more prone to have comorbid disorders such as alcohol and substance use, affective disorders and antisocial personality disorder (Aysev & Bakar, 2008, p. 413). Mood swings, incomfortable and nerveous personality structures and difficulties in delaying demands among adolescents with ADHD are also risk factors for them to have alcohol and substance dependence (Ercan & Aydın, 1999). It has been shown that individuals diagnosed with ADHD and comorbid disorders such as anxiety and conduct disorder have higher levels of impulsivity and lower levels of social functioning when compared to individuals diagnosed with only ADHD. It is known that the risk of tobacco, alcohol and substance addiction is higher among individuals diagnosed with ADHD. There are studies in the literature showing that ADHD increases the risk of alcohol and substance abuse (Wilenis, 2004). In recent years, studies conducted n America and Europe show that the risk of tobacco, alcohol and drug addiction is three times higher when ADHD is not treated (Semerci, 2007b, p. 88). Studies show that 30-40% of adolescents with conduct disorder and ADHD are subject to drug and alcohol abuse. Inattentiveness, excessive impulsiveness and lack of awareness of the consequences of their actions, sometimes aggravated by substance abuse, contribute to the higher incidence of motor vehicle accident in adolescents (Kewley, 2011, p. 23).

Nevertheless, it is also stated that tobacco, alcohol and drug abuse is higher among the adolescents with no treatment and they begin to use these substances at earlier ages

(Langley, 2011). Adolescents with ADHD who undergone no treatment have two-three times higher risks of developing marijuana, cocaine, nicotine and alcohol dependency (Lee, 2011). According to a study examining if IQ and achievement test scores of children diagnosed with ADHD predict substance use in adolescence, the ADHD group with higher IQ scores are more likely to try cigarettes and alcohol at early ages (Molina & Pelham, 2001). Fleming, Kellam and Brown (1982) showed that higher levels of readiness to read and IQ predict frequent use of alcohol during adolescence (Fleming, Kellam & Brown, 1982).

There are research findings in the literature showing that comorbidity with disruptive behavioral disorders such as conduct disorder and oppositional defiant disorder is the predictive factor for the relationship between ADHD and tobacco, alcohol and substance use (Milberger, et al. 1997). ADHD is associated with early initiation of cigarette smoking in children and adolescents. In a research conducted in Turkey, were obtained. The reason for this was indicated as the lower levels of frequency of disruptive behavioral disorders and inadequate treatment compliance among children and adolescents are predictive factors for trying cigarettes (Esenkaya, 2012).

3. METHOD

3.1. Aim of the Study

The basic aim of this study is to reveal the relationship between demographic characteristics, substance use and impulse control levels of adolescents diagnosed with attention deficit hyperactivity disorder and determine whether there is a comorbidity with depressive disorder, anxiety disorder, oppositional defiant disorder and conduct disorders among adolescents diagnosed with attention deficit hyperactivity disorder. In line with this basic aim, answers to the following questions will be sought in this study:

1. What are the demographic characteristics of adolescents diagnosed with ADHD?
2. Is there a comorbidity of Depressive disorders or Anxiety disorders among adolescents diagnosed with ADD/HD?
3. Is there a comorbidity of Oppositional defiant disorder and Conduct disorders among adolescents diagnosed with ADD/HD?
4. Is there a comorbidity of Attention deficit, Hyperactivity, Oppositional defiant disorder and Conduct disorders among adolescents diagnosed with ADD/HD?
5. Do adolescents diagnosed with ADD/HD use tobacco, alcohol and substance?
6. Are there significant differences among adolescents diagnosed with ADD/HD who use and do not use tobacco in terms of Attention deficit, Hyperactivity, Oppositional defiant disorder and Conduct disorder?
7. Are there significant differences among adolescents diagnosed with ADD/HD who use and do not use alcohol in terms of Attention deficit, Hyperactivity, Oppositional defiant disorder and conduct disorder?
8. Are there significant differences among adolescents diagnosed with ADD/HD who use and do not use substance in terms of Attention deficit, Hyperactivity, Oppositional defiant disorder and Conduct disorder?

9. Are there significant differences among boy and girl adolescents diagnosed with ADD/HD in terms of impulse control levels (not making plans, motor impulsivity, impulsivity inattention)?
10. Are there significant differences among adolescents diagnosed with ADD/HD who use and do not use tobacco in terms of impulse control levels (inability to plan, motor impulsivity, impulsivity inattention)?
11. Are there significant differences among adolescents diagnosed with ADD/HD who use and do not use alcohol in terms of impulse control levels (inability to plan, motor impulsivity, impulsivity inattention)?
12. Are there significant differences among adolescents diagnosed with ADD/HD who use and do not use substance in terms of impulse control levels (inability to plan, motor impulsivity, impulsivity inattention)?

3.2. Participants

The participants of the study include 60 adolescents diagnosed with ADHD and their parents by Child and Adolescent Psychiatrists between the ages of 10 and 19 applied to Barış Mental Health Hospital Child and Adolescence Psychiatry Service.

3.2.1. Inclusion Criteria:

1. Being between the ages of 10 and 19
2. Getting written consent from the family and adolescent
3. Adolescents who applied to Barış Mental Health Hospital Child and Adolescent Psychiatry Polyclinic
4. Being diagnosed with ADD/HD according to DSM-5 diagnostic criteria
5. Having clinically normal level of IQ

3.2.2. Exclusion Criteria:

1. Being not literate
2. Not having informed consent from both family and the adolescent
3. Being not diagnosed with ADD/HD according to DSM-5 diagnosis criteria
4. Having a clinical condition of mental retardation

3.3. Data Collection Tools

In order to asses ADD/HD according to DSM-5 diagnostic criteria, these measurement tools were used to collect the data in this study; firstly, Patient Consent Form and respectively are used a Demographic Information Form was used for sociodemographic attributes. Adolescents were assessed in Child and Adolescent Behavior Disorders Screening and Rating Scale based on DSM-IV and K-SADS-PL-T, BIS-II. Screening and rating scale was completed by parent of the adolescents.

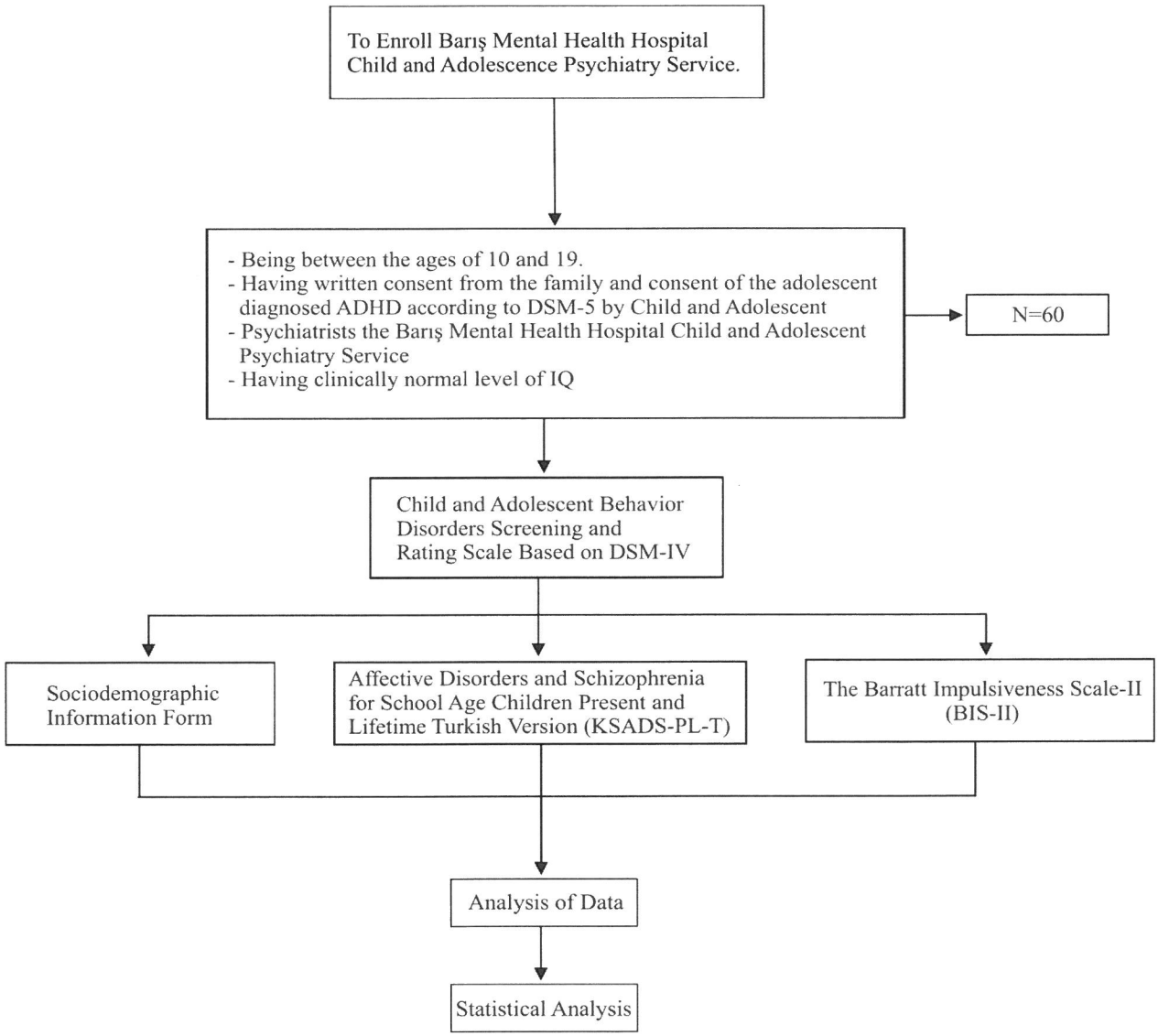

Figure 1. Flow Chart of Data Collection Process

3.3.1. Screening and Evaluation Scale for Behavior Disorders Among Children and Adolescents According to DSM-IV

This scale was developed by Turgay based on DSM-IV diagnostic criteria. This is a 4-point Likert type scale and it includes 41 questions in which 9 of them examines attention deficit, 9 of them examined hyperactivity and impulsivity, 8 of them examines Oppositional Defiant Disorder and 15 examines Conduct Disorder. Every item is scored as 0,1,2,3. For ADHD diagnosis, at least 6 of 9 items examining attention deficit must be met as 2 or 3 and at least 6 of 9 items examining impulsivity must be met as 2 or 3. For Oppositional Defiant Disorder diagnosis, at least 4 of 8 items must be met as 2 or 3 and for Conduct Disorder diagnosis, 2 of 25 items must be met for at least 6 months.

Reliability and validity study of Turkish version of the scale was made by Ercan and colleagues in 2001. It was figured out that sub-scale analysis was reliable and valid at a satisfactory level and it is a detailed scale which can be used for screening and diagnosis (Ercan, 2001; Ercan et al. 200).

3.3.2. Demographic Information Form

A socio-demographic information form is prepared by the researchers including questions about the participants' gender, age, education, place of birth, information regarding the mother and father such as; age, educational level, socio-economic status,marital status, nationality, birth and developmental story of the child etc. Interview with adolescent include two sections.

3.3.3. Affective Disorders and Schizophrenia for School Age Children Present and Lifetime Turkish Version (KSADS-PL-T)

K-Sads-Pl is a scale developed by Kaufmann and his colleagues in order to assess psychopathology among children and adolescents between the ages of 6 and 18. In this scale, psychopathology is examined based on the obtained information from both parents and the child. Affective, psychotic, anxiety, conduct, elimination, eating, tic, alcohol and substance use disorders are included as psychopathologies in the scale. The

reliability and validity study of K-Sads-Pl-T was conducted by Gökler and colleagues in Turkey (Gökler, et al., 2004).

3.3.4. The Barratt Impulsiveness Scale-II (BIS-II)

The Barratt Impulsiveness Scale-II (BIS-II) is a self-report questionnaire with 30-items assessing impulsivity. The scale was developed by Barratt in 1959 and it has undergone numerous revisions. Turkish validity and reliability study was carried out by Gülec and colleagues in 2008 (Güleç, et al., 2008, p. 252). Barratt and his colleagues have 3 aims; first, to identify impulsivity in normal individuals, to reach the role of impulsivity in psychopathology and finally to develop a personality system which is predisposition to impulsivity may be associated with the other personality traits (Barratt, 1994, p. 62).

Materials are evaluated with 4 point likert scale (1= Rarely/Never, 2= Occasionally, 3= Often, 4= Almost always/Always). 4 usually indicates the highest response impulsive behavior, but some items are graded in reverse order to avoid bias. All materials have been defined in a structure of impulsivity related to the personality traits (Patton, Standford & Barratt, 1995, p. 774). Cronbach's alpha coefficients of internal consistency in students 0.78, 0.81 in patients after two months, students retest reliability was found 0.83 (Güleç, et al., 2008).

There are 3 sub-scales;

1. Impulsivity of attentiveness (IA) (concentration and problems associated with attention, competing thoughts, quickly change direction of attention or

intolerance to cognitive confusion) - 8 items

2. Motor impulsivity (MI) (fast responses, hasty movement, restlessness) - 11 items

3. Inability to plan (IP) (lack of future orientation) - 11 items (Patton, Standford & Barratt, 1995, 771).

In the present study, the analysis of Barratt impulsivity scale used with short form (BIS-11-SF). of the scale because of the factor analysis. 1, 2, 5, 6, 12, 13, 14, 17, 18, 19,

20, 22, 24, 25, 30 items evaluated. 1, 12, 13, 20, 30 items are reversed score. Reversed items were evaluated 4, 3, 2, 1 (Tamam, Güleç & Karataş, 2013).

3.4. Analysis of Data

3.4.1. Statistical Analysis

In this study, Rorschach protocols are planned to be obtained from patients who were diagnosed with Attention Deficit Hyperactivity Disorder and analyzed with objective tests data and statistical analysis is planned to perform with IBM SPSS Statistics version 20.0. In this study used frequnecy, crosstab (chisqure) and independent sample t-test statistical methods.

4. RESULTS

In the present study, descriptive statistics and findings on demographic characteristics of adolescents who are diagnosed with Attention deficit Hyperactivity Disorder and their parents are firstly provided. Tables respectively show age groups, nationalities, educational status and socioeconomic status of adolescents' parents. Then, demographic information on age group, gender, nationalities; psychotropic medicine use of the adolescents diagnosed with ADD/HD are demonstrated. Other details are also shown in other tables. In this study; several measurement tools were used to collect the data. These tools were namely Demographic Information Form, Child and Adolescent Behavior Disorders Screening and Rating Scale based on DSM-IV, K-Sads-Pl-T and BIS-II and its three sub-scales. Statistical analysis was done with IBM SPSS Statistics version 20.0.

Demographic Characteristics of Adolescents who are diagnosed with ADD/HD and Their Parents.

Table 5.

Distribution of Adolescents' Mothers and Fathers According to Their Age Groups

Age Groups	Mothers		Fathers	
	n	%	n	%
33-40	14	46.6	5	16.6
41-45	6	20.0	6	19.9
46-50	5	16.6	13	33.3
51-62	3	9.9	4	13.3
Total	29	100	28	100

In this study, age range of adolescents' parents age was between 33 and 62. As it can be seen from Table 5; 14 mothers (n=14) were between 33-44 years old (46.6%) and 5 fathers (n=5) were between 33-44 years old (16.6%). 6 mothers (n=6) were between 41-45 (20.0%); 6 fathers (n=6) were between 41-45 years old (19.9%). 5 mothers (n=5)

were between 46-50 (16.6%); 13 fathers (n=13) were between 46-50 years old (33.3%); 3 mothers (n=3) were between 51-62 (9.9%) and 4 fathers (n=4) were between 51-62 years old (13.3%).

Table 6.

Distribution of the Nationalities of the Parents

Nationality	**Mothers**		**Fathers**	
	n	*%*	**n**	*%*
TRNC	41	68.3	36	60.0
TR	15	25.0	19	31.7
Other	4	6.7	5	8.3
Total	60	100	60	100

A total number of 60 participants were included in this study. As it can be seen from the table, 36 of the mothers (68.3%) and 36 of the fathers (60.0%) were Turkish Cypriot. 15 mothers (25.0%) and 19 fathers (31.7%) were Turkish. 4 mothers (6.7%) and 5 fathers (8.3%) were from other nationalities. Others have two nationalities including TRNC and TR.

Table 7.

Distribution of the Educational Status of the Parents

Educational Status	Mothers		Fathers	
	n	%	n	%
Primary School	8	13.3	8	13.3
Middle School	7	11.7	9	15.0
High School	27	45.0	24	40.0
University and higher	18	30.0	19	31.7
Total	60	100	60	100

Table 7 shows that 8 of the mothers (13.3%) and 8 of the fathers (13.3%) were primary school graduates. Besides, 7 mothers (11.7%) and 9 fathers (15.0%) were middle school graduates. 27 of the mothers (45.0%) and 24 of the fathers (40.0) had a high school level. 18 mothers (30.0%) and 19 fathers (31.7%) had university and higher degree of education.

Table 8.

Distribution of Marital Status of Parents

Marital Status	n	%
Married	39	65
Divorced	18	30
Died	3	5.0
Total	60	100

Note. **N=60**

In the present study, 39 parents were married (65%), 18 of them were divorced (30%) and 3 of them were dead (5.0%).

Table 9.

Distribution of Socioeconomic Status of Parents

Socioeconomic Status	**n**	*%*
Low SES	7	11.7
Middle SES	19	31.7
High SES	34	56.7
Total	60	100

Note. **N=60**

Table 9 shows the distribution of socioeconomic status of parents. It can be seen from the table that 7 of the parents had low socioeconomic status (11.7%), 19 of them had middle socioeconomic status (31.7%) and 34 of them had high socioeconomic status (56.7%).

Table 10.

Distribution of Psychiatric History of Parents

Psychiatric History	**n**	*%*
Yes	30	50
No	30	50
Total	60	100

Note. **N=60**

In the present study, 30 of the parents (50%) had a history of psychiatric diagnosis and 30 (50%) of them had no psychiatric history.

Table 11.

Distribution of Adolescents' Age Groups

Age Groups	n	%
10	5	8.3
11	5	8.3
12	4	6.7
13	6	10.0
14	6	10.0
15	4	6.7
16	13	21.7
17	9	15.0
18	3	5.0
19	5	8.3
Total	60	100

Note. **N=60**

As it can be seen from Table 11, 5 adolescents were 10 years old (8.3%), 5 of them were 11 years old (8.3%); 4 of them were 12 years old (6.7%); 4 of them were 15 years old (6.7%); 6 of them were 13 years old (10.0%); 6 of them were 14 years old (10.0%); 4 of them were 15 years old (6.7%); 13 of them were 16 years old (21.7%); 9 of them were 17 years old (15.0%); 3 of them were 18 years old (5.0%); and 5 of them were 19 years old (8.3%).

Table 12.

Distribution of the Adolescents' Gender

Gender	n	%
Female	28	46.7
Male	32	53.3
Total	60	100

Note. **N=60**

Table 12 shows that 28 of the adolescents participated in this study (46.7%) were female and 32 of them were male (53.3%).

Table 13.

Distribution of the Adolescents' Nationality

Nationality	n	%
TRNC	38	63.3
TR	9	15
Other	13	21.7
Total	60	100

As it can be seen from Table 13, 38 adolescents participated in the present study (63.3%) were Turkish Cypriot and 9 of them have Turkish nationality (15%) and 13 of them were from other nationalities (21.7%).

Table 14.

Distribution of the Success Levels of the Adolescents Diagnosed with ADHD

Success Level	**n**	*%*
Very Bad	10	16.7
Bad	24	40
Good	25	41.7
Very Good	1	1.7
Total	60	100

Table 14 shows the success levels of the adolescents participated in the present study. As it can be seen, 10 adolescents have very bad success level (16.7%), 24 adolescents have bad success level (40.0%), 25 adolescents have good success level (41.7%) and 1 adolescent has very good success level (1.7%).

Table 15.

Distribution of the Psychotropic Medicine Use of Adolescents Diagnosed with ADD/HD

Psychotropic Medicine Use	**n**	*%*
Yes	53	83.3
No	7	11.7
Total	60	100

As it can be seen from Table 15; 53 of the adolescents have used psychotropic medicine (88.3%) and 7 of them have not used psychotropic medicines (11.7%).

Table 16.

Distribution of the Tobacco, Alcohol and Other Psychoactive Substance Use among Parents of the Adolescents

Usage Status	**n**	*%*
Yes	46	76.7
No	14	23.4
Total	60	100

Results of the study showed that 46 parents use psychoactive substances (76.7%) and 14 of the parents do not use psychoactive substances (23.4%).

Table 17.

Distribution of the Types of Used Psychoactive Substances Among Parents

Psychoactive Substances	**n**	*%*
Tobacco	28	46.7
Alcohol	5	8.3
Tobacco and Alcohol	14	23.3
Other Psychoactive Drugs	1	1.7
All	1	1.7
None	11	18.3
Total	60	100

According to the results, 28 of the parents use tobacco (46.7%); 5 of them use alcohol (8.3%); 14 of them use tobacco and alcohol together (23.3%); 1 of them were uses other psychoactive substances (1.7%) and n=1 of them uses all psychoactive substances (1.7%). On the other hand, 11 parents do not use any psychoactive substances (18.3%).

Table 18.

Distribution of the Defined Relationship Between Adolescents and Their Parents

Relationship with Parents	**Mother**		**Father**	
	n	*%*	**n**	*%*
Very Bad	6	10.0	11	18.3
Bad	20	33.3	19	31.7
Good	30	50.0	23	38.3
Very Good	4	6.7	6	10.0
Total	60	100	59	100

As it can be seen from Table 18; 6 adolescents have very bad relationship with their mothers (10.0%) and 11 of them have very bad relationship with their mothers (18.3%). 20 adolescents reported that they have bad relationship with their mothers (33.3%) and 19 of them reported that they have bad relationship with their fathers (31.7%). In addition, 30 adolescents (50.0%) indicated that they have good relationship with their mothers and 23 of them indicated that they have good relationship with their fathers (38.3%). Number of adolescents who reported that they have very good relationship with their parents was the lowest. 4 adolescents indicated that they have very good relationship with their mothers (6.7%) and 6 of them indicated that they have very good relationship with their fathers (10.0%).

Table 19.

Comorbidity of Depressive Disorders and Anxiety Disorders Among Adolescents Diagnosed with ADD/HD

Diagnosis	Yes		No		Total	
	n	%	n	%	N	%
Major Depression	20	33.3	40	66.7	60	100
Generalized Anxiety Disorder	9	15.0	51	85.0	60	100

When comorbidity of depressive disorders and anxiety disorders among adolescents diagnosed with ADD / HD is examined, results on K-Sads-Pl-T revealed that 20 adolescents have a diagnosis of Major Depression (33.3%) and 9 of them have a diagnosis of Generalized Anxiety Disorder (15.0%).

Table 20.

Comorbidity of Oppositional Defiant Disorder and Conduct Disorders Among Adolescents Diagnosed with ADD/HD

Diagnosis	Yes		No		Total	
	n	%	n	%	N	%
Oppositional Defiant Disorders	15	25.0	45	75.0	60	100
Conduct Disorders	11	18.3	49	81.7	60	100

According to results on K-Sads-Pl-T, it was figured out that 15 of the adolescents have a diagnosis of Oppositional Defiant Disorder (25.0%) and 11 of them have a diagnosis of Conduct Disorders (18.3%).

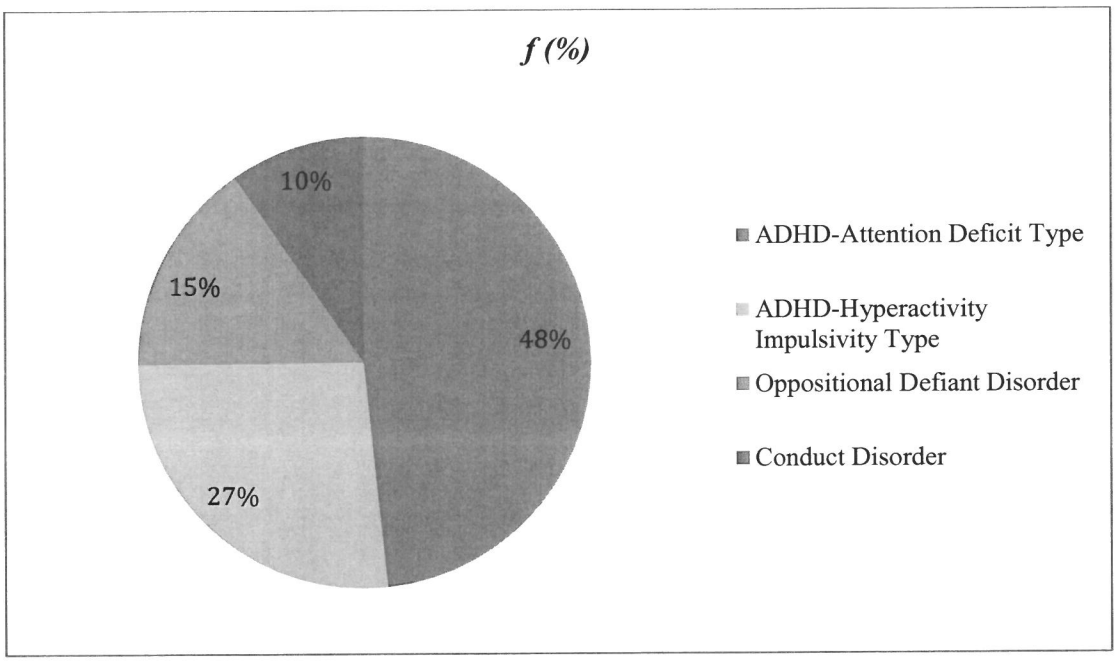

Figure 2. Distribution of Comorbid Disorders with ADHD Acccording to Turgay' s Child and Adolescent Behavior Disorders Screening and Rating Scale

Table 21.

Distribution of Comorbid Disorders with ADHD Acccording to Turgay' s Child and Adolescent Behavior Disorders Screening and Rating Scale

	Yes		**No**		**Total**	
	n	*%*	**n**	*%*	**N**	*%*
ADHD-Attention Deficit Type	60	100	0	100	60	100
ADHD-Hyperactivity Impulsivity Type	33	55.0	27	45.0	60	100
Oppositional Deficiant Disorder	19	31.7	41	68.3	60	100
Conduct Disorder	12	20.0	48	80.0	60	100

Note: **N=60**

According to Turgay's Child and Adolescent Behavior Disorders Screening and Rating Scale based on DSM-IV, it was revealed that 60 (100%) of the adolescents are

diagnosed with ADHD-Attention Deficit type; 33 of them are diagnosed with ADHD-Hyperactivity Impulsivity type (55.0%); 19 of them are diagnosed with Oppositional Defiant Disorder (31.7%) and 12 of them are diagnosed with Conduct Disorder (20.0%).

Table 22.

Distribution of the Psychoactive Substances Used by Adolescents Diagnosed with ADD/HD

Psychoactive Drugs	**n**	*%*
Tobacco	16	26.7
Alcohol	2	3.3
Tobacco and Alcohol	7	11.7
Other Psychoactive Drugs	3	5.0
All	9	15.0
None	23	38.3
Total	60	100

Results of the present study showed that 16 adolescents use tobacco (26.7%), 2 of them use alcohol (3.3%), 7 of them use both tobacco and alcohol (11.7%), 3 of them use other psychoactive substances (5.0%), 9 of them use all substances (15.0%) and 23 of them do not use any psychoactive substance (38.3%).

Table 23.

Reasons of Psychoactive Substance Use Among Adolescents Diagnosed with ADD/HD

Reasons of Using Psychoactive Substances	**Yes**		**No**		**Total**	
	n	*%*	**n**	*%*	**N**	*%*
I can not have fun without the substance.	8	13.3	52	86.7	60	100
It is exciting.	12	20.0	48	80.0	60	100
It gives pleasure.	21	35.0	39	65.0	60	100
In order to forget or solve my problems	17	28.3	43	71.7	60	100
I can not dealt with my anger with other ways.	17	28.2	43	71.7	60	100
It helps me when I feel sad, anxious or angry.	21	35.0	39	65.0	60	100
It makes me feel more confident.	4	6.7	56	93.3	60	100
In order to talk or behave in a more comfortable way.	5	8.3	55	91.7	60	100
In order to prevent tease	1	1.7	59	98.3	60	100
Not to be isolated from my environment and to adapt to my friends	7	11.7	53	88.3	60	100
Because of familial problems	16	26.7	44	73.3	60	100

Adolescents were asked about the reasons of using psychoactive substance. According to the results, 21 adolescents reported that they use substances for pleasure (35.0%) and 21 of them use when they feel sad, anxious or angry (35.0%). The second most frequent response was to forget or solve problems n=17 (28.3%) and to deal with anger n=18 (28.2%). In addition, the third most frequent response was familial problems n=16 (26.7%). Finally, 12 adolescents mentioned about the exciting effect of substances (20.0%). It was also a remarkable result that only 1 adolescent reported preventing tease as the reason for using substances (1.7%).

Table 24.

Descriptive Statistics for Adolescents Diagnosed with ADD/HD Who Use and Do Not Use Tobacco

Tobacco Use	**ADHD-ADD Diagnosis**	
	n	**%**
Yes	30	100
No	30	100
Total	60	100

Note: **N=60**

The results revealed that half of the adolescents use tobacco and half of them do not use tobacco and all of them are diagnosed with ADHD-ADD.

Table 25.

Comparison of Tobacco Use, ADHD-HI, ODD and CD diagnosis

Tobacco Use	**ADHD-HI**		**ODD**		**CD**	
	n *(%)*		**n *(%)***		**n *(%)***	
	Yes	**No**	**Yes**	**No**	**Yes**	**No**
Yes	20 (55.7)	10 (33.3)	14 (46.7)	16 (53.3)	11 (36.7)	19 (53.3)
No	13 (43.3)	17 (56.7)	5 (16.7)	25 (83.3)	1 (3.3)	29 (96.7)
Total	33 (55.0)	27 (45.0)	19 (31.7)	41 (68.3)	12 (20.0)	48 (80.0)
x^2, p	x^2=3.30	p=.069	x^2=6.23	p=.012*	x^2=10.41	p=.001*

In this study; tobacco use, ADHD-HI, ODD and CD diagnosis were compared with Chi-square statistical method. In a study when ADHD-HI diagnosis and tobacco use is compared, it was determined that tobacco use is the most frequent n=20 (55.7%), n=25 (83.3%) among individuals without ODD diagnosis and individuals without CD diagnosis use less tobacco n=29 (53.3%).

Table 26.

Descriptive Statistics for Adolescents Diagnosed with ADD/HD Who Use and Do Not Use Alcohol in Terms of Attention deficit, Hyperactivity, Oppositional defiant disorder and Conduct disorder

Alcohol Use	**ADHD - HI**		**ODD**		**CD**	
	n *(%)*		**n *(%)***		**n *(%)***	
	Yes	**No**	**Yes**	**No**	**Yes**	**No**
Yes	5 (83.3)	1 (16.7)	2 (33.3)	4 (56.7)	2 (33.3)	4 (66.7)
No	28 (51.9)	26 (48.1)	17 (31.5)	37 (68.5)	10 (18.5)	44 (81.5)
Total	33 (55.0)	27 (45.0)	19 (31.7)	41 (68.3)	12 (20.0)	48 (80.0)
x^2, p	x^2= 2.16	p=.14	x^2=.009*	p=.926	x^2= .741	p=.389

In the present study; alcohol use and Attention deficit, hyperactivity, oppositional defiant disorder and conduct disorder diagnosis were compared with Chi-square statistical method. It was determined that ADHD-HI diagnosis and alcohol use is higher compared to individuals without diagnosis (n=5, 83.3%), individuals without ODD diagnosis use alcohol less (n=37, 68.5%) and individuals without CD diagnosis use alcohol less (n=44, 81.5%)

Table 27.

Descriptive Statistics for Adolescents Diagnosed with ADD/HD Who Use and Do Not Use Substance in Terms of Attention deficit, Hyperactivity, Oppositional defiant disorder and Conduct disorder

Other Psychoactive Substance USe	**ADHD-HI** n *(%)*		**ODD** n *(%)*		**CD** n *(%)*	
	Yes	**No**	**Yes**	**No**	**Yes**	**No**
Yes	11 (84.6)	2 (15.4)	8 (61,5)	5 (38.5)	8 (61.5)	5 (38.5)
No	22 (46.8)	25 (53.2)	11 (23.4)	36 (76.6)	4 (8.5)	43 (91.5)
Total	33 (55.0)	27 (45.0)	19 (31.7)	41 (68.3)	12 (20.0)	48 (80.0)
x^2, p	x^2=5.88	p=.015*	x^2=6.84	p=.009*	x^2=17.89	p=.000**

In the present study; substance use and Attention deficit, hyperactivity, oppositional defiant disorder and conduct disorder diagnosis were compared with Chi-square statistical method. According to the results, it was figured out that adolescents diagnosed with ADHD-HI frequently use psychoactive substances (n=11; 84.6%), adolescents without ADHD-HI diagnosis use psychoactive substances less (n=25; 53.2%), adolescents diagnosed with ODD frequently use psychoactive substances (n=8; 61.5%) and adolescents without ODD diagnosis use psychoactive substances less (n=5; 38.5%). It was also determined that adolescents diagnosed with CD more frequently use psychoactive substances (n=8; 61.5%) compared to adolescents without CD diagnosis (n=5; 38.5%).

Table 28.

Impulse Control Levels of Boy and Girl Adolescents Diagnosed With ADD/HD

Barratt Subscales	**Female**		**Male**		*sd*	*T*	*P*
	$\bar{X}$	*S*	$\bar{X}$	*S*			
Barratt - IA	12.50	3.20	13.62	3.48	-1.29	58	.20
	N=28		N=32				
Barratt - MI	10.28	33.3	9.84	2.79	.557	58	.58
	N=28		N=32				
Barratt - IP	12.10	3.08	12.0	3.05	.017	58	.98
	N=28		N=32				

Note: *p ≤ 0.05 **p < 0.001

In this study; an Independent sample t-test analysis method was applied to figure out whether impulse control levels of adolescents change significantly based on gender. Results revealed that for the impulsivity of attentiveness (IA) subscale; there is no significant difference (p=.20), the motor impulsivity (MI) subscale (p=.58), and the inability to plan (IP) subscale (p=.98) there are no significant differences according to gender.

Table 29.

Impulse Control Levels of Adolescents Who Use and Do Not Use Tobacco

Barratt Subscales	**Tobacco Use**		**Not Using Tobacco**		*sd*	*T*	*P*
	$\bar{X}$	*S*	$\bar{X}$	*S*			
Barratt - IA	12.83	4.04	13.36	2.59	-.60	58	.545
	N=30		N=30				
Barratt - MI	10.83	3.29	9.26	2.61	2.04	58	.046*
	N=30		N=30				
Barratt - IP	12.40	3.53	11.8	2.46	.762	58	.449
	N=6		N=30				

Note: *p ≤ 0.05 **p < 0.001

An independent sample t-test analysis was applied in order to reveal the relation between Barratt subscales and tobacco use. The results showed that there is significant difference between Impulsivity of attentiveness (IA) subscale and tobacco use (p=.545). There is also a significant difference between motor impulsivity (MI) subscale and tobacco use (p=.046*). Lastly, no statistical significant difference was obtained between the inability to plan (IP) subscale and tobacco use (p=.449).

Table 30.

Impulse Control Levels of Adolescents Who Use and Do Not Use Alcohol

Barratt Subscales	**Alcohol Use**		**Not Using Alcohol**		*sd*	*T*	*P*
	$\bar{X}$	*S*	$\bar{X}$	*S*			
Barratt - IA	15.83	2.71	12.79	3.32	2.15	58	.036
	N=6		N=54				
Barratt - MI	12.33	1.50	12.7	3.32	1.98	58	.052
	N=6		N=54				
Barratt - IP	14.33	2.58	11.85	3.0	1.94	58	.057
	N=6		N=54				

Note: *p ≤ 0.05 **p < 0.001

An independent sample t-test analysis was applied in order to reveal the relation between Barratt subscales and alcohol use. The results showed that there is significant difference between Impulsivity of attentiveness (IA) subscale and alcohol use (p=.036*). There is also a significant difference between motor impulsivity (MI) subscale and alcohol use (p=.052*). Lastly, There is also a significant difference between the inability to plan (IP) subscale and alcohol use (p=.057).

Table 31.

Impulse Control Levels of Adolescents Who Use and Do Not Use Psychoactive Substance

Barratt Subscales	**Psychoactive Substance Use**		**Not Using Psychoactive Substances**		*sd*	*T*	*P*
	$\bar{X}$	*S*	$\bar{X}$	*S*			
Barratt - IA	12.93	3.17	12.93	3.17	.71	58	.480
	N=13		N=47				
Barratt - MI	12.23	3.34	9.44	2.70	3.12	58	.003*
	N=13		N=47				
Barratt - IP	13.07	3.56	11.82	2.86	1.31	58	.193
	N=13		N=47				

Note: *p ≤ 0.05 **p < 0.001

An independent sample t-test analysis was applied to figure out the relationship between Barratt subscales and psychoactive drug use. The results showed that there is no significant difference between Impulsivity of attentiveness (IA) subscale and psychoactive substance use (p=.480). There is a significant difference between motor impulsivity (MI) subscale and psychoactive substance use among adolescents (p=.003*). Lastly, no statistical significant difference was obtained between the inability to plan (IP) subscale and tobacco use (p=.193).

5. DISCUSSION

Obtained results were analyzed with IBM SPSS Statistics version 20.0. Descriptive statistical techniques were used to figure out demographic information of adolescents who are diagnosed with ADHD and their parents. Adolescents who are diagnosed with ADHD and adolescents who use tobacco, alcohol and other psychoactive substances and who do not use tobacco, alcohol and other psychoactive substances were compared with Chi-square statistical method. Lastly, an Independent sample t-test method was used to examine the relationship between impulsivity levels and tobacco, alcohol and other substance use. The data were provided as mean and standard deviation. All of the *p* values were evaluated at a 5% level of significance.

In this section, findings of the present study are discussed in the light of the relevant literature.

The first aim of this study was to reveal the demographic characteristics of adolescents and their parents. The second aim of this study was to assess the comorbidity of depressive disorders and anxiety disorders among adolescents diagnosed with ADHD. The third aim of the present study was to examine the comorbidity of oppositional defiant disorder and conduct disorder among adolescents diagnosed with ADHD. The fourth aim of this study was to reveal Attention Deficit Hyperactivity Disorder-Attention Deficit Disorder Type, Attention Deficit Hyperactivity Disorder-Hyperactivity Impulsivity Type and Oppositional Defiant Disorder, Conduct Disorder diagnosis according to Turgay's Child and Adolescent Behavior Disorders Screening and Rating Scale based on DSM-IV. The fifth aim was to examine tobacco, alcohol and substance use among adolescents diagnosed with ADHD and their reasons for using psychoactive substances. It was also aimed to determine whether there are significant differences among adolescents who use tobacco, alcohol and other psychoactive substances in terms of attention deficit, hyperactivity, oppositional defiant disorder and conduct disorder. Lastly, it was also aimed to reveal the relationship between the impulse control levels and tobacco, alcohol and other psychoactive substance use of adolescents.

One of the aims of the current study was to determine the demographic characteristics of the age groups, nationalities, education status, marital status, socioeconomic status, psychiatric history, substance use conditions and substance preferences among parents of adolescents. In addition, adolescents' age groups, genders, nationalities, school success levels, psychotropic medicine use, relationships with their parents were examined. The significant results obtained from the analysis and the literature concerning long-term consequences of ADHD and related disorders will be discussed below. There is some evidence regarding educational level, psychosocial problems, substance abuse, psychiatric problems and risky behavior among adolescents (Bernfort, Nordfeldt & Persson, 2008).

In this study, it was revealed that educational levels of parents were mostly high school. This result means that university and higher educational level are at the second rank. At this point, it is recommended that educational levels of families might be examined with larger sample size. Since the sample size of the present study is small, this study might only give an idea about the educational level of the parents. On the other hand, more than half of the adolescents' success levels in this study were bad or very bad. This is an important result for adolescents with ADHD. In the present study, it was figured out that nearly half of the parents were divorced and 50% of parents had a psychiatric history and 53 of the adolescents use psychotropic medicines. This result was high for the number of the participants of the present study. It is frequently acknowledged that being from broken families, conflict in the family, psychiatric disorders in mother or father, being single or the first child are risk factors for ADHD (Gücüyener, 2015, p. 371). Similarly, according to a study examining the ADHD and other psychiatric symptoms among parents of children with ADHD, it was figured out that mothers of ADHD group have more psychiatric symptoms than the control group. In addition, fathers of ADHD group have more obsessive, depressive, paranoid symptoms and interpersonal sensitivity (Şimşek & Gökcen, 2012). Results of the present study are consistent with the relevant literature. One study emphasized the importance of maternal factors such as higher depression and anxiety symptoms, lower tolerance, lower adaptation regarding its association with presence and the severity of ADHD and comorbid symptoms of children (Evinç, 2004). In the literature, one study showed that maternal distress significantly increased the average number of childhood

symptoms, ranging between 3.8% for ADHD hyperactive-impulsive (ADHD-HI) and 8.7% for anxiety. The combination of high maternal scores of distress both pre and postnatally were associated with increased risk of childhood symptoms of anxiety with minor sex differences (Bendiksen, et al.).

In this study, it was figured out that 28 of the parents use tobacco and nearly half of the parents use psychoactive substances (tobacco, alcohol, other psychoactive substances). Genetic, physiological and psychological researchs in the literature show that familial uses are effective. On the other hand, it was revealed that 30 (%50.0) of the adolescents use tobacco, alcohol and other psychoactive substances in this study. Jung examined the relationship between alcohol use frequency of adolescents and their parents and figured out that there are important similarities between boys and their fathers' alcohol use frequency (Jung, 1995). Furthermore, Family environment is also frequently studied in relation with substance use. Substance use among a family member is generally related with other members' substance use. Divorce, conflict, inadequacy of family authority, negative form of communication, inconsistent discipline, domestic violence, excessive protection and control, unresolved bereavement and excessive emotional distance among family members are risk factors for substance use (Tosun, 2008).

In this study 6 of the adolescents reported that they have very bad relationships with their mothers and 11 of the adolescents reported that they have very bad relationships with their fathers. In addition, 20 of the adolescents have bad relationships with their mothers and 19 of them have bad relationships with their fathers. 30 of the adolescents have good relationships with their mothers and 23 of them have good relationships with their fathers. Number of adolescents who reported that they have very good relationship with their parents was the lowest. 4 adolescents indicated that they have very good relationship with their mothers (6.7%) and 6 of them indicated that they have very good relationship with their fathers (10.0%). Psychoanalysts mention that excessive negative reactions of mothers to their children might lead to hyperactivity in clinical terms. According to psychoanalytic literature, disturbances in early mother-child relations and agitation as a manic defense to underlying depression might play a role in ADHD symptoms. Berger (2003) revealed that fifty-six children out of sixty children with

problems of hyperactivity had experiences of inadequate relations (violent, inconsistent relations and depression in mother) in the first year of lifetime. Similarly, Winnicott mentioned that this inadequacy is associated with the absence of omnipotence of experience in the baby. This leads to hyperactivity since omnipotence leads to the denial of anxiety caused by the inadequacy of early relations (Zabcı, 2007; Berger, 2003, pp. 15-17). In this study, it is expected that negative relationship between parents and adolescents might lead to ADHD and there is a need for studies which will contribute to psychoanalytic literature to understand this issue better.

Comorbidity is a distinct clinical feature of both childhood and adulthood ADHD. Second and third aims of the study were to examine the relationship between ADHD comorbidity with the depressive, anxiety, oppositional defiant and conduct disorders. There are limited number of studies examining psychological functioning of children and adolescents with ADHD. It was revealed that at least 65% of cases of ADHD comorbid with a neuropsychiatric disorder (Biederman et al., 1991). Results of the present study showed consistent results with the literature regarding the association between ADHD comorbidity with the depressive disorders. Furthermore, comorbidity of ADHD with oppositional defiant disorder and conduct disorder was also observed in the present study and this is consistent with findings from the literature. For instance; conduct disorder, oppositional defiant disorder, substance and alcohol use and emotional disorders are present in adolescence (Aynev & Öner, 2001). It is also acknowledged that Conduct Disorder comorbids with ADHD with a 26% and Oppositional Defiant Disorder comorbids with ADHD with 21.7% (Rohde, Biederman & Busnello, 1999). There are research findings in the literature showing evidence that comorbidity with disruptive behavioral disorders such as conduct disorder and oppositional defiant disorder is the predictive factor for the relationship between ADHD and tobacco, alcohol and substance use (Milberger, Biederman, Faraone, Chen & Jones, 1997). In a study, it is suggested that ADHD with anxiety symptoms children may be less impulsivity or hyperactive than those children with ADHD alone though they remain more impaired than controls (Pliszka & Steven, 1992).

Furthermore, comorbidity of Attention Deficit, Hyperactivity, Oppositional Defiant Disorder and Conduct Disorders among adolescents diagnosed with ADD/HD was also

examined in this study. According to Turgay's Child and Adolescent Behavior Disorders Screening and Rating Scale based on DSM-IV, it was revealed that all adolescents have ADHD-Attention deficit type; 33 adolescents have ADHD-Hyperactivity Impulsivity type; 19 of them have Oppositional Defiant Disorder and 12 of them have Conduct Disorder. Risk of substance abuse among individuals with an early onset of ADHD and conduct disorder is higher compared to individuals with ADHD (Deborah, 2007, pp. 3470-3490). The results of this study are highly consistent with the literature. For instance, Adolescents experiencing social problems diagnosed with ADHD have increased risk for depression, anxiety, disruptive behavior disorder, smoking and substance abuse (Biederman et al., 1990).

Nevertheless, tobacco, alcohol and other psychoactive substance use among adolescents diagnosed with ADD/HD were also examined. It was revealed that half of the adolescents use tobacco and half of them do not use tobacco. In the second row, there are other psychoactive substances. On the other hand; it was found that alcohol is the least frequently used by adolescents. In a study, ADHD is a risk factor for psychoactive substance use disorder and nicotine dependence in adolescence and comorbid conduct disorder and oppositional defiant disorder further increases the risk of developing psychoactive substance use disorder and nicotine dependence (Groenman et al., 2013).

There are research findings in the literature showing that comorbidity with disruptive behavioral disorders such as conduct disorder and oppositional defiant disorder is the predictive factor for the relationship between ADHD and tobacco, alcohol and substance use (Milberger et al., 1997).

Differences among adolescents diagnosed with ADD/HD who use and do not use tobacco, alcohol and psychoactive substance in terms of Attention deficit, hyperactivity, oppositional defiant disorder and conduct disorder were also examined in the present study. It was revealed that all adolescents had ADHD-ADD diagnosis. In the literature, it is noted that adolescents with ADHD who undergone no treatment have two-three times higher risks of developing marijuana, cocaine, nicotine and alcohol dependency (Lee, 2011). Nevertheless, it is also stated that tobacco, alcohol and substance abuse is higher among the adolescents with no treatment and they begin to use these substances

at earlier ages (Langley, 2011). In this study; diagnosis and tobacco use were compared with Chi-square statistical method. When ADHD-HI diagnosis and tobacco uses are compared; it was figured out that tobacco use is high among adolescents with ADHD-HI and adolescents without ODD and CD diagnosis use tobacco less. This result reveals that hyperactivity and impulsivity is effective in tobacco use. In addition, diagnosis and alcohol use were compared with Chi-square statistical method. It was revealed that alcohol use is high among adolescents with ADHD-HI and adolescents without ODD and CD diagnosis use alcohol less. According to this study; it was figured out that adolescents diagnosed with ADHD-HI more frequently use other psychoactive substances; adolescents without ADHD-HI diagnosis use psychoactive substances less; adolescents diagnosed with ODD more frequently use psychoactive substances and adolescents without ODD diagnosis use psychoactive substances less; adolescents diagnosed with CD more frequently use other psychoactive substances and adolescents without CD diagnosis use psychoactive substances less. There are studies in the literature showing that ADHD increases the risk of alcohol and substance abuse (Wilenis, 2004). Studies show that 30-40% of adolescents with conduct disorder and ADHD are subject to drug and alcohol abuse. Inattentiveness, excessive impulsiveness and lack of awareness of the consequences of their actions, sometimes aggravated by substance abuse, contribute to the higher incidence of motor vehicle accident in adolescents (Kewley, 2011, p.23).

Various definitions had been made about impulsivity. Eysenck identified impulsivity in relation with the inability to take risk, make plans and gather thoughts (Eysenck, 1977, 61). In addition, Patton et al., identified impulsivity as spontaneous sudden movement (motor activation), acting without focusing on, making plans and thinking adequately (Patton & Stanford, 1995, p. 770). On the other hand; impulsivity is the basic element and multidimensional concept of many neurological and psychiatric illnesses as well. Although it is known as a basic element, sometimes it can be a symptom as well (Tamam, Güleç & Karataş, 2013, p. 132). In this study; an independent sample t-test analysis was applied in order to reveal the relationship between impulse control levels of adolescents and their gender and results revealed no significant differences according to gender.

When impulse control levels of adolescents who use and do not use tobacco are examined, it was figured out that there are significant differences between the tobacco use among adolescents and sub-scales including inability to plan and motor impulsivity. When impulse control levels who use and do not use alcohol are examined, it was figured out that there are significant differences between the alcohol use among adolescents and sub-scales including inability to plan (IP), motor impulsivity (MI) and impulsivity in attention (IA). Furthermore; an independent sample t-test analysis was applied to compare Barratt subscales and psychoactive drug use among adolescents. The results showed that there is no significant difference between Impulsivity of attentiveness (IA) subscale and psychoactive substance use. There is a significant difference between motor impulsivity (MI) subscale and psychoactive substance use among adolescents and lastly, no statistical significant difference was obtained between the inability to plan (IP) subscale and tobacco use. Research suggest that impulsivity is a risk factor for trying the substance, continuing to use it and not quitting and individuals with higher impulsivity levels begin to use alcohol and substance at earlier ages as well (Tarter et al. 2007; Kollins, 2002). Impulsivity is a risk factor for trying the substance, continuing to use it and not quitting and individuals with higher impulsivity levels begin to use alcohol and substance at earlier ages as well (Tarter et al., 2007).

6. CONCLUSION AND RECOMMENDATIONS

The purpose of this study was to determine whether the relationship between demographic characteristics, tobacco, alcohol and substance use and impulse control levels of adolescents diagnosed with attention deficit hyperactivity disorder and determine whether there is a comorbidity with Depressive Disorders, Anxiety Disorders, ODD and CD disorders among adolescents diagnosed with ADHD.

The results of this study are highly consistent with the literature. For instance, adolescents diagnosed with ADHD the educational status of the parents, psychiatric history of parents etc. risk for developing ADHD symptoms. On the other hand, the types of uses psychoactive substance use of parents firstly become tobacco and after tobacco and alcohol. This preference similar to adolescents diagnosed with ADHD. The relationship between adolescents and their parents were generally bad. Adolescents were asked about the reasons of using psychoactive substance and reported that they use psychoactive substances for pleasure and when they feel sad, anxious or angry. The second most frequent response was to forget or solve problems and to deal with anger. In addition, the third most frequent response was familial problems. Family environment is also frequently studied in relation with substance use. Substance use among a family member is generally related with other members' substance use. Divorce, conflict, inadequacy of family authority, negative form of communication, inconsistent discipline, domestic violence, excessive protection and control, unresolved bereavement and excessive emotional distance among family members are risk factors for substance use (Tosun, 2008).

In this study another questions were comorbidity. Comorbidity is a distinct clinical feature of both childhood and adulthood ADHD. There are limited number of studies examining psychological functioning of children and adolescents with ADHD. It was revealed that at least 65% of cases of ADHD comorbid with a neuropsychiatric disorder (Biederman et al., 1991). Comorbidity of depressive disorders and anxiety disorders among adolescents diagnosed with ADD/HD is examined, results on K-Sads-Pl-T revealed that adolescents have a diagnosis of major depression and have a diagnosis of generalized anxiety disorder. Therefore, oppositional defiant disorder and diagnosis of conduct disorders was investigated as. Furthermore, comorbidity of ADHD with

oppositional defiant disorder and conduct disorder was also observed in the present study and this is consistent with findings from the literature. For instance; conduct disorders, oppositional defiant disorder, substance and alcohol use and emotional disorders are present in adolescence (Aynev & Öner, 2001). It is also acknowledged that Conduct Disorder comorbids with ADHD with a 26% and Oppositional Defiant Disorder comorbids with ADHD with 21.7% (Rohde, Biederman & Busnello, 1999). There are research findings in the literature showing evidence that comorbidity with disruptive behavioral disorders such as conduct disorder and oppositional defiant disorder is the predictive factor for the relationship between ADHD and tobacco, alcohol and substance use (Milberger, Biederman, Faraone, Chen & Jones, 1997). In a study, it is suggested that ADHD with anxiety symptoms children may be less impulsivity or hyperactive than those children with ADHD alone though they remain more impaired than controls (Pliszka & Steven, 1992).

The results revealed that half of the adolescents use tobacco and half of them do not use tobacco and all of them are diagnosed with ADHD-ADD. Tobacco use, ADHD-HI, ODD and CD diagnosis were compared and it was determined that tobacco use is the most frequent among individuals without ODD diagnosis and individuals without CD diagnosis use less tobacco.

Similarly, alcohol use and ADHD-ADD, ADHD-HD, ODD, and CD diagnosis were compared and it was determined that ADHD-HI diagnosis and alcohol use is higher compared to individuals without diagnosis, individuals without ODD diagnosis use alcohol less and individuals without CD diagnosis use alcohol less.

Therefore, substance use and ADHD-ADD, ADHD-HD, ODD and CD were compared and it was figured out that adolescents diagnosed with ADHD-HI frequently use psychoactive substances, adolescents without ADHD-HI diagnosis use psychoactive substances. Adolescents diagnosed with ODD frequently use psychoactive substances and adolescents without ODD diagnosis use psychoactive substances less. It was also determined that adolescents diagnosed with CD more frequently use psychoactive substances compared to adolescents without CD diagnosis.

An Independent sample t-test analysis was applied in order to reveal the relation between Barratt subscales and tobacco use. There is significant difference between Impulsivity of attentiveness (IA) subscale and tobacco use. There is also a significant difference between motor impulsivity (MI) subscale and tobacco. Similarly, there is significant difference between Impulsivity of attentiveness (IA) subscale and alcohol use and there is also a significant difference between motor impulsivity (MI) subscale and alcohol use. Lastly, there is also a significant difference between the inability to plan (IP) subscale and alcohol use. Finally, there is a significant difference between motor impulsivity (MI) subscale and psychoactive substance use among adolescents.

In this study, concludes with strengths and limitations of the study as well as clinical implications and recommendations for future researches were provided for future research.

When the results of the study are examined, some limitations might be considered as well. Participants only include adolescents diagnosed with ADD/HD and undergoing an inpatient treatment at Barış Mental Health Hospital Child and Adolescence Psychiatry Service.

The major limitation of the present study is the small sample size since it prevents the generalizability of the results to all TRNC population and another countries. Therefore, it can be said that the obtained results might not represent the whole population. On the other hand, this study is the first study in TRNC which trys to examine the relationship between demographic characteristics, tobacco, alcohol and substance use and impulse control levels of adolescents diagnosed with attention deficit hyperactivity disorder and determine whether there is a comorbidity with DD, AD, ODD and CD disorders among adolescents diagnosed with attention deficit hyperactivity disorder. As indicated before, there are limited number of studies on this issue especially in TRNC. The present study examined the sociodemographic characteristics of the participants, comorbid disorders of ADHD and relation with impulse control. This study showed that these are important predictors of tobacco, alcohol and substance use. According to the literature, there are needs for studies examining the relation between ADHD diagnosis and substance use (Önal, Ögel &

Eke). In this context, it can be said that this study contributes to this need in the literature.

It is expected that a longitudinal study which will be conducted with the participants of this study after psychotherapy and medicine treatment might contribute to the literature. This provides a perspective for further research.

When the literature is considered, ADHD is not only regarded as a childhood disorder; it is emphasized that it is maintained through adolescence with different reflections as well. There are many researchs on the relationship between psychoactive substance use and ADHD and important results were obtained.

In Turkish Republic of North Cyprus, no studies on the prevalence and frequency of ADHD have been conducted before. There are no statistical data showing the prevalence and frequency of ADHD in TRNC and therefore it is also recommended to conduct epidemiological studies for ADHD in TRNC.

Finally, when all of these information are considered, this research in our country provides important preliminary results for developing psycho-educational and psychosocial treatment programs for family, teacher and children about ADHD. For instance, families and teachers might be informed about ADHD, ODD, CD and their relationships with substance use. When prevention approaches are determined, children and adolescents should be regarded as a part of the family system and increasing the functioning of the family must be the basic aim. Besides, individual and group treatment programs might be organized for this aim. In addition, parents and teachers should be taught about the ways to identify and control ADHD symptoms and comorbid diagnoses such as ODD, CD etc., when it is still possible to prevent other negative conditions. Results of this study, makes an important contribution to the relevant literature and highlights the importance of preventive strategies for ADHD and dependence.

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APPENDIXES

Appendix A. Informed Consent Form

Aydınlatılmış Onam Formu

Yakın Doğu Üniversitesi, Sosyal Bilimler Enstitüsü Klinik Psikoloji Ana Bilim Dalı - Yüksek Lisans Programı Öğrencisi, Psk. İpek UÇKAN (20142698) tarafından, Yrd. Doç. Dr. İrem ERDEM ATAK' ın danışmanlığında Barış Ruh ve Sinir Hastalıkları Hastanesi Çocuk ve Ergen Psikiyatri Servisi' nde Dr. Rasiha KANDULU OLCAY' ın Hastane danışmanlığını yürüttüğü çalışma, Dikkat Eksikliği Hiperaktivite Bozukluğu Tanısı Alan Ergenlerin Demografik Özellikleri, madde kullanımı ve dürtü kontrol düzeyleri arasındaki ilişkiyi değerlendirmek amacıyla hazırlanmıştır.

Çalışmaya katılım tamamıyla gönüllülük esasına dayanmaktadır. Cevaplarınız tamamen gizli tutulacak ve sadece araştırmacılar tarafından değerlendirilecektir. Elde edilen bilgiler sadece bilimsel yayınlarda kullanılacaktır.

Anket genel olarak kişisel rahatsızlık veren soruları içermemektedir ve değerlendirme yaklaşık 60 dakikanızı alacaktır.

Katılım sırasında sorulardan ya da başka bir nedenden ötürü kendinizi rahatsız hissederseniz cevaplama işini yarıda bırakmakta serbestsiniz.

Anket sonunda bu çalışmayla ilgili sorularınız cevaplanacaktır. Bu çalışmaya katıldığınız için şimdiden teşekkür ederiz.

Bu çalışmaya tamamen gönüllü olarak katılıyorum ve istediğim zaman yarıda kesip çıkabileceğimi biliyorum. Verdiğim bilgilerin bilimsel amaçla yayımlarda kullanılmasını, yukarıda belirtilen koşullar çerçevesinde klinik görüşme ve psikolojik testlerin uygulanmasını kabul ediyorum.

Adı – Soyadı:

İmza:

Tarih:

ÇOCUK VE ERGENLERDE DAVRANIM BOZUKLUKLARI İÇİN DSM - 4'E DAYALI TARAMA VE DEĞERLENDİRME ÖLÇEĞİ

(Dr. Atilla Tugay)

Davranış sorunları ya da bozukluklarına çocukluk ve ergenlik döneminde oldukça sık rastlanmaktadır. Bu tarama ve değerlendirme ölçeği, Amerika Psikiyatri Derneği'nce ruhsal bozuklukların değerlendirilmesinde kullanılan en son tanı ölçütlerine ve Dr. Turgay'ın konuya ilişkin araştırma bulgularına dayanmaktadır.

Aşağıdaki sorular şu an değerlendirmesini yaptığınız çocuğun / gencin sık rastlanan davranış sorunlarının bazılarını gözden geçirecek ve değerlendirecektir. Lütfen her bir soruda size en uygun gelen seçeneği işaretleyin.

SOYADI :

ADI :

YAŞ :

CİNSİYET :

BU GÜNÜN TARİHİ :

FORMU DOLDURAN KİŞİNİN ÇOCUK / GENCE OLAN YAKINLIĞI :

Öğretmen ☐

Anne ☐

Baba ☐

Anne ve Baba birlikte ☐

Diğer .....

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1. BÖLÜM

A. DİKKATSİZLİK

Sorun	Sorun Derecesi			
	Yok	Biraz	Fazla	Çok Fazla
1. Dikkatini ayrıntılarına vermez ya da okul ödevlerinde, işinde ya da diğer etkinliklerde dikkatsizce hatalar yapar.	0	1	2	3
2. Üzerine aldığı görevlerde ya da oynadığı oyunlarda dikkatini sürdürmede zorluk çeker.	0	1	2	3
3. Kendisine doğrudan hitap edildiğinde dinlemiyormuş gibi görünür.	0	1	2	3
4. yönergeleri gerektiği gibi izlemez ve okul ödevlerini ufak tefek işleri ya da iş yerlerindeki görevlerini tamamlayamaz.	0	1	2	3
5. Görev etkinliklerini düzenlemekte güçlük çeker.	0	1	2	3
6. Uzun süreli dikkat gerektiren işlerden (okul ödevi, ev ödevi gibi) kaçar bunlardan hoşlanmaz ve bunlara karşı isteksizdir.	0	1	2	3
7. Üzerine aldığı görev ya da etkinlikler için gerekli olan eşyaları (kalem, kitap oyuncak araç – gereç gibi) kaybeder.	0	1	2	3
8. Dikkati kolayca dağılır.	0	1	2	3
9. Günlük etkinliklerde unutkandır.	0	1	2	3

...../

I A bölümünde karşılanan ölçüm sayısı

I A bölümünde alınan toplam puan ...../

B. AŞIRI HAREKETLİLİK – DÜRTÜSELLİK

AŞIRI HAREKETLİLİK

Sorun	Sorun Derecesi			
	Yok	Biraz	Fazla	Çok Fazla
10. Elleri ayakları kıpır kıpırdır ya da oturduğu yerde kıpırdanır.	0	1	2	3
11. Sınıf ya da oturması gereken diğer durumlarda yerinde oturamaz.	0	1	2	3
12. Uygun olmayan durumlarda sağa sola koşturur ya da tırmanır (gençlerde ya da erişkinlerde huzursuzluk ile sınırlı olabilir)	0	1	2	3
13. Sakince oyun oynamakta ya da boş zaman etkinliklerine katılmakta güçlük çeker.	0	1	2	3
14. hep hareket halindedir ya da sanki motor takılmış gibi davranır.	0	1	2	3
15. Çok konuşur.	0	1	2	3

DÜRTÜSELLİK

Sorun	Sorun Derecesi			
	Yok	Biraz	Fazla	Çok Fazla
16. Sorulan soru tamamlanmadan yanıt verir.	0	1	2	3
17. Sırasını beklemekte güçlük çeker.	0	1	2	3
18. Başkalarının sözünü keser ya da yaptıklarının arasına girer (başkalarının konuşmaları ya da oyunlarına burnunu sokar)	0	1	2	3

I B bölümünde karşılanan ölçüt sayısı	...../ 9
I B bölümünde alınan toplam puan	...../ 27
I A ve I B bölümünde karşılanan ölçüt sayısı	...../ 18
Bölüm I A ve I B'nin toplam puanı	...../ 54

II. BÖLÜM

Sorun	Sorun Derecesi			
	Yok	Biraz	Fazla	Çok Fazla
19. Kontrolünü kaybetme.	0	1	2	3
20. Erişkinlerle tartışma.	0	1	2	3
21. Kurallara ve isteklere karşı çıkar ya da reddeder.	0	1	2	3
22. Başkalarını isteyerek rahatsız eder.	0	1	2	3
23. Hataları ya da yanlış davranışları başkalarını suçlar.	0	1	2	3
24. Alıngandır ve başkaları tarafından kolayca kızdırılır.	0	1	2	3
25. Kızgın ve güceniktir.	0	1	2	3
26. Çoğu zaman kincidir ve intikam almak ister.	0	1	2	3

II bölümünde karşılanan ölçüt sayısı ...../ 8

II bölümünde alınan toplam puan ...../ 24

III. BÖLÜM

Sorun	Sorun Derecesi			
	Yok	Biraz	Fazla	Çok Fazla
A. İnsanlara ve hayvanlara karşı saldırganlık				
27. Kabadayılık eder, tehdit eder gözdağı verir.	0	1	2	3
28. Kavga döğüş başlatır.	0	1	2	3
29. Eşyalarına ciddi biçimde fiziksel zarar verecek silah (sopa, taş,kırık şişe bıçak tabanca v.b.) kullanır.	0	1	2	3
30. İnsanlara fiziksel olarak acımasız davranır.	0	1	2	3
31. Hayvanlara fiziksel olarak acımasız davranır.	0	1	2	3
32. Başkalarının gözü önünde hırsızlık (saldırarak soygun, çanta kapıp kaçma tehditle soyma, silahlı soygun) yapar.	0	1	2	3
33. Başka birisini cinsel etkinlikte bulunmak için zorlar.	0	1	2	3
B. Mala zarar verme				
34. Ciddi hasar vermek amacıyla yangın çıkarır.	0	1	2	3
35. Başkalarının malına mülküne isteyerek zarar verir. (yangın çıkarma dışında)	0	1	2	3
C. Dolandırıcılık ya da hırsızlık				
36. Başkalarının evine binasına ya da aracına zorla girer.	0	1	2	3
37. Bir şey elde etmek, bir çıkar sağlamak ya da sorumluluklarından kaçmak için yalan söyler (başkalarını aldatır)	0	1	2	3
38. Hiç kimse görmeden değerli şeyler çalar (mağazalardan mal çalma, sahtekarlık)	0	1	2	3

D. Kuralları ciddi biçimde bozma

39. 13 yaşından öncesinden başlayarak ailesinin yasaklarına karşın geceyi dışarıda geçirir.	0	1	2	3
40. Anne babasının ya da onların yerini tutan kişilerin evinde yaşarken en az iki kez geceleyin evden kaçtı (ya da uzun süreli dönmemişse bir kez)	0	1	2	3
41. 13 yaş öncesinden başlayarak okuldan kaçar.	0	1	2	3

III. bölümde karşılanan toplam ölçüt sayısı ...../ 15

III. bölümden alınan toplam puan ...../ 45

I. II. III. Bölümlerde karşılanan toplam ölçüt sayısı ...../ 41

Her üç bölümden alınan toplam puan ...../ 123

Appendix C. Demographic Information Form

Görüşme Tarihi: ..... **İletişim Tel: .....**

SOSYODEMOGRAFİK VERİ FORMU

(Ebeneyn ve Ergen)

Bu form, Yakın Doğu Üniversitesi, Sosyal Bilimler Enstitüsü, Klinik Psikoloji Ana Bilim Dalı Yüksek Lisans Programı bitirme tezinde kullanılmak üzere sizler ve çocuğunuz hakkında bilgi edinmek amacıyla hazırlanmış olup gönüllülük esasına dayanarak kullanılmaktadır. Ad, soyad ve numara gibi kimliğinizi tanıtıcı bilgiler vermeden de bu formu doldurabilirsiniz.

Bu bilgiler araştırma dışında hiç bir uygulamada kullanılmayacaktır.

Katılımınız için teşekkürler.

Ebeveyn Görüşme Formu

	ANNE	**BABA**
Adı		
Yaşı		
Uyruk		
Eğitim Durumu		
Medeni Durumu		

Sosyoekonomik durumunuz?

a. Düşük SES
b. Orta SES
c. Üst SES

Yaşadığınız konut durumu:

a. Kiracı
b. Ev Sahibi
c. Diğer .....

Kaç çocuğunuz vardır? .....

Çocuğunuzun;

Yaşı: .....

Cinsiyeti:

a. Kadın
b. Erkek

Kiminle ve nerede yaşıyorsunuz?

a. Çekirdek Aile (Anne, Baba ve çocuklar)
b. Geniş Aile (Anne, Baba ve çocuklarla birlikte diğer akrabalardan bir ya da bir kaçı ile birlikte)
c. Tek ebeveyn olarak: (Anne, Baba boşanmış, Anne vefat etmiş/ Baba vefat etmiş,
d. Diğer (Açıklayınız: .....)

Çocuğunuzun düzenli tedavi almasını gerektiren bir hastalığı var mıdır? ***(Eğer varsa, lütfen belirtiniz.)***

a. Astım
b. Alerji
c. Diyabet
d. Anemi
e. Epilepsi
f. Diğer .....
g. Yok

Hastaneye yatış, cerrahi ya da herhangi bir tıbbi müdahale öyküsü bulunuyor mu?

a. Evet (Belirtiniz .....)
b. Hayır

Herhangi bir ilaç kullanıyor mu?

a. Evet (Belirtiniz .....)
b. Hayır

Ailede sigara, alkol, madde kullanımı/bağımlılık düzeyinde kullanımı olan var mıdır?

a. Evet (Belirtiniz .....)
b. Hayır

Ailede kullanılan maddeyi belirtiniz;

a. Sigara
b. Alkol
c. Sigara ve Alkol
d. Diğer Psikoaktif Maddeler
e. Tümü
f. Hiçbiri

Çocuğunuzun doğum öyküsü;

a. Normal
b. Sezaryan
c. Tüp bebek
d. Evlat Edinilmiş

Çocuğunuzun sınıf tekrarı oldu mu?

a. Evet (Kaçıncı Sınıf Olduğunu Belirtiniz .....) b. Hayır

Okul tarafından uzaklaştırma veya uyarı cezası aldı mı?

a. Evet (Kaç defa belirtiniz .....) b. Hayır

Psikotrop ilaç kullan durumunu belirtiniz;

(Antidepresanlar, Stimulanlar, Duygudurum Düzenleyici, Antipsikotikler, Diğer .....)

a. Var b. Yok

Ailede psikiyatrik öykü geçmişi;

a. Var b. Yok

<u>Ergen İle Görüşme Formu</u>

Okul ders başarı durumunuzun nasıl olduğunu düşünüyorsunuz?

a. Çok kötü
b. Kötü
c. İyi
d. Çok iyi

Anneniz ile ilişkinizi nasıl tanımlarsınız?

a. Çok kötü
b. Kötü
c. İyi
d. Çok iyi

Babanız ile ilişkinizi nasıl tanımlarsınız?

a. Çok kötü
b. Kötü
c. İyi
d. Çok iyi

Arkadaşların arasında sigara, alkol, madde kullanan var mıdır?

a. Evet b. Hayır

Bu maddelerin hangi maddeler olduğunu belirtiniz;

a. Sigara
b. Alkol
c. Sigara ve Alkol
d. Diğer Psikoaktif Maddeler
e. Tümü
f. Hiçbiri

Şu an sizin kullanmakta olduğunuz madde/ler nelerdir?

a. Sigara
b. Alkol
c. Sigara ve Alkol
d. Diğer Psikoaktif Maddeler
e. Tümü
f. Hiçbiri

İlk denemede ne hissetmiştiniz?

a. İyi veya kötü hiç bir şey hissetmedim
b. Hoş bir duygu verdi
c. Tiksindim
d. Diğer (....., ...)

Şimdi kullandığınızda ne hissediyorsunuz?

a. İyi veya kötü hiç bir şey hissetmiyorum
b. Hoş bir duygu veriyor
c. Tiksiniyorum
d. Diğer(.....)

Maddeyi aşağıda belirtilen hangi durumlarda kullanıyorsunuz?

a. Madde olmadan eğlenemediğim için
b. Heyecan verici olduğu için
c. Hoş bir duygu verdiği için
d. Sorunlarımı çözmek / unutmak için
e. Öfkemi başka türlü yenemediğim için
f. Mutsuz, endişeli ya da gergin hissettiğimde yardımcı olduğu için
g. Daha fazla kendime güvenli ya da kendimden emin hissettirdiği için
h. Daha rahat konuşabilmek ya da davranabilmek için
i. İçmiyorsunuz diye diğerleri sizle dalga geçmesin diye
j. Çevrem tarafından dışlanmamak, arkadaşlarıma uyum sağlamak için.
k. Ailemle olan sorunlardan yorulduğum için

Daha önce bırakma girişiminde bulundunuz mu?

a. Evet b. Hayır

Appendix D. Barratt Impulsivity Scale

BIS-11

Açıklamalar: İnsanlar farklı durumlarda gösterdiği düşünce ve davranışları ile birbirlerinden ayrılırlar. Bu test bazı durumlarda nasıl düşündüğünüzü ve davrandığınızı ölçen bir testtir. Lütfen her cümleyi okuyunuz ve bu sayfanın sağındaki, size en uygun daire içine X koyunuz. Cevaplamak için çok zaman ayırmayınız. Hızlı ve dürüstçe cevap veriniz.

	Nadiren/ Hiçbir zaman	**Bazen**	**Sıklıkla**	**Hemen herzaman/ Herzaman**
1. İşlerimi dikkatle planlarım.	_	_	_	_
2. Düşünmeden iş yaparım.	_	_	_	_
3. Hızla karar veririm.	_	_	_	_
4. Hiç bir şeyi dert etmem.	_	_	_	_
5. Dikkat etmem.	_	_	_	_
6. Uçuşan düşüncelerim var.	_	_	_	_
7. Seyahatlerimi çok önceden planlarım.	_	_	_	_
8. Kendimi kontrol edebilirim.	_	_	_	_
9. Kolayca konsantre olurum.	_	_	_	_
10. Düzenli para biriktirim.	_	_	_	_
11. Derslerde veya oyunlarda yerimde duramam.	_	_	_	_
12. Dikkatli düşünen birisiyim.	_	_	_	_
13. İş güvenliğine dikkat ederim.	_	_	_	_
14. Düşünmeden bir şeyler söylerim.	_	_	_	_
15. Karmaşık problemler üzerine düşünmeyi severim.	_	_	_	_
16. Sık sık iş değiştiririm.	_	_	_	_
17. Düşünmeden hareket ederim.	_	_	_	_
18. Zor problemler çözmem gerektiğinde kolayca sıkılırım.	_	_	_	_
19. Aklıma estiği gibi hareket ederim.	_	_	_	_
20. Düşünerek hareket ederim.	_	_	_	_
21. Sıklıkla evimi değiştirim	_	_	_	_
22. Düşünmeden alışveriş yaparım.	_	_	_	_
23. Aynı anda sadece bir tek şey düşünebilirim.	_	_	_	_
24. Hobilerimi değiştiririm.	_	_	_	_
25. Kazandığımdan daha fazla harcarım.	_	_	_	_
26. Düşünürken sıklıkla zihnimde konuyla ilgisiz düşünceler oluşur.	_	_	_	_
27. Şu an ile gelecekten daha fazla ilgilenirim.	_	_	_	_
28. Derslerde veya sinemada rahat oturamam.	_	_	_	_
29. Yap-boz/puzzle çözmeyi severim.	_	_	_	_
30. Geleceğini düşünen birisiyim.	_	_	_	_

Appendix E.

KUZEY KIBRIS TÜRK CUMHURİYETİ
SAĞLIK BAKANLIĞI
YATAKLI TEDAVİ KURUMLARI DAİRESİ

Sayı. YTK.0.00-1/2013-16/1267 Lefkoşa : 08.03.2016

Barış, Ruh ve Sinir Hastalıkları Hastanesi Başhekimliği,
Lefkoşa.

Yakın Doğu Üniversitesi Sosyal Bilimler Enstitüsü Uygulamalı (Klinik) Psikoloji Yüksek Lisans Öğrencisi **İpek Uçkan**'ın, **"Dikkat Eksikliği Hiperaktivite Tanısı Alan Ergenlerde Madde Kullanımında Erken Dönem Nesne İlişkileri ve Dürtü Kontrolünün Yordayıcı Etkisi"** konulu tez çalışmasını, çalışmayı kabul eden gönüllü bireylere uygulaması ve raporlarını yayımlamadan önce Bakanlığımıza sunması uygun görülmüştür.

Bilgilerinize saygılarımla arz ederim.

Dr. Nil Ergün ELEDAĞ
Yataklı Tedavi Kurumları Dairesi
Başhekim

Dağıtım: Sn. İpek Uçkan.

Ek.

Adres: Bedreddin Demirel Caddesi No: 142 Lefkoşa.
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AUTOBIOGRAPHY

İpek Uçkan was born in Kyrenia 1991. She attended to Lapta Primary School and Lapta Secondary School and went to Lapta Yavuzlar High School and graduated.

In 2009, she started Near East University Psychology Department. During these years, she completed her internship at Balıklı Rum Hospital Anatolia Clinical Services in Istanbul. Also, she completed her voluntary internships in Atmosfer Kintergarden in Nicosia and Ateşböceği Kintergarden in Istanbul during her undergraduate education.

In 2014, she started to Near East University Graduate School of Social Sciences Applied (Clinical) Psychology Master Program, made her internship at Barış Mental Health Hospital and she completed her internship successfully.

She attended to several psychology conferences in domestic and foreign countries, educations and seminars. She also attended to many television programs and gave education seminars for families, teachers and adolescents. Nevertheless, she still continues to receive supervision on play therapy and education on psychotherapy as well.

YAKIN DOĞU ÜNİVERSİTESİ FEN VE SOSYAL BİLİMLER BİLİMSEL ARAŞTIRMALAR DEĞERLENDİRME ETİK KURULU (YDÜBADEK)

ARAŞTIRMA PROJESİ DEĞERLENDİRME RAPORU

Toplantı Tarihi : 23.03.2016

Toplantı No : 2016-04

Proje No : 4

Yakın Doğu Üniversitesi Sosyal Bilimler Fakültesi Psikoloji Bölümü öğretim üyelerinden Yrd. Doç. Dr. İrem ERDEM ATAK'ın sorumlu araştırmacısı olduğu, YDU/ 2016-04 proje numaralı ve ***"The Predictive Effect Of Early Object Relation And Impulse Control On Substance Use Among Adolescents Diagnose With Attention Deficit Hyperactivity Disorder"*** başlıklı proje önerisi kurulumuzca değerlendirilmiş olup, etik olarak uyun bulunmuştur.

1- Prof. Dr. Mehmet Çakıcı (BAŞKAN)

2- Prof. Dr. Mahmut Savaş (ÜYE)

3- Doç. Dr. Nesil F. Baytın (ÜYE)

4- Doç. Dr. Direnç Kanol (ÜYE)

5- Yrd. Doç. Özgür Özerdem (ÜYE)

Katılmadı

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