Alpha Psychiatry

ORIGINAL ARTICLE
Alpha Psychiatry 2022;23(1):33-39
DOI: 10.5152/alphapsychiatry.2021.21304

The Effect of Attention Deficit and Hyperactivity Disorder on Treatment Compliance in Individuals Undergoing Probation Addiction Program Treatment

ABSTRACT

Objective: The social and legal problems caused by substance use necessitate compulsory treatment. Individuals with substance use disorder who also have attention deficit and hyperactivity disorder (ADHD) are more frequently prone to crime and more severe substance use. The aim of this study was to investigate the effect of ADHD on the treatment compliance.

Methods: One hundred one patients who applied to the Probation Erenköy Mental Health and Neurological Diseases Training and Research Hospital, and who were determined to participate in the probation addiction program (PAP), were included. The participants were evaluated with a sociodemographic form, the Addiction Profile Index (API), The Stages of Change Readiness and Treatment Eagerness Scale (SOCRATES), the Wender Utah Rating Scale, and the Adult Attention Deficit Hyperactivity Disorder Self-Report Scale (ASRS), before commencing the PAP. The diagnosis of ADHD was confirmed by interview. After the PAP was completed, participants were re-evaluated

Results: It was determined that 67.3% of the participants had ADHD and 41.2% of the patients with ADHD were noncompliant in completing the program. There was no statistically significant relationship between ADHD and treatment compliance. The SOCRATES total values at the beginning of treatment were significantly higher in patients with ADHD. The API total scores were significantly higher in the ADHD group before and after the program. Severe craving and severity of addiction were important factors that increased treatment noncompliance.

Conclusion: ADHD is higher in the probation population and the severity of addiction is also higher, both before and after the program. Treatment motivation in patients with ADHD decreases toward the end of the program.

Keywords: Attention deficit disorder with hyperactivity, substance-related disorders, motivation, addiction

Introduction

Substance use disorder is conceptualized as the result of behavioral, cognitive, and physiological symptoms that indicate that the person will continue to compulsively use one or more substances, regardless of potential substance use problems.[1] It is evaluated as both a cause and a consequence of various social problems that have psychological, sociological, and economic aspects and can disrupt the functioning of institutional arrangements.[2]

Social and legal problems accompanying individual substance use problems have raised the issue of the need for treatment and the need for legal action. Due to this situation, the probation measure, in which legal, social, and medical processes go hand in hand with the aim of integrating people with substance use disorder into society, has also begun to be implemented in our country.[3]

Burcu Yüce Akalın[1]
Rabia Bilici[2]

[1]*Department of Psychiatry, Gaziosmanpaşa Training and Research Hospital, İstanbul, Turkey*
[2]*Department of Psychiatry, University of Health Sciences Erenköy Mental Health and Neurological Diseases Training and Research Hospital, İstanbul, Turkey*

Corresponding author:
Burcu Yüce Akalın ✉ drburcuyuce@gmail.com

Received: April 5, 2021
Accepted: August 10, 2021

Cite this article as: Yüce Akalın B, Bilici R. The effect of attention deficit and hyperactivity disorder on treatment compliance in individuals undergoing probation addiction program treatment. *Alpha Psychiatry.* 2022;23(1):33-39.

Attention-deficit/hyperactivity disorder (ADHD) is a chronic neurodevelopmental disorder that impairs personal, academic, family, and social functioning. It is manifested by the persistence of attention deficit and/or hyperactivity/impulsivity patterns beyond developmental norms.[4] The condition can present in early childhood and leads to functional impairments in more than one domain. Moreover, it is one of the most common neuropsychiatric disorders in childhood.[5] Although there is no definitive consensus on the prevalence of ADHD, meta-regression analyses estimate it to be between 3.4% and 5% in adults.[6]

As ADHD begins in childhood, persists at high rates in adulthood, causes functional impairment in multiple domains, and is an important risk factor for other psychiatric diagnoses, it is increasingly important to identify this disorder in adulthood.[7] According to the results of studies on ADHD in adulthood, the most common disorders associated with ADHD in adulthood are mood disorders, anxiety disorders, and alcohol and substance use disorders.[8] When ADHD and alcohol/substance use disorders co-occur, there is greater substance use along with social and psychiatric impairment.[9] The tendency of such individuals to behave inattentively, impulsively, and aggressively has been found to increase the likelihood of crime and accidents, thus increasing the punishment for these individuals.[10] Considering all this information, it seems important to determine ADHD in individuals whose hospital applications are made in the context of probation. The aim of our study is to determine the relationship between treatment compliance and ADHD in individuals with substance abuse who should be treated at Probation Addiction Program (PAP). In addition, we aim to determine the relationship between ADHD diagnosis and addiction severity and treatment motivation.

This study included patients who were admitted to a PAP and followed up in accordance with the notice of Ministry of Health at Erenköy Mental Health and Neurological Diseases Training and Research Hospital between May and July 2019.

Methods

Our study included 101 individuals who were not in an episode of psychotic disorder or mania, were informed about the research, agreed to participate, and were designated by the appropriate relevant clinician to participate in the PAP.

Before participants began the PAP, they were assessed with the sociodemographic data sheet, the Addiction Profile Index (API), The Stages of Change Readiness and Treatment Eagerness Scale (SOCRATES), the Wender Utah Rating Scale, and the Adult Attention Deficit Hyperactivity Disorder Self-Report Scale (ASRS); the diagnosis of ADHD was confirmed by a clinical interview. After the PAP was completed, participants were reassessed with API and SOCRATES.

MAIN POINTS

- *ADHD is a disease closely related to substance use disorder.*
- *ADHD affects treatment motivation, addiction severity and compliance with the treatment program.*
- *It would be beneficial to support the relationship between ADHD and probation treatment with further studies, since it can affect the treatment process and it has been detected at a high rate in this group.*

Participants were grouped as compliant or noncompliant based on the reports they received as a result of the PAP.

The procedure for the PAP is as follows: After the assigned person has registered at the addiction treatment facility, the initial interview takes place, with a psychiatric evaluation of the patient and treatment planning. As a result of the clinical examination and evaluation, the patient who proves positive or negative in 3 tests is considered to be in early complete remission. If a positive result is found on at least 1 of the clinical examinations or laboratory tests, a decision will be made to enroll him or her in the 6-session addiction program. The person who is a regular participant in the program and has a negative result in the last 3 sample tests is classified as compliant in the clinical examinations, while the person who violates the rules during the treatment process and continues to use the substance is classified as noncompliant with the treatment program.

Individuals were informed in detail about the study and signed consents were then obtained from all participants. Ethics committee approval was received for this study from the Erenköy Mental Health and Neurological Diseases Training and Research Hospital (Approval Date: April 8, 2019; Approval Number: 23).

Data Collection Tools

The sociodemographic data sheet: It is a form consisting of 36 questions, prepared for this study.

Adult Attention Deficit Hyperactivity Disorder Self-Report Scale (ASRS): It is a 5-point Likert-type self-report scale consisting of 2 subscales, 9 "attention deficit" questions, and 9 "hyperactivity/impulsivity" questions. The validity and reliability study of the Turkish form of the ASRS was conducted by Doğan et al.[11] Cronbach's alpha value for the scale is 0.82.[11]

The Wender Utah Rating Scale: It was developed to retrospectively examine ADHD symptoms in childhood and to aid in the diagnosis of ADHD in adults. It is a self-report scale in which 25 items are evaluated. Cronbach's alpha value for the scale is 0.93. The validity and reliability study was conducted by Öncü et al.[12]

The Stages of Change Readiness and Treatment Eagerness Scale (SOCRATES): It is a self-report questionnaire with 20 items. It is a 5-point Likert-type scale. Its subscales are "Recognition", "Ambivalence" and "Taking Steps." Its validity and reliability were established by Evren et al.[13] Cronbach's Alpha value for the scale is 0.84.[13]

The Addiction Profile Index (API): It is a self-report scale consisting of 37 questions and 5 subscales. The subscales measure substance use characteristics, addiction diagnostic criteria, impact of substance use on the person's life, craving, and motivation to stop substance use. Cronbach's alpha value is 0.89. Its validity and reliability have been established by Ögel et al.[14]

Statistical Analysis

Data were analyzed with SPSS version 23.0 (IBM Corp., Armonk, NY, USA). The independent samples *t*-test and the dependent samples *t*-test were used to examine normally distributed data. Conformity to normal distribution examined by the Shapiro–Wilk test. The Mann–Whitney *U*-test and the Wilcoxon test were used to compare

data that were not normally distributed. All categorical data were analyzed using the chi-square test, Fisher's exact test, and Freeman–Halton test. Normally distributed quantitative data were presented as mean standard deviation, and non-normally distributed data were presented as median (min-max). Categorical data were expressed as percentages. The statistical significance level was taken as $P < .05$.

Results

Ninety-nine percent of the participants in the study were male and the mean age was 30.9 (SD = 7.6) years; 32.70% of the participants had a high school diploma and 15% had a university degree; 14.90% of them are not employed. The mean age at the onset of substance use was 21 (SD = 5.5) years. The additional delinquency rate was 22%. Twenty-four percent of our participants declared that they used mainly cannabis and 74% declared that they did not use the substance.

At baseline, 73.30% of the compatible group reported no substance use. It was found that 63.6% of the compatible group had no craving for the substance. The sociodemographic characteristics of the treatment groups are shown in Table 1.

As a result of the clinical interviews, it was found that 67.30% of the participants had ADHD, and 58.8% of the participants with ADHD and 78.80% of the participants without ADHD were compliant. When comparing in terms of compliance with treatment and presence of ADHD, no difference was found between the groups ($P = .079$) (Table 2).

There was no significant difference between the SOCRATES and API total scores and subscales before and after the program for all participants ($P = .102$ and $P = .947$) (Table 3).

An evaluation for the presence of ADHD in all participants showed that pre-treatment API scores were high in the ADHD group. Among the subscales, substance use characteristics, diagnosis, impact on life, and craving were significantly higher in the ADHD group ($P < .001$). After treatment, the API scores and the same subscale scores were higher in the ADHD group (Table 4).

The SOCRATES scores differed between participants with ADHD before and after treatment ($P = .023$), but no significant difference was found between API total scores ($P = .324$) (Table 5).

Before treatment, the SOCRATES scores of participants with ADHD in the noncompliant group were 58.5 and were higher than those in the compliant group ($P = .029$). The overall API mean scores were 13.9 in the noncompliant group and were higher than in the compliant group ($P = .015$). For the subscales, substance use characteristics and craving mean scores were higher in the noncompliant group ($P = .017$ and $P = .002$). There was no difference in the SOCRATES scores of participants with ADHD after treatment. However, there was a difference in terms of the API. The total score in the noncompliant group was 13.5, higher than in the compliant group ($P = .030$). Of the subscales, substance use characteristics, craving, and diagnosis were higher in the noncompliant group (Table 6).

Discussion

Our study examined the impact of ADHD on treatment compliance among individuals who applied under probation and were to be admitted to the PAP. Considering our sociodemographic data, the average age at onset of substance use was 21 years, which is consistent with the literature, and cannabis was identified as the most commonly used substance, also in line with the literature.[15,16] Another study conducted in Turkey in 2020 determined the most frequently used substance as amphetamine/methamphetamine. New studies will be useful in supporting this finding.[17]

The prevalence of ADHD in adults is thought to be between 3.40% and 5.60%. The results of a meta-regression analysis of 3 studies reveal the association between ADHD and substance use disorders, and the prevalence of ADHD in substance use disorders was reported to be 23.10%.[18] With regard to the population applying for probation, a study using self-report scales based on DSM-IV diagnostic criteria in England estimated the prevalence rate of ADHD to be 45% in children and 20% in adults.[19] In our study, 67.30% of participants were diagnosed with ADHD. We think that this high rate may be due to the fact that our sample is a population with high drug use and additional delinquency rates. Previous studies have found that the prevalence of ADHD was higher in studies conducted in populations with high rates of delinquency than in the general population.[20] In addition, we believe that the DSM-5 diagnostic criteria in our study should be based on the difference between the 2 studies.

In our study, 67% of all participants were able to complete treatment compliantly. On the other hand, only 58.80% of participants with ADHD completed treatment compliantly. In general, PAP seems to have a positive effect on compliance with treatment. However, a review of the literature on this topic revealed that the studies conducted were limited and presented different results. For example, some studies found that the risk of noncompliance with treatment was high among those who were unable to complete the program, and that the program had a positive effect on compliance with treatment.[21] Another study found that motivation did not change at the end of the program. While participants were more willing to stop substance use, the importance attached to quitting and the severity of craving did not change.[22]

Considering treatment compliance in relation to ADHD, no statistical significance was found between ADHD and treatment compliance. With this in mind, we believe it is important to consider treatment motivation and severity of addiction in individuals when examining treatment compliance.

When we examined treatment motivation, we found that there was no change in treatment motivation among our participants at the end of PAP. Our findings are at odds with the results of a study that examined the effectiveness of using SAMBA (tobacco, alcohol, and drug dependence treatment program) in the context of PAP by Ögel et al.[14] In that study, it was shown that the severity of addiction and craving for the substance decreased, and motivation to quit substance use increased in those who completed the program.[23] We think that this is related to the motivational enhancement sessions in the content of the program. In our study, there were no motivation-enhancing sessions within the PAP sessions.

When the motivation scores of our participants with ADHD were evaluated before the program, independent of treatment compliance, they were found to be significantly higher before the program. This fact suggests to us that people with ADHD may not maintain their motivation until the end of the program. In reviewing the

Table 1. Examination of Sociodemographic and Clinical Data of Study Participants

	Compliant, n = 66 (%)	Noncompliant, n = 35 (%)	Total, n = 101 (%)	*P*
Gender				
Female	2 (3)	0 (0)	2 (2)	.298
Male	64 (97)	35 (100)	99 (98)	
Age, mean (SD)	31.02 (7.4)	30.69 (8.040)	30.90 (7.6)	.838
Marital Status				
Married	24 (36.4)	10 (29.4)	34 (33.7)	.597
Single	39 (59.1)	21 (61.8)	60 (59.4)	
Divorced	3 (4.5)	3 (8.8)	6 (5.9)	
Educational level				
Literate	2 (3)	0 (0)	2 (2)	.128
Primary school	10 (15.2)	10 (28.6)	20 (19.8)	
Middle school	18 (27.3)	13 (37.1)	31 (30.7)	
High school	23 (34.8)	10 (28.6)	33 (32.7)	
University	13 (19.7)	2 (5.7)	15 (14.9)	
Working status				
Not working	10 (15.2)	5 (14.3)	15 (14.9)	.969
Self-employed	27 (40.9)	14 (40)	41(40.6)	
Worker	26 (39.4)	15 (42.9)	41 (40.6)	
Civil servant	3 (4.5)	1 (2.9)	4 (4.0)	
Military service status				
Completed smoothly	43 (66.2)	22 (62.9)	65 (65)	.921
Did not complete	17 (26.2)	9 (25.7)	26 (26)	
Completed without compliance	3 (4.6)	2 (5.7)	5 (5.0)	
Could not complete	2 (3.1)	2 (5.7)	4 (4.0)	
Probation history in the past				
No	47 (71.2)	17 (48.6)	64 (63.4)	.025
Yes	19 (28.8)	18 (51.4)	37 (36.6)	
Additional delinquency history				
No	47 (71.2)	17 (48.6)	78 (78)	.244
Yes	19 (28.8)	18 (51.4)	37 (36.6)	
Age at onset of substance use, mean (SD)	22.06 (5.9)	19.43 (4.1)	21 (5.5)	.022
Time since last substance use (days), mean (SD)	102.70 (87.8)	43 (49.9)	82 (81.6)	.001
Substance currently used				
None	56 (84.8)	18 (52.9)	74 (73.3)	.001
Marijuana	10 (15.2)	16 (47.1)	26 (25.7)	
Frequency of substance use				
Once a week	23 (34.8)	11 (31.4)	34 (33.7)	.012
2-4 times a week	10 (15.2)	7 (20)	17 (16.8)	
5-6 times a week	6 (9.1)	0 (0)	6 (5.9)	
Daily	2 (3)	8 (22.9)	10 (9.9)	
Other	3 (4.5)	0 (0)	3 (3.0)	
Alcohol use				
None	12 (18.2)	9 (25.7)	21 (20.8)	.576
Once in 2-3 weeks	7 (10.6)	6 (17.1)	13 (12.9)	
1-2 times a month	27 (40.9)	9 (25.7)	36 (35.6)	
1-2 times a week	15 (22.7)	8 (22.9)	23 (22.8)	
4 or more times a week	5 (7.6)	3 (8.6)	8 (7.9)	
Frequency of craving for the most frequently used substance				
None	42 (63.6)	10 (29.4)	52 (51.5)	.002
Hardly ever	13 (19.7)	7 (20.6)	20 (19.8)	
Sometimes	10 (15.2)	14 (41.2)	24 (23.8)	
Often	1 (1.5)	3 (8.8)	4 (4.0)	

Table 2. Relationship Between ADHD and Program Completion Outcome

	Program outcome		
ADHD	Compliant	Noncompliant	*P*
Yes (68)	40 (58.8)	28 (41.2)	.079
No (33)	26 (78.8)	7 (21.2)	

ADHD, attention deficit and hyperactivity disorder.

Table 3. Evaluation of All Participants Before and After PAP

	Before PAP	After PAP	*P*
SOCRATES, mean (SD)	50.9 (13.7)	48.6 (14.3)	.102
Taking steps	19.2 (4.9)	17.7 (5.3)	.001
Ambivalence	18.9 (5.8)	18.2 (6.2)	.309
Recognition	12.9 (5.8)	12.8 (5.1)	.853
API, mean (SD)	11.7 (3.4)	11.7 (3.5)	.947
Substance use characteristics	3.1 (1.1)	3.1 (1.6)	.726
Diagnosis	11.9 (5.2)	12.4 (5.4)	.407
Impact on life	23.9 (10.4)	23.9 (10.0)	.991
Craving	7.3 (3.4)	7.0 (3.2)	.427
Motivation	11.9 (3.2)	11.7 (3.4)	.709

API, Addiction Profile Index; PAP, probation addiction program; SOCRATES, The Stages of Change Readiness and Treatment Eagerness Scale.

Table 4. Assessment of Participants in Terms of Motivation and Addiction Profile Before and After PAP According to the Presence of ADHD

	Has ADHD	Does not have ADHD	*P*
Before PAP, mean (SD)			
SOCRATES	54.1 (13.9)	44.5 (10.9)	<.001
Taking steps	19.8 (4.5)	18.2 (5.4)	.117
Ambivalence	20 (6)	16.6 (4.8)	.006
Recognition	14.4 (5.9)	9.7 (4)	<.001
API	12.6 (3.4)	9.7 (2.6)	<.001
Substance use characteristics	3.3 (1.2)	2.5 (0.5)	<.001
Diagnosis	13.2 (5.3)	9.1 (3.9)	<0.001
Impact on life	26.9 (10.4)	18 (7.6)	<.001
Craving	8 (3.6)	5.4 (2.5)	<.001
Motivation	12.2 (2.9)	11.3 (3.6)	.182
After PAP, mean (SD)			
SOCRATES	49.8 (15.4)	46.2 (11.6)	.201
Taking steps	17.5 (5.5)	17.9 (5)	.728
Ambivalence	18.7 (6.9)	17 (4.7)	.140
Recognition	13.5 (5.1)	11.3 (4.9)	.042
API	12.4 (3.5)	10.1 (3.2)	.002
Substance use characteristics	3.3 (1.2)	2.6 (0.8)	.003
Diagnosis	13.2 (5.4)	10.2 (4.7)	.008
Impact on life	26.2 (9.9)	19.4 (8.7)	.001
Craving	7.6 (3.3)	5.9 (2.8)	.013
Motivation	12.1 (2.9)	11.2 (4.1)	.205

ADHD, attention deficit and hyperactivity disorder; API, Addiction Profile Index; PAP, probation addiction program; SOCRATES, The Stages of Change Readiness and Treatment Eagerness Scale.

Table 5. Evaluation of All Participants with ADHD Before and After Treatment

	Before treatment	After treatment	*P*
SOCRATES	56.5 (16-80)	52 (16-4)	0.023
Taking steps	20 (5-25)	18 (5-25)	.001
Ambivalence	21 (6-30)	21 (6-30)	.173
Recognition	14 (5-25)	13 (5-25)	.326
API	12.2 (6-19)	11.89 (6-20)	.324
Substance use characteristics	2.6 (2.1-6.7)	2.7 (2.1-6.8)	.816
Diagnosis	13.3 (6-24.5)	12.3 (6-26)	.824
Impact on life	27 (11- 48)	26.5 (12-48)	.238
Craving	7 (4-16)	6.5 (4-16)	.524
Motivation	13 (3-15)	13 (3-15)	.749

ADHD, attention deficit and hyperactivity disorder; API, Addiction Profile Index; SOCRATES, The Stages of Change Readiness and Treatment Eagerness Scale.

literature, it was reported that people with comorbid psychiatric disorders and diagnosed substance use disorder have high motivation at the beginning of treatment and stay in treatment longer depending on their level of readiness to change.[24] Moreover, recognition and ambivalence scores were high in the group with ADHD before the program, even in the noncompliant group. Recognition reflects the person's level of perception of their substance use problem and the harm they may suffer if they do not change. The ambivalence

Table 6. Evaluation of ADHD Patients in Terms of PAP Completion Rate Before and After Treatment

	Compliant (n = 66)	Noncompliant (n = 35)	*P*
Before PAP, mean (SD)			
SOCRATES	51.1 (13)	58.5 (14.2)	.029
Taking steps	19.7 (4.6)	20 (4.4)	.756
Ambivalence	18.6 (5.6)	21.9 (6.3)	.029
Recognition	12.8 (5.4)	16.6 (5.9)	.007
API	11.8 (2.9)	13.9 (3.7)	.015
Substance use characteristics	3 (1)	3.8 (1.4)	.017
Diagnosis	12.1 (4.4)	14.8 (6.1)	.052
Impact on life	25.3 (10)	29.1 (10.7)	.131
Craving	6.7 (2.6)	9.7 (4.2)	.002
Motivation	12.1 (3.4)	12.5 (2.1)	.539
After PAP, mean (SD)			
SOCRATES	48.2 (16)	52 (14.3)	.316
Taking steps	17.2 (5.8)	18 (5.1)	.570
Ambivalence	18.1 (7.1)	19.6 (6.5)	.385
Recognition	12.8 (5.1)	14.4 (4.9)	.211
API	11.6 (3.4)	13.5 (3.4)	.030
Substance use characteristics	3.1 (1)	3.7 (1.4)	.046
Diagnosis	11.8 (5.3)	15.2 (4.9)	.011
Impact on life	25.1 (9.9)	27.8 (9.9)	.280
Craving	6.9 (3.1)	8.5 (3.4)	.046
Motivation	11.7 (3.5)	12.6 (1.9)	.153

ADHD, attention deficit and hyperactivity disorder; API, Addiction Profile Index; PAP, probation addiction program; SOCRATES, The Stages of Change Readiness and Treatment Eagerness Scale.

subscale reflects a person's level of conflict about the benefits and harms of substance use.[13] Given these results, it appears that the individuals in the ADHD group are motivated to seek treatment even if they are unable to complete the program compliantly at baseline, because their ambivalence and recognition scores are high. In other words, they have an awareness of the harmful effects of the substance and experience conflict regarding quitting the substance.

With regard to treatment motivation, the effects of legal compulsory treatment should not be ignored. In a study conducted on this topic, voluntary treatment adherence was found to be an indicator of motivation. The study on encouraging voluntary use rather than mandatory use is suggested as a method to increase motivation.[25]

In terms of the severity of addiction, we found no difference when we compared all of our participants and those diagnosed with ADHD at the end of the program. In general, our results suggest that PAP has no significant effect on the severity of addiction. Studies have shown that the presence of ADHD leads to more severe addiction development in substance use disorders.[9] In the group with ADHD, the craving scores were significantly higher before and after the program. Studies have shown that craving negatively impacts the ability to complete treatment. According to the International Consensus Statement on the Diagnosis and Treatment of Substance Use Disorder in People with ADHD, published in 2018, treatment for substance use disorder should be started as early as possible, with treatment for ADHD or another comorbidity when these 2 conditions are comorbid. It is recommended that psychotherapy and pharmacological treatment be combined in content, and that stimulants should be used as needed under close supervision. In our study, we think that the fact that the severity of addiction did not change might be related to the fact that the subjects had an ADHD diagnosis but did not receive adequate treatment.

According to the results of our study, 67.3% of the participants were diagnosed with ADHD. Although no statistically significant relationship was found between ADHD diagnosis and treatment compliance, it was found that about half of the group with ADHD were not compliant in completing their treatment. Therefore, it seems important to question ADHD in individuals whose applications were made in the context of probation. We believe that providing the necessary treatment to question additional psychiatric conditions, particularly ADHD, will increase treatment compliance and contribute to the decrease in the rate of additional delinquency. Another study that examined the relationship between ADHD and parole highlighted the importance of screening and diagnosing ADHD in applicants in this context.[19] In addition, we think updating program content to include individuals with ADHD and adding sessions on motivation will also contribute to compliance.

Thus; ADHD was found at a higher rate in the probation group compared to the normal population. There was no significant difference between the presence of ADHD and treatment compliance in those who applied for probation. Although no significant difference was found between ADHD and treatment compliance, we think that it would be beneficial to support this issue with further studies, since it can affect the treatment process and it has been detected at a high rate in this group.

The limitations of our study are the relatively limited sample size, the collection of substance abuse information verbally, the scales based on self-reported data, and the inability to conduct family interviews.

Ethics Committee Approval: *Ethics committee approval was received for this study from the Erenköy Mental Health and Neurological Diseases Training and Research Hospital (Approval Date: April 8, 2019; Approval Number: 23).*

Informed Consent: *Informed consent was obtained from the individuals who participated in this study.*

Peer Review: *Externally peer-reviewed.*

Author Contributions: *Concept - B.Y.A., R.B.; Design - B.Y.A., R.B.; Supervision - B.Y.A., R.B.; Materials - B.Y.A., R.B.; Data Collection and/or Processing - B.Y.A., R.B.; Analysis and/or Interpretation - B.Y.A., R.B.; Literature Review - B.Y.A., R.B.; Writing - B.Y.A., R.B.; Critical Review - B.Y.A., R.B.*

Conflict of Interest: *The authors have no conflict of interest to declare.*

Financial Disclosure: *The authors declared that this study has received no financial support.*

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