

ORIGINAL RESEARCH

Medicine Science 2018;7(4):754-8

Evaluation of probation implementations of drug users in Adiyaman university training and research hospital: A one-year retrospective study**Mehmet Hamdi Orum¹, Mahmut Zabit Kara², Oguzhan Bekir Egilmez¹, Murat Eren Ozen³, Aysun Kalenderoglu¹**¹ Adiyaman University, Faculty of Medicine, Department of Psychiatry, Adiyaman, Turkey² Adiyaman University Training and Research Hospital, Child and Adolescent Psychiatry, Adiyaman, Turkey³ Private Adana Hospital, Psychiatry, Adana, Turkey

Received 12 February 2018; Accepted 10 April 2018

Available online 22.07.2018 with doi: 10.5455/medscience.2018.07.8846

Copyright © 2018 by authors and Medicine Science Publishing Inc.

Abstract

Increasing the use of drugs all over the world and our country has become a very important social problem, making legal obligations necessary. Probation Implementation (PI) refers to the correction of the conduct of criminals causing criminal acts, the prevention of repeat offenses, the follow-up of prisoners, the rehabilitation of substance abusers, the elimination of the harm suffered by the victims, and the protection of the society in this way. In this study, it was aimed to investigate the substance use characteristics of people who applied to our hospital within the scope of PI law. 313 cases, applying to Adiyaman University, Training and Research Hospital, all of whom were decided to have PI on 01.01.2017-31.12.2017 were included in the study. PI was carried out by having psychiatric interview and evaluating psychoactive substance in urine in three-time and six-time programs. It was determined that totally 313 cases applied as required by PI during the study. These cases consist of people, 298 of whom were male and 15 of whom were female. Mean age was determined as 26.2±6.8 (15-55). It was also observed that 251 cases (80.2%) completed three-times program and 62 (19.8%) cases completed six-times program. According to the number of programs, there was no significant difference in terms of gender distribution and ethyl glucuronide positivity in two groups ($p>0.05$). PI, which is a fairly new practice in Turkey, has an important place in the care of substance users. In terms of gender distribution, results were consistent with studies in the literature. Alcohol comorbidities in PI-applied individuals are noteworthy.

Keywords: Addiction, illicit drug detection, probation, retrospective study, substance use**Introduction**

Addiction is considered as both a cause and a consequence of different social problems that regulate social life through psychological, sociological and economic dimensions and threaten the functioning of almost all norms and institutional regulations [1]. Substance dependence is no longer explained as a form of behavior that is caused by individual behaviors alone or guided by the social circle, but rather in relation to many dynamics, such as the personal characteristics, the characteristics of the living zone, the social structure, its structural exclusion, and the dynamics of othering. Drug use and dependence has become one of the most important global problems faced by all societies, regardless of race, ethnicity, socio-economic situation, with the rapid development of technology and communication and the growth of the drug market [2,3].

The drugs may be illegal substances not prescribed with herbs such as heroin, cannabis, cocaine, etc., but may also be prescribed drugs, such as benzodiazepines, amphetamines, sedative hypnotic drugs and synthetic drugs, as it is in many countries of the world,

it is stated in our country that cannabis is the most common use among the narcotics. In addition to the use of cannabis in drug users, the use of substances such as cigarettes, alcohol, morphine, heroin and synthetic drugs such as bonsai and ecstasy are also common. The use of new types of synthetic drugs such as bonsai, ecstasy, amphetamine and methamphetamine is becoming increasingly widespread in developing countries like our country [4-6].

In countries where the use of illegal substances is widespread, both the individual and the social problems of substance addicts have become increasingly necessary to take legal measures. The Probation Implementation (PI), which was initiated as an important step in the criminal concept and security measures in our country, came into force with the publication of Official Gazette dated July 20, 2005 and numbered 25881. It has been explained how to implement the treatment of those who are drug addicts given the PI decision on the grounds of the crime of “buying, accepting or possessing drugs and stimulants for use” written in article 191 of Turkish Penal Code No. 5237 (TPC). Again, according to Article 109 of the Code of Criminal Procedure No. 5271, it is explained how to implement the treatment of those who are addicted to drugs from judicial decision to be taken under judicial control. According to the DS application, if the accused and the prisoners apply to the branch directorate or office within the determined time, they are required to write the referral letter to the health

*Corresponding Author: Mehmet Hamdi Orum, Adiyaman University, Faculty of Medicine, Department of Psychiatry, Adiyaman, Turkey
E-mail: mhorum@hotmail.com

institution determined by the Ministry of Health and apply to this institution within five working days. As a result of the analysis and examination made by the health institution, a follow-up program about the non-dependents is prepared and the accused or convict is notified. An example of the program is also sent to the branch office. Those who are found to be addicted as a result of the analysis and examination are referred by the health care institution to the substance abuse treatment center and this is reported to the branch directorate. The accused or convict applies to the substance abuse treatment center within three days. The branch office keeps track of whether the suspect or the custodian applies for the substance dependency referred to the treatment center [7,8].

PI refers to “a community-based practice provided by all kinds of services, programs and resources that are necessary for the integration of the suspect, the defendant or the judiciary into the society in line with the audit and inspection plan in the conditions and time specified in the court”. In other words, the PI is the prevention of repeat offenses, the follow-up of the prisoners released from the prison, the rehabilitation of drug addicts, the elimination of the damage suffered by the victims, and the protection of the society in this way [9]. The total number of files created for PI between January 1, 2017 and December 31, 2017 is 5,583,948 (Adult: 5,439,503, Child: 144,445), according to the website of the General Directorate of Prisons and Detention Houses - Probation Branch Office. These files belong to 4,185,750 people. 641.235 (Adult: 602.224, Child: 39.011) of all the files were evaluated under the scope of “Treatment and Probation (TPC 191)” [10].

Despite the fact that PI has been made in our country which is more than 10 years old, literature information is limited in this respect. With the number of people and files being known, it is not enough to study the substance use characteristics of these people. The aim of this study is to examine the data such as age and gender, the number of programs participated, the completion of the probation and the positive substances in the toxicological analyses of the persons who came to Adiyaman University Training and Research Hospital Psychiatry Department by taking decision of PI. According to these results, it is planned to obtain data about the prevalence of drug use in Adiyaman, to determine requirements and to carry out further researches.

Material and Methods

Study Design and Participants

The sample consists of individuals who are admitted to the PI Unit of Adiyaman University Training and Research Hospital within five days from the date of dispatch and PI decision was made between 1 January 2017-31 December 2017. Between the dates mentioned, it was seen that 330 cases were recorded due to PI. 12 persons were excluded from the study because the audit decision was terminated by the court during the audit process. 5 people were referred to the nearest Alcohol and Substance Abuse Treatment Centre (ASATC) because of their incompatibility with the result of a 6-session PI process (toxicological analysis, positivity in one or more of the last 3 sessions). These people have not been included in the study. Only 313 cases were awarded to the study in 2017, in which PI decision was made, and 3 or 6 sessions were successfully completed in the same year.

People who come to the psychiatry outpatient clinic with a PI decision give urine samples for urine analysis three times for two weeks. The test result is “positive” when substance is detected, “negative” when not. If the three tests are negative, follow-up is done by the probation officer. If at least one of the three urine tests performed for two weeks is found to be positive, the individual is considered to continue to use the substance and the individual is admitted to the six-time PI drug addiction training program by the psychiatrist. In the meantime, it is reported that if the substance is found negative in the urine of the individual, the follow-up should be continued by the Directorate of Probation and Help Centre Branch (DPHCB). However, if the individual is not compliant with the six-time training schedule, the urine has a positive drug substance, a deprivation table or a suicide risk has been found, the DPHCB is informed to provide the closest ASATC. This practice is routinely performed in the psychiatric outpatient clinic. No additional work has been done. This data has been studied retrospectively. Individuals who are referred to as judicial cases in the Directorate of Probation of Adiyaman are assessed psychiatrically and the substance dependency is assessed according to the Diagnostic and Statistical Manual of Mental Disorders, 5th Edition (DSM-5) [11] and the information form is filled. Afterwards, samples of urine are taken from the individuals and the drugs are analysed manually with the “instant-view multi-drug of abuse urine test kit” in the biochemistry laboratory. In our laboratory, the analysis of intoxicated drugs and stimulants such as amphetamine, barbiturate, benzodiazepine, cocaine, phencyclidine, methamphetamine, morphine, tetrahydrocannabinol and tricyclic antidepressants is done by immune chromatographic methods.

In these analysis findings, the minimum limit for urine; it was accepted as 500 ng/mL for “Methamphetamine” (MAMP), 50 ng/mL for cannabis agent Tetrahydrocannabinol (THC), 200 ng/mL for “Benzodiazepines” (BZD), 200 ng/mL for “Barbiturates” (BAR), 300 ng/mL for “Methadone” (EDDP), 1000 ng/mL for “Amphetamine” (AMPH), 25 ng/mL for “Phencyclidine” (PCP), 300 ng/mL for “Morphine” (OPIAT), 500 ng/mL for “Ecstasy” (MDMA), 10 ng/mL for “Acetylmorphine” (6AM), 20 ng/mL for “Bonsai” (K2-1), 10 ng/mL for “Bonsai” (K2-2), 5 ng/mL for “Buprenorphine” (BUP), 1000 ng/mL for “Ethyl Glucuronide” (EtG), and 300 ng/mL for “Cocaine” (COC). Local ethics committee approval was obtained (Adiyaman University ethics committee protocol number 2018/2-7).

Statistical Analysis

Windows SPSS 22.0 program (Statistical Package for the Social Sciences Inc.) was used for statistical analysis. Independent t test was used to assess the mean differences between the two groups. Pearson correlation test was used to evaluate the relationship between the scales. Descriptive statistics and continuous variables were expressed as mean±standard deviation, while categorical variables were given as frequency and percentage. Statistical significance level was accepted as $p < 0.05$ for all values.

Results

313 possible drug users were taken to work. 298 males (95.2%) and 15 females (4.8%) were included in the study and the mean age was 26.3 ± 6.8 (15-55) for male, 26.0 ± 8.1 for female, and 26.2 ± 6.8 for total. According to sex, the average age was similar. The distributions of males and females were similar compared to

those under 25 years and above 25 years (≤ 25 male: 159 (53.4%); >25 male: 139 (46.6%); ≤ 25 female: 8 (53.3%); >25 female: 7 (46.7%)). Some of the individuals completed three-time program and some completed six-time program. According to the number of programs, there was no significant difference in gender distribution in both groups ($p=0.519$). 133 (79.6%) of the participants under the age of 25 completed three-time program. 118 (80.8%) of the participants over the age of 25 completed three-time program. There was no difference in distribution of age groups ($p=0.794$). During the first session of three-time program, 50 out of 251 respondents were positive for EtG. 11 out of 251 respondents were positive for EtG in second session and no positive result in

third session of three-time program. Including first and sessions of three-time program, EtG positivity was similar in terms of sex (For first session, $p=0.674$; for second session, $p=0.428$). Including first and second sessions of three-time program, EtG positivity was similar in terms of age group (For first session, $p=0.873$; for second session, $p=0.609$). In the three-time program, the number of EtG-positive patients was 60 (23.9%) and 13 (21%) for six-time program in any session. There was no significant difference between them ($p=0.624$). In those who complete the six-time program, substances that are positive according to the sessions are shown in table 1.

Table 1. Positive Substances-Drugs According to the Sessions of Six-Time Program

	1st Session	2nd Session	3rd Session	4th Session	5th Session	6th Session	7th Session	8th Session	9th Session
None	16 (25.8%)	39 (62.9%)	48 (77.4%)	49 (79%)	45 (72.6%)	48 (77.4%)	54 (87.1%)	57 (91.9%)	61 (98.4%)
MAMP	0 (0%)	0 (0%)	1 (1.6%)	0 (0%)	2 (3.2%)	1 (1.6%)	0 (0%)	0 (0%)	0 (0%)
THC	21 (33.9%)	10 (16.1%)	8 (12.9%)	3 (4.8%)	6 (9.7%)	9 (14.5%)	0 (0%)	0 (0%)	0 (0%)
BZD	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)
BAR	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)
EDDP	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)
AMPH	0 (0%)	0 (0%)	0 (0%)	1 (1.6%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)
PCP	2 (3.2%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	1 (1.6%)	0 (0%)	0 (0%)	0 (0%)
OPIAT	3 (4.8%)	1 (1.6%)	2 (3.2%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)
MDMA	2 (3.2%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)
6AM	0 (0%)	4 (6.5%)	2 (3.2%)	2 (3.2%)	3 (4.8%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)
K2-1	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)
K2-2	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)
BUP	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)
EtG	0 (0%)	5 (8.1%)	0 (0%)	4 (6.5%)	3 (4.8%)	1 (1.6%)	8 (12.9%)	5 (8.1%)	1 (1.6%)
COC	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)
Multiple*	18 (29%)	3 (4.8%)	1 (1.6%)	3 (4.8%)	3 (4.8%)	1 (1.6%)	0 (0%)	0 (0%)	0 (0%)

*Multiple: THC+EtG, THC+MAMP, THC+OPIAT, THC+6AM+BUP, THC+6AM+BUP+OPIAT+EtG, EDDP+MAMP, THC+AMPH (We only wrote here these multiple drug results due to none idea for them)

MAMP: Methamphetamine; THC: Tetrahydrocannabinol; BZD: Benzodiazepines; BAR: Barbiturates; EDDP: Methadone; AMPH: Amphetamine; PCP: Phencyclidine; OPIAT: Morphine; MDMA: Ecstasy; 6AM: Acetylmorphine; K2-1: Bonsai; K2-2: Bonsai; BUP: Buprenorphine; EtG: Ethyl Glucuronide; COC: Cocaine

Discussion

Our study is important because it allows us to reach one year of probation data collectively. This study shows that the vast majority of follow-up people are men because of probation (95.2%). Since the average age is between 20-30, it is important to increase the level of knowledge about substance and psychoeducation in this age group. Again, the study allows us to see how much alcohol use is accompanied. We can see the compliance rates of the programme and which substances are used more.

In Turkey, the scope of PI, studies in people referred to health institutions is increasing. Some of these studies have been designed prospectively [12,13] and some have been retrospectively [14-16] designed. Prospective ones are studies that examine patients who are applied by PI, treated and rehabilitated within a program on a timelier basis and how much they benefit from the treatment given. Retrospective studies are based on finding more epidemiological data. These retrospective studies have examined the sociodemographic characteristics and substance use

characteristics of the cases. Karadeniz et al. [17] have determined that the individuals registered for PI consist of males (98.5%) and females (1.5%). Again in that study, it was found that substance use was most frequently seen in the 27-36 age group (39.8%). Aslan et al. [14] stated that the cases applied by probation consist of males (98.5%) and females (1.5%). In this study, mean age was 32.5 ± 9.8 . Kulaksizoglu et al. [18] indicated that 97% of the persons in the PI process because of substance use were male, and 3% were female. In our study, it was found that the majority of people who were taken to PI because of drug use were male, similar to this information in the literature, and that the number of people aged 20-35 years was high. 9 out of 10 people who abuse or are addicted to nicotine, alcohol or other drugs began using these substances before they were 18. People who began using addictive substances before age 15 are nearly 7 times likelier to develop a substance problem than those who delay first use until age 21 or older [19,20].

The age of starting to use the substance varies according to the type of substance used. For example, volatile and cannabis

(Marijuana, THC) use begins at very early ages [21-23]. In the studies conducted, it was found that the most frequently positive substance in toxicological analyses made by PI was cannabis. Bahceci et al. [24] found that the substance used in 196 of 201 cases (97.5%) was cannabis. Mutlu et al. [25] reported that they had possession of cannabis when most of the cases (55.7%) were caught. In the same study, synthetic cannabinoids were found to be 13.2%. According to the study of Aslan et al. [14], 70.5% of the cases stated that they used cannabis during a period of their life. In our study, cannabis positivity was high.

In the literature, there are fewer studies examining the relationship between the number of sessions (3 or 6 sessions) and the use of drugs in relation to substance use characteristics of persons who have applied PI. In six-time PI drug addiction training program, patients are informed about substance use. The program is open and new members can be taken at any session. It is a circular program. The evaluation criteria are the number of attendance to sessions, the level of compliance in sessions, the number of negative urine, and the number of homework done. It is expected that the level of adjustment in the sessions will be between 9-12 points. It is expected to make at least 4 of the assignments. The urine may be positive from the beginning of the quince. However, the urine should be negative in the last three sessions. If negative, dependence is referred to treatment center. If the ruling negatively starts with the session 3 positive urination is found, the treatment is terminated and referred to the Dependence Center. This six-week program includes the following: the concept of information and dependence on PI, drug/stimulants and effects, motivation, emotion-thinking and behavioral cycle, prevention of re-use, lifestyle changes to improve. We are less knowledgeable about the issues such as characteristics of positive substances according to the number of sessions, the relationship between the positive substances and the age, the relationship between the number of sessions and the age, in which session, which substance is positive, and the frequency of multiple substance use. In the one-year retrospective study of Bahceci's study [24], it is demonstrated that 90.1% of the individuals were followed up by DPHCB, 8% were transferred to ASATC and 2% were taken to six-times training program has been decided. When Aslan et al. [14] examine the cases in terms of PI treatment and compliance levels; found that 46 (23.0%) completed the three-session program, 32 (16.0%) were referred to the Psychiatric Hospital and 19 (9.5%) were unable to adapt to the program. In the same study, it was seen that 10 (5.0%) completed six-time program, one (0.5%) was referred to the Psychiatric Hospital and three (1.5%) did not adapt to the program. In our study, it was seen that the number of those who completed the three-time program was higher. This can be interpreted as an indication of the effectiveness of PI treatment and rehabilitation services.

Mancini [26] has linked the failure of the PI system to low socioeconomic status, youth, marital status, working status and alcohol use. In a study conducted in our country, the rate of substance use at least once during life was 31.9% for alcohol [27]. There are not enough studies to investigate the relationship between alcohol use and PI process, number of sessions and age. Zorlu et al. [28] retrospectively assessed the frequency of alcohol use disorders in patients referred to PI. The most important finding of their study was that higher unemployment rates in urine positive

group and high alcohol use disorder rates in all patients. They stated that high alcohol use disorder rates show the importance of evaluating alcohol use in treatment. In our study, alcohol use comorbidity was found in an important number of individuals. This can be interpreted as the fact that the cases subjected to the three-sessions had lower substance abuse severity and they head for substances such as alcohol, which had a lower possibility of causing legal problems, to get pleasure. On the other hand, it was interpreted that the cases subjected to the three-session program had higher substance abuse severity and they do not need to head for alcohol use for pleasure.

In this study, it was found that as many as half of the PI practitioners had cannabis. The cannabis is followed by synthetic cannabinoids, ecstasy, heroin and cocaine, respectively. Positive and non-positive substances were thought to change according to socioeconomic status and ease of access to the relevant substance. In the tests conducted during the PI period, no substances were found in some of the cases. This can be caused by the presence of the substance in the environment in which the substance is used, if the person does not use the substance. In addition, the fact that the test results are misleading and that the material used is discarded within a short period of time can also affect this. Our study supports the notion that some of the people convicted of possession of substance are not dependent on it or that they can abandon the use of the substance when they meet a legal problem. This suggests that PI may be able to keep people away from substance use, even if only urine analysis is required. On the other hand, highly addictive substances such as heroin are probably not left untreated. This is in line with the 6AM and OPIAT positivity of some of the 6 participants in our study. Likewise, the fact that we do not include it because it does not fit the study pattern and that it is incompatible with the PI and that the majority of the cases referred to ASATC are positive for heroin and similar substances, supports our thinking.

Conclusions

In conclusion, PI, which is a fairly new practice in Turkey, has an important place in the care of substance users. Further studies should be conducted with respect to PI to provide a greater understanding of its positive and missing sides.

Major limitation of this study is its retrospective design. A prospective design starting from early periods of substance use with regular follow-up scale evaluations would yield more convincing results about nature of addiction. One of another major limitation of this study is its poor sociodemographic and scale content.

Competing interests

The authors declare that they have no competing interest

Financial Disclosure

The financial support for this study was provided by the investigators themselves.

Ethical approval

Local ethics committee approval was obtained (Adiyaman University ethics committee protocol number 2018/2-7).

References

1. Dennis M, Scott CK. Managing addiction as a chronic condition. *Addict Sci. Clin Pract.* 2007;4:45-55.
2. Bulut M, Savas HA, Cansel N, et al. Sociodemographic characteristics of

- patients, applied to substance usage disorders unit of Gaziantep University. *J Dependence*. 2006;7:65-70.
3. Ögel K, Tamar D, Evren C, et al. Uçucu madde kullanımının yaygınlığı: Çok merkezli bir araştırmanın verilerinin değerlendirilmesi. *Anadolu Psikiyatri Derg*. 2000;1:220-4.
 4. Özmen F, Kubanç Y. Opinions of schoolmaster and teachers on drug addiction – present situation and on advices in secondary schools. *Turkish Studies*. 2013;8:357-82.
 5. Türkiye uyuşturucu ve uyuşturucu izleme merkezi (TUBİM) 2013 ulusal raporu. <http://www.kom.pol.tr/tubim> Erişim tarihi 11.01.2015
 6. Türkiye uyuşturucu ve uyuşturucu izleme merkezi (TUBİM) 2012 ulusal raporu. <http://www.sck.gov.tr> Erişim tarihi 11.01.2015
 7. Çolak H, Altun U. Denetimli serbestlik kavramının yaptırım teorisi ve penolojik bakımdan tahlili ile pozitif hukukumuzdaki düzenlemeler, 2006. http://www.yayinadalet.gov.tr/adaletdergisi/25.sayi/09_27_16.htm. Erişim tarihi 22.02.2015
 8. Usta İ, Öztürk H. Denetimli Serbestlik. *Ceza Hukuku Dergisi* 2010;13:10-2. http://www.cteds.adalet.gov.tr/menusayfaları/bilgibankasi/makaleler/makale_ds_cezahukukudergisi.pdf. Erişim tarihi 22.02.2015
 9. Ogel K, Karadag F, Can Y, Altintoprak E, Coskunol H. Denetimli Serbestlik Bağımlılık Programı [Probation Addiction Programs]. 1 ed. Ankara: Turkish Psychiatry Association; 2010. Turkish.
 10. <http://www.cte-ds.adalet.gov.tr/> Erişim tarihi 02.09.2015
 11. Amerikan psikiyatri birliği, ruhsal bozuklukların tanısı ve sayımsal elkitabı, Beşinci baskı (DSM-5), Tanı ölçütleri başvuru elkitabı'ndan, çev. Köroğlu E, Hekimler Yayın Birliği, Ankara, 2014. Turkish.
 12. Ögel K, Bilici R, Güvenç-Bahadır G, Maçkan A, Orhan N, Olcay T. Denetimli serbestlikte, sigara, alkol madde, bağımlılığı tedavi programı (SAMBA) uygulamasının etkinliği. *Anadolu Psikiyatri Derg*. 2016;17:270-7.
 13. Bilici R, Ögel K, Güvenç-Bahadır G, et al. Treatment outcomes of drug users in probation period: three months follow-up. *Psychiatr Clin Psychopharmacol*. 2017;28:149-55.
 14. Aslan M, Hocaoglu Ç. Eğitim ve araştırma hastanesinde denetimli serbestlik uygulamalarının değerlendirilmesi. *Adli Tıp Bülteni*. 2015;20:138-43.
 15. Yazici AB, Yazici E, Akkisi-Kumsar N, Erol A. Addiction profile in probation practices in Turkey: 5-year data analysis. *Neuropsychiatric Disease and Treatment*. 2015;11:2259-63.
 16. Akpınar A, Şalış O, Aksoy UM. Samsun Ruh Sağlığı ve Hastalıkları Hastanesi'nde denetimli serbestlik 2010 yılı sonuçları ve şehir merkezi dışından başvurularda tedavi uyumlarının değerlendirilmesi. *Düşünen Adam The Journal of Psychiatry and Neurological Sciences*. 2013;26:46-54.
 17. Karadeniz H, Birincioglu İ, Seçilmişoğlu B, ark. Trabzon'da Denetimli Serbestlik ve Yardım Merkezi Şube Müdürlüğü'nde madde bağımlılığı nedeniyle kayıtlı olgularda toksikolojik analiz bulguları ve tedavi uygulamalarının değerlendirilmesi. *Adli Tıp Bülteni*. 2009;14:80-7.
 18. Kulaksızoglu B, Kulaksızoglu S, Ellidağ HY, ark. Antalya ilinde denetimli serbestlik kararı alınan kişilerde uyuşturucu madde kullanımının araştırılması. *Adli Tıp Bülteni*. 2015;20:21-6.
 19. The national center on addiction and substance abuse at Columbia University (CASA Columbia). (2012a). CASA Columbia analysis of the alcohol and public health: Alcohol-Related Disease Impact (ARDI). [Online]. Centers for Disease Control and Prevention. Retrieved January 11, 2012 from <http://apps.nccd.cdc.gov>.
 20. French MT, Rachal V, Harwood HJ, et al. Does drug abuse treatment affect employment and earnings of clients? *Benefits Quarterly*. 1990;6:58-67.
 21. Tekalan A. Uyuşturucu maddelere genel bir bakış. Yeşilay, Bağımlılık Tedavisi, Aylık Sağlık, Eğitim ve Kültür Dergisi. 2012;87:32.
 22. Springer JF, Sale E, Hermann J. Characteristics of effective substance abuse prevention programs for highrisk youth. *J Prim Prev*. 2004;25:171-219.
 23. Erdem G, Eke CY, Ögel K, ark. Lise öğrencilerinde arkadaş özellikleri ve madde kullanımı. *Bağımlılık Dergisi*. 2006;7:111-6.
 24. Bahceci B, Helvacı-Celik F, Kandemir G, et al. Evaluation of the patients applied by probation referring to a training and research hospital in the eastern black sea region: A one-year retrospective study. *J For Med*. 2014;28:1-9.
 25. Mutlu E, Alniak I, Aksoy UM, et al. The use of synthetic cannabinoids among probation population. *J For Med*. 2015;29:169-78.
 26. Mancini AR. The influence of probation officers' and probationers' gender, ethnicity, and college major on probation officers' court recommendations. Texas: Lake University, 2006.
 27. Sevinçok L, Küçükardalı Y. Genç erkeklerde madde kullanımı: Sosyodemografik özellikler ve psikiyatrik tanıları. *Türk Psikiyatri Dergisi*. 2000;11:40-8.
 28. Zorlu N, Türk H, Manavgat Aİ, ark. Denetimli serbestlik uygulaması kapsamında başvuran hastalarda sosyodemografik, klinik özelliklerin ve alkol kullanım bozukluğu sıklığının geriye dönük değerlendirilmesi. *Anadolu Psikiyatri Dergisi*. 2011;12:253-7.