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The Relationship of Substance Abuse with Attachment and Emotion Regulation

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Abstract

Objective: The purpose of this study to examine the characteristics of substance use (SU) and its relationship with psychiatric symptoms, emotion regulation and attachment in youth and young adults with substance abuse in the southeast region of Turkey who have been exposed to repetitive trauma.

Method: Forty-four patients with substance use complaints completed Sociodemographic Form, Addiction Profile Index (BAPI), BAPI-Clinical Form. Association of SU disorder diagnosis with both emotion regulation as measured by the Emotion Regulation Questionnaire (ERQ) and the attachment style as measured by Parent Attachment Tool is evaluated.

Results: Our sample consists of 44 male patients a mean age of 23.77 years. All of them can read and write, but none of them are university graduates. The rate of being single in marital status is 66%. 60% of them have a low income level. 45% of them do not work. 25% of the sample meets the addiction criteria. Compared to the addicted and non-addicted groups, the addicted groups had significantly higher scores on inadequate anger control, lack of safe behavior, pleasure-seeking behavior, impulsivity, depression, and anxiety. The non-addicted group had a higher mean for cognitive reappraisal. The non-addicted group had a higher mean for cognitive reappraisal. Inadequate anger control, pleasure seeking behavior and duration of anxiety about substance use were found to be risk factors for addiction.

Conclusions: The addicted group is different from the non-addicted group for BAPI subscales and ERQ subscale- a cognitive reappraisal. The current findings expand our understanding of the psychological and behavioral aspects of addiction, especially in provinces such as Şırnak, where traumatic life events are repeated, as there are many risk factors for SUD.

Keywords: addiction, attachment, emotion regulation

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Madde Kullanımının Bağlanma ve Duygu Düzenleme ile ilişkisi

Öz

Amaç: Bu çalışmanın amacı, Türkiye'nin güneydoğu bölgesinde tekrarlayan travmaya maruz kalmış madde kullanımı (MK) olan genç ve genç erişkinlerde madde kullanımının özelliklerini ve psikiyatrik belirtiler, duygu düzenleme ve bağlanma ile ilişkisini incelemektir.

Yöntemler: Madde kullanım yakınması olan kırk dört hasta Sosyodemografik Form, Bağımlılık Profil İndeksi (BAPI), BAPI-Klinik Formları ile değerlendirildi. MK bozukluğu tanısının özellikleri hem Duygu Düzenleme Anketi (ERQ) ile ölçülen duygu düzenleme hem de Ebeveyn Bağlanma Aracı ile ölçülen bağlanma stili ile ilişkisi değerlendirilmiştir.

Bulgular: Örneklemimiz yaş ortalaması 23.77 olan 44 erkek hastadan oluşmaktadır. Hepsi okuma yazma bilmektedir ama hiçbiri üniversite mezunu değildir. Medeni durumda bekar olma oranı %66'dır. %60'ının gelir düzeyi düşük, %45'i çalışmamaktadır. Örneklemin %25' i bağımlılık kriterlerini karşılamaktadır. Bağımlı olan ve olmayan gruplarla karşılaştırıldığında, bağımlı grupların yetersiz öfke kontrolü, güvenli davranış eksikliği, zevk arama davranışı, dürtüsellik, depresyon ve kaygı puanları anlamlı olarak daha yüksektir. Bağımlı olmayan grupta bilişsel yeniden değerlendirme ortalaması daha yüksektir. Yetersiz öfke kontrolü, zevk arama davranışı ve madde kullanımına ilişkin kaygı süresinin bağımlılık için risk faktörleri olduğu saptanmıştır.

Sonuçlar: Bağımlı grup, BAPI alt ölçekleri ve bilişsel bir yeniden değerlendirme olan ERQ alt ölçeği için bağımlı olmayan gruptan farklıdır. Madde kötüye kullanımının özellikleri için birçok risk faktörü olduğundan dolayı, özellikle Şırnak gibi travmatik yaşam olaylarının tekrarlandığı illerde, bağımlılığın psikolojik ve davranışsal yönlerine ilişkin anlayışımızı genişletmektedir.

Anahtar kelimeler: bağımlılık, bağlanma, duygu düzenleme.

INTRODUCTION

Substance use disorder (SUD) has a destructive impact on personal attitudes, behaviors, and environments that harms autonomy and integrity. It is a chronic disease that causes problems in individuals' physical and mental health[1]. More people are experiencing substance use disorders. The United Nations Office of Drugs and Crime 2 (UNODC) estimates that more than 35 million people worldwide suffer from drug use disorders. This is according to the most current World Drug Report (WDR). Over the years 2000–2018, drug use increased significantly more quickly in developing nations than in industrialized nations (WDR, 2020). According to a report from Turkey's TUBIM, 3.1% of people in that country had used drugs at some point in their lifetime[2]. Another study carried out in Turkey in 2021 found that the lifetime prevalence of single substance use, excluding alcohol and tobacco, was 4.5%, and the lifetime prevalence of multiple substance use was 2.6%[3]. The highest percentage of drug users are teenagers and young adults. Also, the adolescent ages are the period in which brain development continues and is one of the most vulnerable time for the effects of the drug.

The southeasth region of Turkey which is also adjacent to Syria and Iraq, a region where terrorist incidents occur frequently in Turkey. In 2015 and 2016, there were events in the region where there was a long-term curfew, various groups and soldiers clashed, many people lost their lives, and people had to migrate to different cities[4]. Considering the definition of trauma and the experiences in this region, it can be said that the people of this region are exposed to a social trauma. Problems such as chaotic social structure, interruption of education life and weakening of ties with school, poverty, inability to continue social life, uncertainty about the future, social marginalization, which are risk factors for substance abuse, may increase the frequency of substance abuse in these regions where recurrent traumas are experienced[5]. On the one

hand, the possibility of choosing the substance as a self-treatment method for other psychiatric problems that occur after all experiences may increase the frequency of substance abuse. Therefore, it is also important to conduct research on substance abuse in these regions. The substance abuse rate in the region in 2015 and before is unknown, however, a substance abuse probation center was built in 2017 by the municipality due to increase in substance use in these region after clash. According to the records of all health centers in this state, 218 adult and 71 child and adolescent patients were admitted to the outpatient clinic in 2017 with all-psychiatric disorders and behavioral impairments diagnosis-related with substance use based on ICD-10 from F10 to F19. In 2018, trends of prevalence were on the rise. People may experience a variety of detrimental effects on their behavioral and mental health after a disaster. This can include abusing drugs, alcohol, tobacco, and other substances, as well as developing anxiety and mood disorders like posttraumatic stress disorder (PTSD) and depression. Since these effects are connected, having one mental health problem may increase the likelihood that someone will use drugs.

Drug addicts may be able satisfy their need for intimacy by manipulating the biochemistry of bonding and attachment, according to a theory that suggests attachment and addiction share common neurobiology and neural pathways[6]. According to Bowlby's attachment theory from 1982, infants need to form an emotional connection with a caring adult from birth onward[7]. The need to seek and maintain a bond through proximity is heightened in particular when the baby or child is exposed to internal or external stressors. Additionally, early interpersonal trauma increases one's risk of developing substance use disorders (SUDs) later in life[8].

Psychiatric disorders, personality traits, and emotion regulation have all been studied concerning substance use disorder. Young people and minors have been found to be at risk due to low levels of emotion regulation[9], and these risky behaviors, which can lead to the development of addictive behavior, have been linked to emotional regulation and attachment[10]. Improving maternal caregiving behaviors lowers the likelihood of addictive processes in children. Critical to this change are parental reflective functioning and attachment representations, which are also closely related to executive functioning and emotion regulation[11-14]. Early trauma may be the cause of issues with affect regulation and forming satisfying relationships, which makes them susceptible to turning to drugs as a coping mechanism[15].

This study will be one of the important examples to increase the awareness of SUD and its impact on the local community. By shedding light on the psychopathology of SUD, identifying protective and risk factors, and exploring the intricate relationship between substance use characteristics and psychological variables, we hope to contribute valuable information to the field of addiction research. Given the rising concerns of the Directorate of Health of the Province and local hospitals regarding the growing number of SUD cases, this study aims to provide data that can inform the development of more effective prevention and treatment strategies for SUD in our region. While SUD remains an urgent public health problem in this area and its neighboring regions, there is a scarcity of research dedicated to understanding the specific nuances and challenges faced by community. This study seeks to fill this gap and pave the way for evidence-based interventions and policies aimed at addressing SUD and its consequences. By raising awareness and deepening our understanding of SUD within our local context, we aspire to contribute to improved healthcare

outcomes and the overall well-being of community.

In this study, we aimed to gain insight into the substance use patterns of adolescents and young adults. Our goal was to investigate the connections between substance use features, attachment style, emotion regulation and mental symptoms in order to identify potential risk factors for SUD. We explored the substance use patterns of the patients from the region who had been tracked in the probation clinic and admitted to the outpatient psychiatry clinic and explored to learn how adults with SUDs differ in their ability to regulate their emotions and attachment style. We hypothesized that people with SUDs would have significantly more difficulty with emotion regulation and more problematic parental attachment style than people who did not have SUDs. As a secondary goal, we looked at differences in the ERQ subscales and attachment style to see if specific aspects of emotion regulation and attachment style differed more between people with and without SUDs.

METHOD

All of the patients with a complaint of substance use were accepted to our study between September and October 2018. There was no exclusion criteria as we want to explore the natural course of the substance use in a specific time period in a specific region. Before receiving their informed consent, every participant was informed of the study. Forty-four patients who applied to either an outpatient psychiatry clinic or substance use probation center accepted to participate to our study. Participants who accepted to participate in the study completed the Sociodemographic and Clinical Knowledge Form, the Addiction Profile Index (BAPI), the Addiction Profile Index-Clinical Form (BAPI-C), the Parental Bonding Instrument (PBI), and the Emotion Regulation Questionnaire (ERQ). All the comorbid psychiatric disorder were surveyed with BAPI-C.

Materials

Sociodemographic and Clinical Knowledge Form

To get information about sociodemographic and clinical data; sex, education, job, income state, job changes and reason to change, repeating a grade level, discipline or punishment by police, psychiatric admission, and family history of psychiatric disorder are investigated.

Addiction Profile Index (BAPI)

The Addiction Profile Index (BAPI) is defined by the different dimensions of addiction. Assess the severity and severity of addiction, plan of treatment. It is planned as a scale who help in the cultivation and sensitivity to different substances. Addiction Profile Index's alcohol and substance- the extent of the problems caused by the use of the person, motivation to quit substances, violent substance use, this scale can measure the desire and severity of addiction in a valid and reliable way.

The BAPI is a 37-item self-report questionnaire with 5 subscales. The subscales evaluate many facets of substance use, including craving, motivation to stop using drugs, dependent diagnosis, the effect of drug use on a person's life, and other factors. The first subscale evaluates how frequently alcohol and other drugs are used, as well as the problems they have caused. The second subscales involve diagnostic criteria for substance use based on DSM and ICD. The third subscale involves problems related to education, job, family, economy, and legal. The fourth subscales evaluate the craving for the substance. The last subscales search for motivation to quit the substance. BAPI measures the severity of substance use disorder in different dimensions. All the measurements were done according to BAPI Practice Guideline. Cronbach's alpha coefficient of the whole scale is 0.89 and Cronbach's alpha coefficient of the subscales was found between 0.63-0.86 [16,17].

Development, reliability, and validity of the scale had been done by Ogel et al[16].

Addiction Profile Index- Clinical Form (BAPI-C)

Clinical questions come after the 37th question of BAPI. Two relate to their mental health, while the other four are related to their personality traits. BAPI – C measures 1) depression, 2) anxiety, 3) inability to control anger, 4) lack of secure behavior, 5) pleasure-seeking behavior, and 6) impulsivity[17].

The Parental Bonding Instrument (PBI)

A complex self-report instrument measuring the fundamental aspects of parental care and protection, the Parental Bonding Instrument (PBI) was developed. The effectiveness of a self-report measure like this depends on the demonstration of strong psychometric properties, particularly how well the PBI provides accurate ratings of real, as opposed to just perceived, characteristics.

Parental relationship as seen by the person being evaluated by PBI. Retrospective measurement means that adults (those older than 16) answer questions about their memories of their parents during the first 16 years of their life. Fundamental parental behaviors are categorized into two scales: "care" and "overprotection" or "control," as perceived by the child. Both for mothers and fathers separately, the measure is completed. Care and control/overprotection are the two main components of the scale. The care dimension consists of 12 items out of a total of 25, with scores ranging from 0 to 36. Low scores represent the perception of cold and rejecting parents, while high scores reflect the perception of warmth, understanding, and acceptance from parents. The remaining 13 items make up the control/overprotection dimension, which has a score range of 0 to 39. High scores are indicative of perceived overprotective parenting or not allowing a child to engage in autonomous behaviors. On a 4-point Likert-type rating scale, the person is requested to score the parental actions depicted in each item relating the first 16 years of his or her childhood (very like = 3, very unlike = 0). One rating is given to each of the person's parents—their mother and their father. Items 2,3,4,7,14,15,16,18,21,22,24, and 25, as well as items 8,9,10,13,19, and 23 on the control overprotection subscale, are reversely coded (0-3) for the care subscale. Evaluation of psychometric properties with Turkish of the scale has been done by Kapci and Kucuker[18].

Emotion Regulation Questionnaire (ERQ)

The Emotion Regulation Questionnaire's rationally formed items each clearly explain the emotion regulating mechanism they are intended to assess (reappraisal or suppression). Along with these questions regarding general emotions, the Reappraisal scale and the Suppression scale each had at least one item each about managing negative emotion (the participants' examples of grief and rage) and positive emotion management (examples of which were joy and amusement). Additionally, care was made to prevent any potential confounding factors by omitting any references to any benefits or drawbacks for affect, social functioning, or general wellbeing. Additionally, the item's content was limited to the targeted emotion regulation technique. The ERQ is a 10-item scale that measures respondents' propensity for expressive suppression and restraint of strong emotions. The test repetition coefficient was 0.69, the internal consistency for cognitive reappraisal was 0.79, and the suppression was 0.73 on both subscales. This scale is a self-declaration[19]. Turkish reliability and validity of the scale were done by Totan[20]. Depending on this scale, internal consistency co-efficiency for the cognitive reappraisal subscale is 0,78 and for suppression, it is 0,71 were calculated.

Statistical Analysis

Data were statistically analyzed using the Statistical Package for the Social Sciences Statistics for Windows 22.0 program. To

compare the continuous quantitive variables between addiction and non-addiction group, depending on whether the parametric test assumptions were met or not, the student's t-test or the Mann-Whitney U test was applied. The categorical data between groups were compared using the chi-square (2) test. The relationships between the Addiction Severity scores and other continuous variables were examined using the Pearson or Spearman's correlation analysis. The independent variables that were thought to have an effect on the dependent variable were determined as a result of literature review and clinical opinion. Simple linear regression analysis was used to assess the relationship between the determined independent variables and the dependent variable. With independent variables that were found to be significant in simple linear regression analysis, multiple linear regression analysis was carried out. In all analyses, statistical significance was established at the 0.05 level.

RESULTS

In this study, substance use disorder (SUD) and associated factors were assessed in a group of male patients between the ages of 17 and 38. In addition to examining patient characteristics, psychiatric symptoms, psychopathology, protective and risk factors, relationship between attachment and regulation of emotions was also presented. Exploring the probable multifactor related with the substance use increased the

Sociodemographic and Clinical features

Our sample consisted of a total number of forty-four male patients ages 17- 38 years with a mean age of 23,77. All of them are literate, but none of them graduated from university. When we looked at the graduation from the highest class, 46% of them were from primary school, 43% from secondary school, and 11% of them from high school. 20.5% of them repeated the same grade in the class. For marital status, the rate of being single is 66% and the rate of being married is 34% of the sample. When we evaluated the income level, low as 60%, middle as 37.5%, and high as 2.5%. For job status, 45% of them do not work, 42.5% of them are workers and 12.5% are self-employed. Only psychiatric application in the addicted group is significantly higher than non-addicted group for sociodemographic and clinical characteristics (Table 1).

Table I: Sociodemographic and Clinical Characteristics

	Total (n=44) Mean (SD) n (%)	Addicted (n=11) Mean (SD) n (%)	Non-Addicted (n=33) Mean (SD) n (%)	p
Chronological age	23.7 (3.9)	22.9 (3.1)	24.06 (4.1)	p=0.345
Gender Male Female	44 (100%)	11(100%) 0	33 (100%) 0	
Education Primary school Middle School High school University	20 (46%) 19 (43%) 5 (11%) 0 (0%)	4 (36.4%) 5 (45.5%) 2 (18.2%) 0 (0%)	16 (48.5%) 14 (42.4%) 3 (9.1%) 0 (0%)	p=0.370
Marital Status Married Single	15 (34%) 29 (66%)	2 (18.2%) 9 (81.8%)	13 (39.4%) 20 (60.6%)	p=0.282
Status of Having Children Yes No	13 (30%) 31 (70%)	2 (18.2%) 9 (81.2%)	11 (33.3%) 22 (66.7%)	p=0.461
Psychiatric Application Yes No	13 (30%) 31 (70%)	9 (81.8%) 2 (18.2%)	4 (12.1%) 29 (87.9%)	**p<0.001**
Employment Status Not Work Workers Self-employed	18 (45%) 17(42.5%) 5(12.5%)	8(89%) 1(11%) 0(0%)	10(32%) 16(52%) 5(16%)	p=0.015
Socio-economic Level Low Middle High	24(60%) 15(37.5%) 1(2.5%)	5(55.6%) 3(33.3%) 1(11.1%)	19(61.3%) 12(38.7%) 0(0%)	p=0.418
Class Repeat Yes No	8(20.5%) 31(79.5%)	3(33.3%) 6(66.7%)	5(16.7%) 25(83.3%)	p=0.355
Disciplinary Punishment Yes No	6(15.7%) 32(84.3%)	2(25%) 6(75%)	4(13.3%) 26(86.7%)	p=0.587
Judicial Event Yes No	5(13.1%) 33(86.9%)	3(37.5%) 5(62.5%)	2(6.7%) 28(93.3%)	p=0.053
Traffic Penalty Yes No	11(29%) 27(71%)	3(37.5%) 5(62.5%)	8(26.7%) 22(73.3%)	p=0.667

SD: Standart Deviation

BAPI- Clinical Form, PBI, and ERQ in Addicted Group vs Non-Addicted Group

BAPI Total score above 10,7 is accepted as addicted[16] and 25% of them corresponded to addiction criteria. The study used the BAPI Total score to classify addiction, 25% of the participants meeting the addiction criteria. Significant differences were found between the addicted and non-addicted groups in several BAPI subscales, including anger control inadequacy, lack of secure behavior, pleasure-seeking behavior, impulsivity, depression, and anxiety. The addicted group scored higher in all these areas, except for cognitive reappraisal, where the non-addicted group scored higher (Table 2).

Table II: Comparison of BAPI, BAPI–C, PBI (Mother-Father), ERQ Scales in Addiction and Non-Addiction Group

	Addiction (n=11) median (min-max) or mean (SD)	Non-addiction (n=33) median (min-max or mean (SD)	p
BAPI			
Substance use properties	4.32 (0.18-5.73)	0.18(0-4.18)	**p<0.001**
Diagnosis	14.5(11-22.5)	2(0-13)	**p<0.001**
Effect of substance use on the person's life	33(30-36)	6(0-39)	**p<0.001**
Craving	8.5(6-14)	0(0-9)	**p<0.001**
Motivation	11(6-12)	6(0-12)	p=0.054
BAPI – C			
Depression	7(0-8)	0.5(0-6)	**p=0.001**
Anxiety	5(0-6)	0(0-5)	**p=0.001**
Inability to control anger	4(0-6)	1(0-5)	**p=0.012**
Lack of secure behavior	7(1-10)	2(0-6)	**p<0.001**
Pleasure-seeking behavior	2(0-6)	0.5(0-5)	**p=0.006**
Impulsivity	4(0-6)	1(0-4)	**p=0.001**
PBI			
Mother			
Overprotection	17(3.8)	19.5(3.3)	p=0.264
Care and control	35(18-47)	29(18-44)	p=0.131
Father			
Overprotection	19(3.9)	18.5(4.5)	p=0.861
Care and control	30.7(14.3)	33.3(7.9)	p=0.587
ERQ	20.5(11.7)	28.3(8.9)	**p=0.029**
Cognitive Reappraisal			
Expressive Suppression	15.6(7.3)	18.4(6.6)	p=0.355

BAPI :Addiction Profile Index , BAPI-C: Addiction Profile Index - Clinical Form, PBI: The Parental Bonding Instrument, ERQ: Emotion Regulation Questionnaire, SD: Standart Deviation

Relations of addiction severity with BAPI-Clinical Form, PBI, and ERQ

The study found high-level positive correlations between addiction severity and several BAPI subscales. There were positive high-level relations between addiction severity and inadequacy of anger control (p<0,001 r=0,729), lack of secure behavior (p<0,001 r=0,636), pleasure-seeking behavior (p<0,001 r=0,639), impulsivity (p<0,001 r= 0,685), depression (p<0,001 r=0,676) and anxiety (p<0,001 r=0,630) (Table 3).

Table III: The Relationship between Severity of Addiction and BAPI, BAPI – C, PBI (Mother-Father), ERQ Scales

	Addiction Severity
BAPI	**p<0.001** r*=0.690
Substance use properties	
Diagnosis	**p<0.001** r*=0.861
Effect of substance use on the person's life	**p<0.001** r*=0.862
Craving	
Motivation	**p<0.001** r*=0.817
	p<0.001 r*=0.761
BAPI – C	**p<0.001** r*=0.676
Depression	**p<0.001** r*=0.630
Anxiety	**p<0.001** r*=0.729
Inability to control anger	
Lack of secure behavior	**p<0.001** r*=0.636
Pleasure-seeking behavior	
Impulsivity	**p<0.001** r*=0.639
	p<0.001 r*=0.685
PBI	
Mother	
Overprotection	p=0.689 r=0.066
Care and control	p=0.059 r*=0.305
Father	
Overprotection	p=0.750 r*=0.055
Care and control	p=0.536 r*=0.112
ERQ	p=0.123 r*=-0.25
Cognitive Reappraisal	
Expressive Suppression	p=0.831 r*=0.036

BAPI: Addiction Profile Index , BAPI-C: Addiction Profile Index - Clinical Form, PBI: The Parental Bonding Instrument, ERQ: Emotion Regulation Questionnaire, r: spearman correlation coefficient*

Risk factors for addiction

Simple linear regression analysis is done between the offered risk factors for addiction as independent variables (mother care control subscale, mother overprotection scale, father care control subscale, father overprotection

subscale, cognitive reappraisal subscale, suppression subscale, BAPI containing psychiatric symptoms subscale, age, and duration of anxiety towards substance use) and dependent variables (BAPI (addiction) total score). Duration of anxiety towards substance use (p=0,038 β=0,333), mother care control subscale (p=0,045 β=0,322), cognitive reappraisal (p=0,034 β=-0,345), anger control inadequacy (p<0,001 β=0,722), lack of secure behavior (p<0,001 β=0,698), pleasure-seeking behavior (p<0,001 β=0,635), impulsivity (p<0,001 β=0,716), depression (p<0,001 β=0,724) and anxiety (p<0,001 β=0,740) were found as significantly important (Table 4).

Table IV: Univariate Regression Analysis Results Regarding the Variables Affecting the Severity of Addiction

Variables	β	%95 CI	p	R^2
Age	-0.216	-0.660-0.116	0.164	0.047
Duration of anxiety towards substance use	0.333	0.068-2.345	**0.038**	0.111
Mother care and control	0.322	0.005-0.429	**0.045**	0.104
Mother overprotection	-0.059	-0.505-0.352	0.720	0.004
Father care and control	0.130	-0.122-0.258	0.472	0.017
Father overprotection	-0.007	-0.357-0.344	0.969	0.000
Cognitive reappraisal	-0.345	-0.326- -0.014	**0.034**	0.119
Suppression	-0.085	-0.302-0.181	0.615	0.007
Depression	0.721	1.009-1.941	**<0.001**	0.519
Anxiety	0.740	1.298-2.383	**<0.001**	0.547
Inability to control anger	0.722	1.407-2.649	**<0.001**	0.521
Lack of secure behavior	0.698	0.968-1.911	**<0.001**	0.488
Pleasure-seeking behavior	0.635	1.263-2.872	**<0.001**	0.403
Impulsivity	0.716	1.456-2.798	**<0.001**	0.513

Multiple linear regression analysis is done with variables that are found as significantly important in the simple linear regression analysis. As VIF values above 10 for depression, anxiety, and secure behavior seeking, analysis is repeated after these independent variables are subtracted. Anger control inadequacy (p=0,051 β=0,261), pleasure-seeking behavior (p=0,028 β=0,382), and duration of anxiety towards substance use (p=0,003 β=0,278) were found as risk factors for dependency (Table 5).

Table V: Multivariate Regression Analysis Results Regarding the Variables Affecting the Severity of Addiction

Variables	β	%95 CI	p
Duration of anxiety towards substance use	0.278	0.299-1.331	**0.003**
Mother care and control	0.075	-0.053-0.148	0.336
Cognitive reappraisal	-0.143	-0.140-0.007	0.072
Inability to control anger	0.261	-0.003-1.363	**0.051**
Pleasure-seeking behavior	0.382	0.129-2.106	**0.028**
Impulsivity	0.183	-0.429-1.417	0.279

DISCUSSION

These findings provide valuable insights into the factors associated with SUD among the studied population. The study highlights the importance of considering various psychosocial factors when assessing addiction risk and severity. It also underscores the need for tailored interventions and support for individuals with SUD.

In past studies in Turkey, substance use disorder groups had more problems related to school (absenteeism, delinquency, and trouble with authority) than the control group[21]. Our sample only consisted of males. Male adolescents are more likely to use substances than females[22,23]. In the same year, the unemployment rate in the general population in Turkey was 10.89%[24]. Substance users' unemployment rate is higher than the general population. Employment is necessary for drug-related visits most frequently used stimulants of the amphetamine type (60%); this adolescent group also used cigarettes and alcohol at rates of 95% and 88%, respectively[26]. We think that determining the type of substance abuse is necessary for appropriate treatment. McCaul et al indicated that an indicator of outpatient drug-free treatment retention, type of substance dependence can be overemphasized and greater focus should be put on tailoring

treatment to the ethnic, gender, and occupational needs of patients[27]. In essence, we need to approach each patient individually for substance use abuse treatment, which brings the concept of personalized treatment.

In our study, the addicted group scored higher on anger control, pleasure-seeking behavior, impulsivity, lack of secure behavior, depression, and anxiety. According to the literature, similar results to our study are obtained as the addicted group has higher levels of impulsivity and depression[24]. When the relationship of substance use with depression is considered, as in the addicted group, anxiety for not recovering, decrease of the patients' expectancy for the future, and loss of self-esteem can be core thoughts for depression[24]. Previous research has found that, while externalizing symptoms frequently precede the onset of substance use, internalizing symptoms, particularly among females, may occur after the onset of substance use[28]. Understanding and managing complex relationships between psychological symptoms and various types of substances in this subgroup is not an easy task; however, understanding that one complex profile may be correlated with the other may help counselors train to assess both areas more carefully. Each of the psychiatric problems needs to be addressed during the SUD treatment. More serious issues for people with SUDs include the possibility of co-occurring illnesses. Dual diagnosis treatment is key to recovery which addresses both SUD and underlying or co-occurring psychiatric disorder treatment. Complex co-occurring psychological profiles and substance abuse disorders are associated with negative outcomes such as relapse (especially for substances other than alcohol or marijuana) and legal issues and are more likely to result in early termination of treatment. If these frequently co-occurring two disorders are not properly treated, they can help to exacerbate each other.

We expected to find more problematic attachment patterns with parents, but there was no difference between the addicted and non-addicted groups. There was no relationship between individual perception of a mother-father affair pattern and the severity of the addiction in our study. Many studies have found a link between adolescent drug abuse and a lack of parental attachment. According to other research, adolescents who have stronger parental attachments exhibit fewer risky behaviors, such as drug use. A good parent-child relationship has also been connected to a lower risk of drug use. Family is believed to have a big impact on whether or not someone is willing to develop coping skills for life's challenges. According to the findings, disruptive attachment can increase vulnerability to SUDs[10]. While we agree that an individual's parent-child attachment style is established in the first years of life and serves as a guide for understanding experiences and relating to others such as peers. Other factors such as peer relationships, gender, and the presence of other sources of family support affect the type of attachment and the likelihood of drug use. Because our study used attachment tests for self-report, it is not entirely accurate as the tests focus on the respondent's point of view at the time. On the other hand, the results of the study of 99 male adolescents from Najafabad City, Isfahan province, Iran revealed that avoidance and ambivalent attachment patterns, as well as impulsiveness, were significantly positively correlated with attitudes toward substance use. Secure attachment style and self-efficacy, on the other hand, were significantly negatively associated with attitudes toward substance use. Attachment styles, self-efficacy, and impulsiveness were found to account for 58% of the variance in attitudes toward substance use among these adolescents[29].

Repression prevents emotional expression while reappraisal reframes emotional valence

stimuli in neutral terms during an emotional arousal state. While the cognitive reappraisal score is statistically lower in the addicted group, suppression does not differ between the addicted and nonaddicted groups in our study. Emotion management issues include difficulties controlling dominant emotions toward unpleasant feelings, taking goal-oriented actions, and remembering effective emotion-regulation techniques. According to some studies, people with emotional regulation disorders engage in compulsive behaviors to suppress or control unpleasant emotions. Cognitive reappraisal incapacity may indicate susceptibility to substance abuse in terms of cognitive coping behaviors during times of emotion management challenges. The development and maintenance of substance use disorders, vulnerability, early experimentation, and other important aspects of substance use behavior are all influenced by affective dysregulation. Pleasure-seeking behavior in the addicted group can be one of the aspects of early experimentation with the substance. Besides emotion regulation problems, differences in impulsivity and anger control found in our addicted group support previous findings in studies on emotion regulation and impulse control[30], addictive behaviors, substance use, and gambling disorder. Additionally, it seems that individuals with poor emotional regulation or a lack of other coping mechanisms may engage in actions that prolong or extend positive emotional states[12]. Also, a recent systematic review and meta-analysis of existing findings revealed an association between SUD diagnosis and emotion regulation as measured by the Difficulties in Emotion Regulation Scale (DERS) and Emotion Regulation Questionnaire (ERQ). Similar to our study, they found that people with substance use disorders appear to struggle with emotion regulation more than people without substance use disorders[31].

Compared to existing literature, exploring the likely multifactor associated with substance use may eventually allow clinicians to gain a better understanding of treatment trajectories and may serve as an important target for therapeutic intervention.

Limitations

This study is not without limitations. First, the sample size is limited to forty-four patients who were recruited from the hospital or the probation center, representing a small proportion of the population. Increasing the number of the patients may change the significant level of multifactor surveyed in the study such as parental attachment style. The fact that the sample consists only of men prevents generalization of the results to both genders. Having a control group without a history of substance use may be beneficial in terms of better understanding the characteristics of the group with a history of substance use. The current sample size thus restricts the generalizability of the results. The absence of psychiatric examinations for the determination of comorbid mental diseases of the study participants is a deficiency. The study was conducted in a group that experienced social trauma, but since we do not know the pre-traumatic substance use status of the sample, it prevents us from establishing a relationship between trauma and substance use characteristics. As we are aware that even all people who faced this social trauma and not evaluated by traumatic experience scale, we did not attribute any of the results of this study related to trauma. Contrary to the longitudinal design, which would have given a more accurate picture of each variable's temporal effect, the cross-section design restricts the analysis's causal effects. Additionally, because this study relied on self-reported information, it is prone to biases that are well-known to exist (such as social bias, method bias, and recall bias). Future research should employ various survey

methodology strategies. Our entire sample group is a drug user. There is not a healthy subjects comparison group that does not use substances. In the future studies, adding a that group may change the explainability of the protective and risk factors of substance use. This could explain why you can't find differences in some variables. Future research can benefit from using complementary techniques to identify these structures because emotion regulation and attachment are complex phenomena that are challenging to measure using conventional questionnaires. Aside from other psychological processes to psychological symptoms, researchers may also look into potential predictors of addiction and protective factors like familial, parental, child-related, and biological factors that affected mental health outcomes as moderators. To better comprehend the resilience towards substance use, protective factors can be described in more detail.

CONCLUSION

In conclusion, our study provides valuable insights into the complex interplay of factors associated with substance use in the studied population, offering a foundation for future research and the development of more effective intervention strategies. Despite these limitations, the current findings expand our understanding of the psychological and behavioral aspects of addiction. We think that it is important because it can shed light on research and prevention studies on substance use, especially in provinces where traumatic life events are repeated, as there are many risk factors for substance use.

Ethics Committee Approval: The Scientific Research Ethics Committee at Dr. Selahattin Cizrelioglu State Hospital granted the ethics committee's approval. (dated 27 September 2018-5261, E-844110283-773.99-221999662) in accordance with the Helsinki Declaration.

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