Brief Report / Kısa Araştırma

Investigation of Depressive Symptoms and Related Variables with Depressive Symptoms in Alcohol and Substance Abusers

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ABSTRACT

Investigation of depressive symptoms and related variables with depressive symptoms in alcohol and substance abusers

Objective: It is aimed to evaluate the bonding and personality traits which are thought to affect the level of depressive symptoms in alcohol and substance abusers.

Methods: The study sample consists of 289 patients diagnosed with alcohol and substance dependence, that have been followed up at inpatient or outpatient units of Ege University, The Institute on Drug Abuse, Toxicology and Pharmaceutical Science and Ege University, Department of Psychiatry Alcohol/Drug Dependency Unit. In the study, sociodemographic data form, Beck Depression Inventory (BDI), the Temperament and Character Inventory (TCI), Experiences in Close Relationships Inventory (ECRI) were applied by means of face to face interviews.

Results: The mean age of the patients in the study was 32.5±11.0 years. It was found that 76.8% of the patients had high levels of depressive symptoms (BDI>17). It was determined that there was a significant difference between the level of avoidant attachment scores and depressive symptoms scores of the patients. In the evaluation of TCI scores according to BDI cut-off scores, it was found that depressive patients (BDI>17) have significant differences on the harm avoidance, cooperate and self-transcendence scores than those non-depressive patients (BDI<17).

Conclusion: Our study showed that certain personality and bonding characteristics of the patient affected the depressive symptoms levels.

Keywords: Addiction, alcohol, attachment, depression, substance

ÖZET

Alkol ve madde bağımlılarında depresif belirtiler ve depresif belirtilerle ilişkili değişkenlerin incelenmesi

Amaç: Bu çalışmada alkol/madde bağımlılarında depresif belirti ve depresif belirti düzeyini etkileyebileceği düşünülen bağlanma ve kişilik özelliklerinin değerlendirilmesi amaçlanmıştır.

Yöntem: Çalışmanın örneklemi, Ege Üniversitesi Madde Bağımlılığı, Toksikoloji ve İlaç Bilimleri Enstitüsü, Ege Üniversitesi Psikiyatri Kliniği Alkol/Madde Bağımlılığı Biriminde serviste yatırılarak ya da ayaktan takip ve tedavi edilen alkol ve madde bağımlılığı tanısı konmuş 289 hasta ile görüşme yapılarak oluşturulmuştur. Çalışmada hastalara sosyodemografik veri formu, Beck Depresyon Envanteri (BDE), Mizaç ve Karakter Envanteri (MKE), Yakın İlişkilerde Yaşantılar Envanteri (YİYE) uygulanmıştır.

Bulgular: Çalışmaya katılan hastaların yaş ortalaması 32.5±11.0'dir. Hastaların (%76.8)'inde depresif belirti düzeyi yüksek (BDE>17) olarak saptanmıştır. Bağımlılarda depresif belirti düzeyi ile kaçıngan bağlanma puanları arasında anlamlı düzeyde farklılık olduğu belirlenmiştir. Çalışmaya katılan hastaların MKE'den aldıkları puanlar BDE kesme puanına göre değerlendirildiğin dedepresif hastaların (BDE>17) zarardan kaçınma, işbirliği yapma ve kendini aşma boyutlarında depresif olmayan hastalardan (BDE<17) anlamlı düzeyde farklı olduğu saptanmıştır.

Sonuç: Çalışmamız bazı kişilik ve bağlanma özelliklerinin hastaların depresif belirti düzeylerini etkilediğini ortaya koymuştur.

Anahtar kelimeler: Bağımlılık, alkol, bağlanma, depresyon, madde

INTRODUCTION

The majority of patients treated for alcohol and substance abuse report depressive complaints (1,2). Although these symptoms often respond to treatment, they are also precursors of failure in alcohol and substance abuse treatment. Especially in heavy alcohol drinkers, even if alcohol is stopped, the risk of developing depression in the future is high (2,3). According to epidemiological and clinical studies, psychiatric disorders such as depression and anxiety disorders have been observed frequently in patients with alcohol and substance use disorders. In subjects with alcohol and substance use, depression and anxiety disorders have been observed at rates of 79% and 76% respectively (4).

Insecure attachment style has been shown to increase depression risk in adults (5,6). Attachment theory provides an approach that considers the developmental context of the relationship between the individual's future low self-esteem, depression and insecure attachment with the risk of developing problematic interpersonal relationships. An insecure attachment style is a form of attachment developed between child and parent through distorted internal working models of childhood, which leads to develop negative perceptions towards one's self and others during adulthood (7-9). It has been stated that insecure attachment style increases the lifetime risk of developing psychopathology (10,11). Empirical studies have reported that alcohol and other psychoactive substance addicts have developed insecure attachment styles; in particular, among the insecure attachment styles, avoidant attachment style has been reported commonly. In addition, generalized anxiety, depression, schizoid features and alexithymia were frequently observed in alcohol addicts who developed insecure attachment style (11-13). Depression is more common in individuals who develop fearful and anxious attachment styles with their parents (14). Anxious attachment style is more common especially in prolonged depression. It has been recognized that anxious attachment leads to deterioration in interpersonal relationships, insecurity, fear of abandonment, and the use of nonfunctional coping strategies (15). It has been found that the prevalence of depression increase with the anxious attachment style (16).

Genetic, neurobiological, psychological, environmental and cultural factors are responsible in the etiology of alcohol and substance abuse. In particular, etiological research has focused on alcohol abuse and personality traits. According to personality models of Cloninger and Eysenk, negative emotional features manifested as harm avoidance and neuroticism have been found more frequent in male patients with alcohol use (17,18). It has also been focused on the relationship between alcohol and substance use disorders and impulsive personality structure (19). Borderline personality disorder prevalence is also very high in substance use disorders, and it increases the risk of self-harm, suicide attempt, psychosocial disruption, and severe psychopathology (20). In addition to the mental health problems associated with substance abuse, psychopathic personality traits, which predispose to acts of violence, are also frequently observed. The incidence of offending behaviors has been determined to increase in these patients (21,22). Canadian psychologist Hare (23) has reported that psychopathic personality, which is frequently observed in alcohol and substance addictions, has been associated with antisocial behaviors such as grandiosity, lack of empathy, and impulsivity. National epidemiological studies have shown that antisocial, schizotypal and borderline personality disorders have been more common in alcohol and substance addicts (24). There are also studies supporting the relationship between depression and neurotic and extroverted personality (25). It has been reported that neuroticism has been frequently seen in recurrent depression (26).

Along with substance and alcohol use, presence of depression negatively affects the prognosis of the addiction. Studies have shown that comorbid depression in alcohol and substance abuse increases the likelihood of hospital admissions, disability due to addiction, and adverse outcomes from treatment (27,28). Although there are many studies investigated depression in alcohol and drug addictions, no studies have been conducted on the variables that may increase the

incidence of depression. From this point of view, the following two questions are investigated in this study: 1. Has the emergence of depression been affected by the individual's attachment style and personality traits, in the case of alcohol and substance addiction? 2. Which variables predict depression among alcohol and drug addicts? Do these predictors vary between depressive and non-depressive patients?

METHODS

The sample of the study was formed by interviewing 312 patients who were treated either on outpatient or inpatient status at Ege University, The Institute on Drug Abuse, Toxicology and Pharmaceutical Science and Ege University, Department of Psychiatry Alcohol/Drug Dependency Unit and, diagnosed as alcohol/substance addict by a clinician according to DSM-IV criteria between December 2013 and April 2014. Twenty of these patients were hospitalized, while the rest were outpatients. The study protocol was explained and written informed consent was obtained.

Procedure

Data collection was conducted twice per week, by 25 minute interviews. Of the 312 interviewed patients, 18 were withdrawn due to the failure of completing applied scales, and five were withdrawn due to accompanying neurological diseases. The study was completed with the remaining 289 patients.

The subjects who were 18-65 years old, had appropriate cognitive status (the individuals who had 25 points and above in mini mental test), diagnosed with alcohol and substance addiction according to DSM-IV diagnostic criteria, alcohol addicts in the post-detoxification period and drug addicts who have spent at least 2 weeks after the last substance use were recruited for the study.

Patients with serious physical health problems, neurological detoriations, major mental disorders other than depression, mental retardation, and comorbid psychiatric disorders in addition to alcohol / substance abuse, and the patients with visual, auditory, and cognitive impairments that significantly impaired communication were excluded from the study.

Interviews were carried out after the clinician confirmed the withdrawal symptoms had been completely disappeared.

Measures

Sociodemographic data form: It is a form of interview structured by researchers that includes parameters such as gender, age, education levels, marital status, and family story. In addition, individuals were inquired whether they had experienced any loss of family members in their childhood, and if so, who was this family member.

Beck Depression Inventory (BDI): It is a self-report scale used in healthy and psychiatric patient groups. It is used to determine the risk of depression and to measure the level of depressive symptoms and the change in intensity. The higher the total score, the higher the severity of depression is. The validity and the reliability studies of the Turkish version of the scale, which was developed by Beck et al. (29), have been conducted. The cut-off score for the scale is 17 (30).

The Experiences in Close Relationships Inventory (ECRI): It is a 36-item scale developed by Brennan et al. (31), consisting of two main dimensions, measuring anxiety and avoidance in close relationships. Internal consistency coefficients of the scale were 0.86 and 0.90, respectively (32).

Temperament and Character Inventory (TCI): The TCI has been developed by Cloninger (33) and based on his personality theory. It is a self-report scale consisting of 240 "True" or "False" items. The validity and reliability of this 7-factor personality inventory have been evaluated and replicated both in general population and psychiatric patients (34). TCI consists of; four temperament traits, namely novelty seeking (NS), harm avoidance (HA), reward dependence (RD) and persistence (PS), and three character traits of,

Self-Directedness (SD), Cooperativeness (CO) and Self-Transcendence (ST). Turkish validity and reliability study of TCI was performed by Kose et al. (34).

Statistical Analysis

SPSS for Windows statistical package was used for data analysis. In statistical evaluation, chi square tests were used to compare categorical variables between groups. To compare two group means, t tests were used. The 95% Confidence Interval and p<0.05 values were considered as statistically significant.

RESULTS

Demographic characteristics

The mean age of the study participants was 32.5±11.0 and 50.5% of them (n=145) were under 20 years old. Males comprised 82.7% (n=239) of the participants. Educational status of the patients were: 23.5% (n=67) middle school, 34.9% high school (n=101), 25.3% university (n=73) and the rest were primary school (n=48) graduates. 50.9% of the patients (n=147) were students and 33.9% (n=98) were divorced. Of the divorced patients, 17.6% (n=18) reported that the cause of divorce was alcohol and substance abuse.

Clinical characteristics

Alcohol (88.9%) (n=256) was reported as the most common substance used by the patients participating in the study. Of the all patients, 51% (n=147) reported using multiple substances, 38% (n=109) only alcohol, and 11% (n=31) only one substance. It was determined that 25% (n=72) of the participants had a family member who was treated for a psychiatric illness and 62.2% (n=179) had a loss in the family at a younger age.

Scores below 17 were considered as low depressive symptoms; scores 17 and above were considered as high depressive symptoms. In the statistical analysis, depressive symptom level was low (BDI≤17) in 67 patients (23.2%) and depressive symptom level was high (BDI>17) in 222 patients (76.8%).

Comparison of depression levels by the sociodemographic characteristics of patients

It was determined that 18.9% of women (n=10) and 88.1% of men (n=210) had high depressive symptom scores. There was a significant difference between depressive symptom scores of the patients with regard to gender. It has been determined that the rate of males with 17 and higher BDI score, was higher than females (χ^2=1.18, p=0.04) (Table 1).

The marital status did not affect the depressive symptom levels of the patients (χ^2=1.66, p>0.05) (Table 1).

Significant differences were found in the depressive status by education levels of the patients. The level of depressive symptom was higher in the high school graduates and higher education groups (χ^2=13.58, p=0.009) (Table 1).

It has been found that there was a significant difference in the depressive symptom status of the patients in the presence of an individual who receives psychiatric treatment in the family. Individuals who had psychiatric treatment in their family represented higher levels of depression (χ^2=11.29, p=0.001) (Table 1).

Of the all participants, 13.2% (n=38) had a family member using alcohol, 33.1% (n=95) substance and 4.6% (n=13) both; 49.1% of them had no family member using alcohol or substance. According to the depressive symptom status, there was a significant difference between the patients who have had an alcohol or substance user in their family and those who have not. Depressive symptoms scores were higher among the patients who have had an alcohol or substance user in their family (χ^2=15.23, p=0.002) (Table 1).

The patients were enquired whether they had experienced loss of family members during childhood. Among the patients who reported family member loss before his/her 18 years old, 45% of

Table 1: BDI scores according to the demographic characteristics of the patients

| | BDI Score | | | | | |
| | Lower than 17 | | 17 and above | | | |
Variable	n	%	n	%	χ²	p
Gender						
Female	8	11.9	42	18.9	1.18	0.04
Male	59	88.1	180	81.1		
Marital status						
Married	34	50.0	107	48.0	1.66	>0.05
Divorced	29	44.0	88	40.0		
Single	4	6.0	25	12.0		
Education level						
Literate	4	6.0	2	0.9	13.58	0.009
Primary school	11	16.4	30	13.5		
Secondary school	18	26.9	50	22.5		
High school	26	38.8	75	33.8		
Collage	8	811.9	65	29.3		
Presence of mental disorders in family						
Yes	2	3.0	45	20.3	11.29	<0.001
No	65	97.0	177	79.7		
Presence of alcohol or drug use in family						
No	45	67.2	93	43.5	15.23	0.002
Yes	22	32.8	121	56.5		
Having lost						
No	31	46.3	77	34.7	2.95	0.05
Yes	36	53.7	145	65.3		
Exposure to violence						
No	25	37.3	88	39.6	11.57	0.009
Yes	40	60.7	136	62.4		

BDI: Beck Depression Inventory

Table 2: BDI scores of patients according to clinical characteristics

| | BDI Score | | | | | |
| | Lower than 17 | | 17 and above | | | |
Variable	n	%	n	%	χ²	p
Style of substance use						
Substance only	6	8	18	8	0.91	>0.05
Alcohol only	28	43	80	36		
Both alcohol and substance	33	49	124	56		
Duration of substance use						
Less than 3 months	2	6	21	14	4.42	>0.05
4 months-1 year	11	28	29	19		
1 to 5 years	14	35	42	28		
More than 5 years	12	31	59	39		
Substance use reasons						
Popularity	1	2.4	18	11.9	9.30	0.041
Evade the issues	9	22	43	28.5		
Couriosity	17	41.5	37	24.5		
Increasing trust	2	4.9	9	6		
I will not be an addicted	4	9.8	6	4		
Enjoying	8	19.5	38	25.2		
Number of hospitalizations for reason of substance use						
1	25	37.9	96	43.4	7.22	0.027
2	41	60.6	110	49.8		
3 and more	1	1.5	15	6.8		

BDI: Beck Depression Inventory

them reported loss of parents, 10% of them reported loss of siblings, 35% reported loss of grandparents, 2% reported loss of own children and 8% reported loss of other relatives. While there was no difference between the depression levels of the individuals by the identity of lost person, it was determined that the status of family member loss resulted in a significant difference in the depressive symptom levels of the patients. The depressive symptom level was higher in individuals who had a loss history (χ^2=2.95, p=0.05) (Table 1).

The patients were asked whether they had experienced violence, if so, was it physical, verbal or sexual violence. Among patients who reported to have been exposed to a violence, 10% reported they have been exposed to sexual violence, 38% physical, and 52% verbal violence. It has been determined that there is a significant difference between depressive symptom levels of patients according to their status of experiencing violence. The level of depressive symptom was higher when patients had been exposed to violence (χ^2=11.57, p=0.009) (Table 1). However, the type of violence was not predictor of depression scores (p>0.05).

Table 3: TCI scores of patients according to BDI score

Variable	n	X	SD	t	p
Novelty seeking					
BDI<17	67	21.33	3.38	1.99	0.48
BDI≥17	222	20.51	3.28		
Harm avoidance					
BDI<17	65	16.56	4.01	-2.19	0.03
BDI≥17	222	17.57	3.71		
Reward dependence					
BDI<17	65	11.34	2.97	1.49	0.13
BDI≥17	222	10.93	2.50		
Persistence					
BDI<17	65	4.20	1.39	0.98	0.32
BDI≥17	222	3.99	1.64		
Self-directedness					
BDI<17	65	22.64	24.21	1.4	0.19
BDI≥17	222	21.22	3.68		
Cooperativeness					
BDI<17	65	23.73	4.32	3.4	0.01
BDI≥17	222	20.79	24.18		
Self-transcendence					
BDI<17	65	17.56	3.53	2.49	0.01
BDI≥17	222	16.47	3.61		

BDI: Beck Depression Inventory

Table 4: ECRI scores of patients according to BDI scores

Variable	n	X	SD	t	p
Secure attachment					
BDI<17	65	33.04	8.78	1.26	0.21
BDI≥17	222	31.57	8.12		
Avoidant attachment					
BDI<17	65	29.41	7.43	2.2	0.04
BDI≥17	222	25.42	7.31		
Anxious attachment					
BDI<17	65	66.81	14.22	0.94	0.34
BDI≥17	222	64.82	15.12		

BDI: Beck Depression Inventory, ECRI: The Experiences in Close Relationships Inventory

Comparison of depression levels of patients by clinical characteristics

There was no significant difference between depressive symptom levels according to substance use patterns and duration of substance use of study participants (p>0.05) (Table 2).

The reasons of drug use made a significant difference in the depressive symptom levels of the patients (χ^2=9.30, p=0.041) (Table 2).

The number of hospitalizations due to substance addiction was found to lead to a significant difference in the depressive symptom levels of the patients (χ^2=7.22, p=0.027) (Table 2).

Comparison of depression levels of patients by personality characteristics

Participants' TCI scores were evaluated according to the BDI cut-off score, and it was determined that there was a difference in depressive symptom levels between the groups in terms of harm avoidance, cooperativeness, and self-transcendence. Patients who had depression scores higher than 17 had significantly higher scores in harm avoidance (t=-2.19; p=0.03) compared to cooperativeness (t=3.40; p<0.01) and self-transcendence (t=2.49; p=0.013) (Table 3).

Comparison of depression levels of patients by attachment characteristics

The scores of the patients' ECRI scores were compared by the BDI cut-off score and it was determined that there was a significant difference between the avoidant attachment scores of the patients in the t test (t=2.20, p=0.04). Avoidant attachment scores were found to be low in patients with higher depressive symptoms (Table 4).

DISCUSSION

In the recent studies conducted in Turkish patient population that admitted for substance use treatment, it has been reported that the majority of patients were male, young adults, single or divorced, unemployed or irregularly employed and had high educational levels (35,36). It has been determined that the patients in our study group also had similar demographic characteristics in general.

Studies have shown that the rate of substance use disorders combined with other psychiatric disorders is very high (2,3,36). Depression is one of the psychological problems that frequently accompany substance use disorders (36,37). According to studies on psychiatric comorbidity of alcohol or drug addictions, depressive disorders have been reported in 19.2% to 79% of patients with substance addiction (4,36-38). In another study conducted in alcohol addicts, the frequency of life-long major depression was reported as 35% (37). The level of depressive symptom was found to be elevated in 76.8% of the patients who participated in our study. This result supports that depressive symptoms are quite common in addiction patients.

Darcin et al. (36) stated that in the study of inpatient addicts, the age, marital status, and education level of the patients did not change according to the presence of Axis I or Axis II co-diagnosis. While there was no significant difference in the depression rates of patients according to age and marital status in our study, sex and education level of the patients resulted in a significant difference in the depressive symptoms. The depressive symptom level in males is significantly higher in our study. Despite the fact that depression is more common in females in the general population (39), we believed that the low proportion of female participants in our study may have produced this result. In our study, it was determined that the level of education affected the rates of depressive symptoms and the depression rate increased as education level increased.

Family history of mental disorders is a risk factor for substance use (40). In our study sample one in every four patients has a family member who has been treated for a mental disorder. The presence of mental disorders in family members increases the rate of depressive symptoms in patients in patients. In the literature it is reported that parental mental disorders

leads to anxiety and depression in the later stages of life and in later generations (41).

Current studies indicate that prevalence of substance use is higher in family members of substance users (42,43). Our results also supported this, half of the patients had family members with alcohol and/or substance use. According to our study, substance use history in the family affects the rate of depressive symptoms. In addiction patients, depressive symptoms are more common in patients who have a substance user in their family.

It has been suggested that predisposition to depression in adult life is related to the problems in child-mother bond (44). Parental loss is a predisposing factor for substance use (45). In our study, more than half of the patients had experienced a loss in the family in their young ages and depressive symptom levels were found to be higher in the addiction patients who had a family member lost, than the patients who did not. It has been found that early childhood loss experience makes it more susceptible to developing depressive symptoms (46).

Multiple substance use among substance addicts is frequent (36). The frequency of multiple substance use was higher among the participants of our study. It has been reported that there is a positive correlation between the number of substance types used and the level of depressive symptoms (47). In our study, the rate of depressive symptom was higher in patients using multiple substances, but this was not statistically significant.

In alcohol/substance dependence remission and relapse are two main processes that determine the natural course of addiction. It has been observed that more than half of the alcohol/drug addicts relapse after detoxification, and these relapses are frequently caused by disorders such as depression and anxiety, which are triggered by negative emotional states (48,49). However, the comorbidity of psychiatric disorders in alcohol/substance use disorders, make harder to diagnose this patients, lead deteriorations in disease prognosis and treatment, thus increase the treatment failure rate (50). In particular, accompanying depressive symptoms increase the severity of problems in addiction (51). It has been suggested that relapses

observed in alcoholism generally develop in association with depressive symptoms (51). In our study, it was seen that the number of hospitalizations was higher in people with higher depressive symptom scores. This finding suggests that when substance use is accompanied by depression, the frequency of treatment seeking increases. Choi and Jeong (52) mentioned in their study that depressive alcohol addicts have increased hospitalization rates. It is believed that depressive mood in alcohol addicts supports ruminative thoughts, and these ruminations maladaptively draws the individual away from solving problems and adversely affects the treatment duration (53,54).

When emphasizing the role of personality in addictive behavior, a specific personality structure that determines the predisposition is not defined. However, substance use disorders are frequently reported in dependent, insecure persons with low threshold for avoidence (55). In our study, patients with high levels of depressive symptoms had higher harm avoidance scores and lower cooperativeness and self-directedness scores. Harm avoidance is often a feature of psychiatric disorders (56). Individuals avoiding harm are defined as those who exhibit passive avoidance behaviors such as pessimistic anxieties and fear of uncertainty for possible future problems, and these individuals are highly likely to develop depression (33,57). In addition to avoid high harm, low cooperation also increases predisposition of depression (57). These results, which are obtained from patients with depression, seem to be consistent with our study findings, but they differ in terms of self-transcendence. Self-transcendence is a sign of maturity. Awareness and dealing with the environment provide a wider perspective. In some of the research results, the high self-transcendence scores of depressed patients are in contradiction with our results. In our study, self-transcendence scores were low. The sample group selected from alcohol addicts may have led this result. According to the theory of Reeds (56,58), there is a linear relationship between psychological well-being and self-transcendence. According to the literature, inadequate psychological well-being has been reported to reduce

self-transcendence, in alcoholic substance addicts. Self-transcendence consists of self-forgetfulness, transpersonal identification, and spiritual acceptance and self-transcendant individuals are idealistic persons with creative, non-selfish, spiritual feelings (34). Cloninger (59) showed that low self-transcendancy in clinical trials is associated with schizoid and impulsive personality. In this respect, it can be suggested that the depressive symptoms commonly seen in addicted patients may be related to the high level of avoidance of harm, low level of cooperativeness, low self-transcendence characteristics.

The form of attachment that occurs during the infantile period has a great influence on the individual's personality development, behavior and mental health (59). Studies have shown that there is a relationship between attachment style and risky behaviors (60). Anxious attachment is frequently associated with anxiety and depression whereas avoidant attachment is associated with conduct disorders (61). When we reviewed the studies which evaluated the relationship between attachment style and substance use, it has been indicated that substance use is associated with insecure attachment (11,12,59,62). Impairment to develop a safe attachment with parents increases the tendency to substance use (60). A study, conducted in substance-user adolescents showed that the rate of substance use is high if they have an insecure attachment (59). However, we have found that avoidant attachment was higher in patients with low depressive symptom scores. It is seen that, people with avoidant attacments avoid the problems and the search for solutions (7). This result suggests that patients with depressive symptoms are likely to seek the solutions to the problems.

Our study has some limitations. The most important limitation is that the study is a cross-sectional study. The results of a follow-up study may be more valuable in order to obtain more precise results in determining the relationship between depressive symptoms and temperament-character traits and attachment patterns. In this study, depressive symptom manifestations in alcohol/drug addicts were assessed in terms of temperament-character traits and attachment patterns. Another limitation is the scales we used in our study were self-reported scales. Since these scales are based on individuals own declarations, they can not always get the right answer and can develop different perspectives according to the participant's social environment and cultural characteristics.

In spite of all these limitations, the results show that depression is an important problem to be considered in substance addicts. We think that our study will be a significant contribution to the clinical literature since it is the first study to investigate the personality and attachment relationship of depression in the alcohol-substance addicted patient group. In our study we found that some demographic, personality, and attachment characteristics affected patients' depression levels. Based on our findings, it is thought that treatment of the accompanying depressive symptoms in the patients, as well as dealing with the personality and attachment characteristics predisposing them, may be useful in long-term addiction treatment.

Contribution Categories	Name of Author
Development of study idea	G.K.
Methodological design of the study	G.K.
Data acquisition and process	G.K.
Data analysis and interpretation	G.K.
Literature review	G.K., A.B.G.
Manuscript writing	G.K., A.B.G.
Manuscript review and revisation	G.K., A.B.G.

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