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# THE PREVALENCE OF VIOLENCE AND VIOLENT CHARACTERISTICS IN ALCOHOL AND DRUG ABUSERS COMPARED WITH CONTROLS

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## ABSTRACT

**The Prevalence of Violence and Violent Characteristics in Alcohol and Drug Abusers Compared with Controls**

**Objective**: To identify the prevalence of violence in alcohol and drug abusers and a control group; to determine the relationship between violent behavior and impulsivity, anger, aggression, traumatic childhood experiences and indicate whether prevalence of violence differs between periods of deprivation, soberness and while under the influence of alcohol/drugs.

**Method**: 49 alcohol abusers and 31 drug abusers aged 15-65 years were compared among themselves and also with 62 healthy controls; using a questionnaire including questions related with sociodemographic characteristics of violence, the Buss-Perry Aggression Scale, Barratt Impulsivity Scale, the State-Trait Anger Scale, the Childhood Trauma Questionnaire, Hamilton Depression Scale, the State-Trait Anxiety Inventory.

**Results**: The prevalence of psychological violence was 85%, physical violence 54%, sexual violence 6% and economic violence 10%. Significant differences were found in most of the variables among the groups, which were thought to be related to violent behavior.

**Conclusion**: In addition to medical treatment for addiction, psychotherapeutic interventions focusing on personality traits in areas such as anger control and impulsivity should be adopted. The fact that violence decreases in sober periods indicates that violence is rather a result of the nature of the substance.

**Keywords:** alcohol and drug addiction, violence, impulsivity, childhood abuse, aggression

## ÖZET

**Alkol ve Madde Bağımlılarında Şiddet Sıklığı ve Şiddet Özelliklerinin Kontrol Grubu ile Karşılaştırılması**

**Amaç:** Alkol ve madde bağımlısı hastalarda şiddet sıklığı ve şiddeti etkileyen faktörlerin değerlendirilmesi; şiddet davranışının dürtüsellik, agresyon, öfke, çocukluk çağı örselenme yaşantıları ile ilişkisi; alkol/madde etkisindeyken, ayık/temizken ve yoksunluk dönemi arasında şiddet uygulama açısından fark olup olmadığının araştırılmasıdır.

**Yöntem:** 15-65 yaş arası 49 alkol ve 31 madde bağımlısı hasta kendi aralarında ve 62 bağımlılığı olmayan sağlıklı bireyle karşılaştırılmıştır. Katılımcılar sosyodemografik özellikleri de içeren şiddetle ilgili soruların yer aldığı anket formu, Buss-Perry Agresyon Ölçeği, Barratt Dürtüsellik Ölçeği, Sürekli Öfke ve Öfke İfade Tarzı Ölçeği, Çocukluk Örselenme Yaşantıları Ölçeği, Hamilton Depresyon Ölçeği, Durumluk Sürekli Kaygı Envanteri ile değerlendirilmiştir.

**Bulgular:** Psikolojik şiddet sıklığı %85, fiziksel şiddet sıklığı %54, cinsel şiddet sıklığı %6, ekonomik şiddet sıklığı %10 çıkmıştır. Gruplar arasında değişkenlerin çoğunda anlamlı farklılıklar bulunmuş, bunun şiddet davranışıyla ilişkili olduğu düşünülmüştür. Alkol ve madde kullanımının şiddeti artırdığı görülmüştür.

**Sonuç:** Alkol ve madde bağımlılarında medikal tedavinin yanında öfke kontrolü, stres yönetimi ve dürtüsellik gibi alanlarda kişilik özelliklerini değiştirmeye yönelik psikoterapotik müdahalelerin de yer alacağı bir tedavi yaklaşımı benimsenmelidir. Alkol ve madde bağımlılarında ayık dönemde şiddetin azalmış olduğunun görülmesi, şiddetin daha çok maddenin doğasından kaynaklanan bir durum olduğuna işaret etmektedir.

**Anahtar Kelimeler:** alkol ve madde bağımlılığı, şiddet, dürtüsellik, çocukluk çağı istismarı, agresyon

## INTRODUCTION

In recent years, addiction has become one of the most important problems in the world. In the United States of America, the lifetime prevalence was 13.8% in terms of alcohol abuse or dependence, whereas it was 6.2% for non-alcoholic substances (1). This situation is brought along with crime, social problems and diseases.

The increasing incidence of violence is a public health problem that affects the entire world. Family and partner violence is the most common type. Domestic violence can be physical, sexual, emotional, and economic. In Faramarzi et al.'s study, among 2400 women interviewed face to face, 15% reported physical violence, 42.4% experienced sexual violence and 81.5% were exposed to psychological violence (2). Alcohol is the most commonly associated substance with violent behavior. It is known that impulsivity and aggressiveness arise as a result of alcohol abuse. In Petry's study, alcohol abusers were found to be more impulsive than controls (3). Cuoma et. al found that the results of impulsivity were higher in prisoners with substance abuse than prisoners without substance use (4).

The purpose of this study is to identify the prevalence of violence in alcohol-drug abusers and a control group; the relationship between violent behaviour and impulsivity, anger, aggression, traumatic childhood experiences and whether there was a difference in the prevalence of violence between the periods of deprivation, sober periods or while under the influence of alcohol/drugs. Symptoms of depression were also assessed in the patients.

## METHODS

### Participants

This cross-sectional study was conducted among patients aged 15-65 years who were admitted to Gazi University School of Medicine Psychiatry Department at the 4th week of admission, 31 of whom were drug abusers and 49 were alcohol abusers. The reason for not taking the patients before the fourth week is that there is possible impairment in their cognitive functions because of the deprivation period before this time, which could impair their memory of the past. At the first visit; a voluntary consent form was signed by the research participants and they were guaranteed that all personal information would remain confidential. The patients were informed that they could leave the study at any time and their absence would not affect their treatment schedule.

### Data Sources

The participants were administered the Hamilton Depression Scale by the responsible physician. A sociodemographic data form developed by the researcher and questionnaire covering psychological, physical, sexual and economic violence; exposure to violence to date; and also the Buss-Perry Aggression Scale, Barratt Impulsivity Scale, the State-Trait Anger Scale, the Childhood Trauma Questionnaire, the State-Trait Anxiety Inventory were completed by the participants. The control group was randomly selected from 62 healthy volunteers aged 15-65 years who presented to the check-up center of Gazi University School of Medicine; the same questionnaires were given to the controls.

Buss-Perry Aggression Scale (BPA): The scales comprises four categories (physical aggression, verbal aggression, anger, and hostility) of 29 items related to aggression.

Barratt Impulsivity Scale (BI): This scale consists of thirty items and three subscales; attention (carelessness and cognitive disorganization), motor (motor impulsivity, impatience) and non-planning (unable to provide control, intolerance to cognitive complexity).

The State-Trait Anger Scale (STA): The first 10 items of the scale include items that measure levels of continuous anger. The remaining 24 items are related to the anger expression style. The anger expression scale yields three factors: anger-in, anger-out, and anger-control.

The Childhood Trauma Questionnaire (CT): The scale was developed by Bernstein et al. in 1994 for screening abduction experiences before the age of 18 years. It is a 40-item, 5-point Likert-type scale.

The State and Trait Anxiety Inventory (STAI): Spielberger et al. developed the scale in 1970. The test can be applied to anyone aged over 14 years.

Hamilton Depression Scale (HAM-D) : This test is administered by physicians to measure the level of depression and the change in intensity. It was developed by M. Hamilton and J.B.W. Williams.

Patients with active alcohol and substance use, organic mental impairment or psychosis and those who were illiterate were not included in the study. This research was completed in 12 months. No financial support was received during the collection of the data. This study was approved by the ethics committee of Gazi University School of Medicine (Decision no. 17; 24/06/2013).

### Statistical Methods

In this study, the data obtained from the participants were analyzed using the SPSS 16.00 program. For the descriptive analyses of the sociodemographic characteristics of the sample groups, the one-way ANOVA test was used to determine whether there were differences between the three groups in terms of variables, and Pearson's correlation was used to identify relations between dependent variables.

### Results

Chi-square analysis was performed to determine whether there was a difference between the groups in terms of age, sex, and education level. There was no significant difference between the groups in terms of sex ($\chi^2 = 2.932$,

p = .569), but there was a significant difference between the groups in terms of age ($\chi^2$ = 1.430E2, p < .001) and educational level ($\chi^2$ = 37.907, p < .001).

Ten percent of the drug-abusing patients used cannabis, 68% used heroin, 3% used thinners, and 19% used multiple substances (cannabis, ecstasy, bali, stone, heroin, bonsai, cocaine, and alcohol).

The frequencies of violence and exposure to violence of the groups are shown in Table1.

Alcohol abusers committed psychological and physical violence, especially while under the influence of alcohol. Drug abusers were more violent when they were under the influence of substances and also in the deprivation period, no participants were violent in the sober period only. When periods of sexual violence were examined, one of the alcohol abusers was under influence of alcohol; three were sexually violent while under the influence of alcohol and also in sober period. Two of the drug abusers were sexually violent while under the influence of drugs. When periods of economic violence were observed, alcohol and substance abusers were more affected by substances; the control group committed economic violence only in the sober period. Alcohol-substance abusers and the controls were mostly exposed to psychological and physical violence, especially by their fathers.

**Scales**

The one-way ANOVA test was used to determine whether there was a difference between the sample groups in terms of scale scores applied. As a result, it was found that there was a significant difference between the groups in terms of all scales and subscale scores. The Tukey test was applied from the post hoc tests to determine the source of the differences. The results are shown in Table 2.

Pearson's correlation analysis was performed to determine whether there was a relationship between the scale scores applied to alcohol abusers. The results are shown in Table 3.

Pearson's correlation analysis was performed to determine whether there was a relationship between the scale scores applied to substance abusers. The results are shown in Table 4.

## DISCUSSION

In our study, substance abusers were found to be younger than alcohol abusers. This result is compatible with studies conducted both abroad and in our country (5). Alcohol abusers in our study were older than substance abusers because longer time is needed to develop alcohol dependence and physical complications, whereas substance dependence can develop rapidly and because of the early onset of physical symptoms, treatment can be earlier.

The most frequently used substance in studies conducted in our country and abroad is reported as cannabis (6) however, the use of cannabis alone was rare in our study, often accompanied by multiple substances, the most frequent being opiates. This difference may be related to the cultural acceptance of cannabis use, and our sample consisted of inpatients.

In our sample, the prevalence of psychological violence was 85%, physical violence 54%, sexual violence 6%, and economic violence 10%. In a study, 74.6% of participants reported perpetrating intimate partner violence (IPV) at some time; 16.5% emotional IPV only, 46.4% physical IPV, and 11.6% sexual IPV. Higher anger expression and symptoms of depression, experiencing a greater number of adverse childhood experiences, and a higher hazardous drinking score predicted IPV perpetration (7).

In terms of psychological violence, 38.8% of those who committed psychological violence were alcohol abusers, 30.6% were substance abusers, and 30.6% were controls. The violence rates in the control group led to an understanding that a culture of violence was established in our general society. Kotan et al. found that the prevalence of exposure to domestic violence by intimate partner is 58.8% in Turkey (8). In Faramarzi et al.'s study 81.5% of women were exposed to psychological violence (2).

Regarding physical violence, 42.6% of those who committed physical violence were alcohol abusers, 35.2% were drug abusers, and 22.2% were control groups. In Faramarzi et al.'s study 15% of women reported physical violence (2).

It is observed that the alcohol abusers mainly commit psychological and physical violence while under the influence of alcohol; violence decreases when there is no alcohol effect. When violent crimes are compared with non-violent crimes, alcohol consumption is twice as likely to be involved in violent crimes (9). Violent behavior often develops as disinhibition (especially early-phase intoxication), emotional lability, and inadequate reasoning. Alcohol directly augments aggression by anesthetizing the center of the brain that inhibits the aggressive response. Alcohol can reduce frontal lobe function. Alcohol may also affect neurochemical systems that elicit aggressive behavior. Violence is possible in alcohol intoxication as well as deprivation, delirium, and substance-induced psychosis episodes. For men entering the domestic violence treatment program the odds of any male-to-female physical aggression were more than 8 times higher on days when men drank than on days of no alcohol consumption (10).

It was reported that adolescents with a history of alcohol or drug use had increased odds of firearm homicide (11). Drug abusers are also more likely to commit psychological violence while under the influence of substances, as well as in the deprivation period. There is no psychological or physical violence in the sober period, whereas physical

violence is seen at the highest levels during deprivation. The cause of the increase of violence during the deprivation period may be related to substance seeking behavior because heroin is the main substance used in substance group and there is no evidence to support the relationship of the use of opioids and violence, apart from in the period of deprivation. Opioids depress activity and are not known as a pharmacologic violence producer. Deprivation can be very painful, potentially causing the user to behave violently to reduce the symptoms of deprivation to find the substance again. Some patients can commit crimes to obtain illegal opioids.

In terms of committing sexual violence, 66.7% of those who commit sexual violence are alcohol abusers and 33.3% are substance abusers. There was no sexual violence observed in the control group. Sexual violence, which men conduct to women within the family, does not usually come into the open in the name of family confidentiality. Therefore, it is thought that the rates may actually be higher. In Faramarzi et al.'s study 42.4% of women experienced sexual violence (2).

When economic violence was considered, 60% of those who commit economic violence were alcohol abusers, 30% were drug abusers, and 10% were in the control group. Dönmez et al. found that the prevalence of economic violence against partners was 34.4% (12).

Exposure to physical and psychological violence in particular, was not so different in the control group; however, the frequency was much less compared with the general sample. This result shows that the tendency for violence in general society is already high and accepted. Exposure to violence can increase the readiness to commit violence in alcohol-drug abusers. The fact that alcohol and drug abusers have decreased violence in sober period indicates that violence is more a result of the nature of the substance. In addition, it is necessary to consider that the characteristics of the adolescence period could also have affected the outcomes as the drug abuser group was young. According to these results one can think that violence may be induced by substances, substances may increase the intensity of underlying violence, or suppressed violence may be revealed with the effect of substances. O'Farrell et al. (13) found that 56% of male alcoholics reported violence against their partners during the treatment year (control group: 14%), and the ratio decreased to 25% after 1 year of treatment. In sober individuals, violence also decreased to 15% (similar to the control group). In Erdem and Muslu's study, it was determined that men who committed physical violence to their partner used alcohol more frequently than those who were not violent (14).

In the BPA scale, the drug abusers scores were significantly higher in all subscale and total scores than the control group. Alcohol abusers had significantly higher scores in the hostility subscale and total scores than the control group. The drug abusers' scores in physical aggression, anger subscales, and total scores were significantly higher than those of the alcohol abusers. This may be related to characteristics of adolescence. In a previous study, the BPA hostility subscale and BI motor impulsivity subscale in alcohol abusers, and BPA physical aggression and BI non-planning subscale in heroin abusers differed from the control group (15).

In the BI scale, alcohol and drug abusers' scores were significantly higher in all subscales and total scores than the control group. Drug abusers had a significantly higher score in the attention subscale and total scores than the alcohol abusers. In the literature, drug abusers were found to be more impulsive than alcohol abusers (16), multi-drug abusers were more impulsive than those dependent on a single substance (17), and alcohol abusers were found to be more impulsive than control groups (3). In a study that investigated alcohol use and violence against partners, the results indicated that impulse control difficulties were an important actor and partner predictor of both physical and psychological aggression (18).

In the STA scale, drug abusers' continuous anger, anger-in and anger-out levels were significantly higher than those of the control group, but the anger control levels were lower. Alcohol abusers also had significantly higher levels of continuous anger and anger-out, but lower anger controls than the control group. The continuous anger and anger-out levels of the drug abusers were significantly higher than in alcohol abusers. The reason for this may be the identity formation process of adolescence and risk-taking behaviors as well as the drug effect. A previous study showed that scores of continuous anger, anger-in and anger-out were significantly higher in those who used alcohol and addictive drugs than those who did not (19).

In our study, it is striking that there was no significant difference between alcohol abusers and the control group in terms of abuse when we looked at the CT questionnaire. This can be explained by the fact that our sample group was small. However Mirsal et al. found that childhood trauma was significantly higher among alcohol abusers than in the control group (20). Drug abusers scored significantly higher in all subscales and total scores than the control group. Drug abusers scored significantly higher in terms of sexual abuse than alcohol abusers. Cuoma et al. reported that the total scores of drug abusers were higher than those without drug dependence in emotional violence and physical neglect (4). Evren et al. found that abuse or neglect was higher in drug abusers than alcohol abusers (21). In a study on violent offenders who used intravenous drugs, higher severity groups had a greater prevalence and more severe histories of childhood maltreatment, and dysfunctional trait personalities, as well as more severe substance use problems than low-level and non-violent, injecting drug users (22).

When we looked at HAM-D, STAI-1, and STAI-2, in our

study, alcohol and substance abusers were found to score significantly higher than the control group, similar to the literature (20). High levels of anxiety and anxiety disorder are common with substance abuse, there is a reciprocal relationship between them. Drug use may increase anxiety and trigger anxiety disorder, or high anxiety and anxiety disorders may increase the risk of starting substance use.

In our study, aggression increased as the level of impulsivity and anger increased in alcohol and drug abusers; increased levels of impulsivity lead to an increase in continuous anger and anger-out. In addition, there was a decrease in anger control in alcohol abusers, but an increase in anger-in among substance abusers. Güleç H. found that impulsivity was associated with aggression and anger in the alcohol abuse group (23). In alcohol abusers in our study, as the level of childhood abuse and trait anxiety increased, the level of aggression increased. In a study with a group that had a history of abuse or neglect, anger and hostility subscales were higher in BPA scales of physical and verbal aggression (24). Contrary to the literature, there was no positive correlation between abuse and aggression in drug abuse in our study, which may be due to our small sample size. In our study, as childhood abuse increased in alcohol abusers, the level of continuous anger, anger-out, and trait anxiety increased, and anger control decreased. In drug abusers, as childhood abuse increased, anger also increased. In a previous study, it was found that anger was high and anger control was low in alcohol-drug abusers who had traumatic experiences in childhood, the mean scores of continuous anger, anger in and anger out subscales were found higher in those who had a history of abuse or neglect (24). In contrast to the literature, there was no positive correlation between abuse and impulsivity in alcohol and drug abusers in our study. This result can be explained by the small sample size. In a study of late adolescents in 2016, negative urgency (an emotion-based facet of impulsivity) mediated the association between childhood maltreatment severity and later alcohol and cannabis problems (25). In a study by Roy substance abusers with a childhood trauma score showed a small but significant correlation with impulsivity scores at times when they were not using the substances on which were dependent (26).

## CONCLUSION

In our study, alcohol and drug abusers were compared with the control group and among themselves in terms of aggression, impulsivity, anger, and childhood trauma. Significant differences were found in most variables among the groups. They were thought to be related to violent behavior; alcohol and drug use increased the severity. These data indicate the importance of protective psychiatric approaches. Our study is the first to address all these parameters simultaneously. In addition to the medical treatment of addiction, a treatment approach in which psychotherapeutic interventions focusing on anger control, stress management, and impulsivity should be adopted. However, the fact that alcohol and drug abusers have decreased violence in sober period indicates that violence is more a result of the nature of the substance. According to the present evidence, the effect of alcohol intake on violence cannot be denied, but only in some people or conditions. Other factors leading to aggression can be listed as biochemical, genetic, psychological, and environmental. Therefore, one of the main issues to be investigated is individual differences and situational variables that constitute the conditions. In addition, it is necessary to consider that the characteristics of the adolescence period might also affect the outcome of the substance abusers in this group because they are very young. Larger scale studies should be conducted comparing alcohol and drug abusers.

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**TABLES**

Table 1. The frequencies of violence and exposure to violence of the groups

| Violence Characteristics | Alcohol Abusers (N=49) | | Drug Abusers (N=31) | | Control Group (N=62) | | Total Sample (N=142) | |
|---|---|---|---|---|---|---|---|---|
| | N | % | N | % | N | % | N | % |
| Psychological violence | 33 | 38.82 | 26 | 30.59 | 26 | 30.59 | 85 | 100 |
| Physical violence | 23 | 42.6 | 19 | 35.2 | 12 | 22.2 | 54 | 100 |
| Sexual violence | 4 | 66.66 | 2 | 33.33 | 0 | 0 | 6 | 100 |
| Economic violence | 6 | 60 | 3 | 30 | 1 | 10 | 10 | 100 |
| Exposure to violence to date | 19 | 29.23 | 20 | 30.77 | 26 | 40 | 65 | 100 |

Table 2. Results of One-Way ANOVA on Scale Points Applied to Sample Groups

| Scales | Subscales | Group | Average | F | p | Post Hoc |
|---|---|---|---|---|---|---|
| **Buss-Perry Aggression Scale** | Physical Aggression | Alcohol | 10.06 | 24.056*** | .000 | Alcohol < Drug (p=.000)<br>Drug >Control (p=.000) |
| | | Drug | 16.45 | | | |
| | | Control | 8.03 | | | |
| | Verbal Aggression | Alcohol | 7.8 | 3.953* | .021 | Drug >Control (p=.019) |
| | | Drug | 9.74 | | | |
| | | Control | 7.45 | | | |
| | Anger | Alcohol | 10.39 | 10.277*** | .000 | Alcohol < Drug (p=.038)<br>Drug>Control (p=.000) |
| | | Drug | 13.77 | | | |
| | | Control | 7.87 | | | |
| | Hostility | Alcohol | 10.96 | 14,379*** | .000 | Alcohol >Control (p=.004)<br>Drug >Control (p=.000) |
| | | Drug | 14.26 | | | |
| | | Control | 6.87 | | | |
| | Total | Alcohol | 38.77 | 19.938*** | .000 | Alcohol < Drug (p=.000)<br>Alcohol >Control (p=.030)<br>Drug >Control (p=.000) |
| | | Drug | 54.23 | | | |
| | | Control | 30.23 | | | |
| **Anger scale** | Continuous Anger | Alcohol | 20.78 | 23.766*** | .000 | Alcohol < Drug (p=.005)<br>Alcohol >Control (p=.000)<br>Drug >Control (p=.000) |
| | | Drug | 24.71 | | | |
| | | Control | 16.71 | | | |
| | Anger in | Alcohol | 17.45 | 5.569** | .005 | Drug >Control (p=.006) |
| | | Drug | 18.48 | | | |
| | | Control | 15.71 | | | |
| | Anger out | Alcohol | 16.51 | 13.091*** | .000 | Alcohol < Drug (p=.032<br>Alcohol >Control (p=.019<br>Drug >Control (p=.000) |
| | | Drug | 18.94 | | | |
| | | Control | 14.34 | | | |
| | Anger Control | Alcohol | 20.71 | 7.602** | .001 | Alcohol <Control (p=.005)<br>Drug <Control (p=.003) |
| | | Drug | 20.1 | | | |
| | | Control | 23.74 | | | |
| **STAI-1** | Total | Alcohol | 37.65 | 21.135*** | .000 | Alcohol > Control (p=.000)<br>Drug > Control (p=.000) |
| | | Drug | 41.81 | | | |
| | | Control | 29.71 | | | |
| **STAI-2** | Total | Alcohol | 45.96 | 31.272*** | .000 | Alcohol > Control (p=.000)<br>Drug > Control (p=.000) |
| | | Drug | 47.29 | | | |
| | | Control | 36.82 | | | |
| **HAMD** | Total | Alcohol | 7.24 | 11.122*** | .000 | Alcohol > Control (p=.000)<br>Drug > Control (p=.001) |
| | | Drug | 7.42 | | | |
| | | Control | 2.31 | | | |
| **Barratt Impulsivity Scale** | Attention Impulse | Alcohol | 16.14 | 18.699*** | .000 | Alcohol < Drug (p=.003)<br>Alcohol > Control (p=.010<br>Drug > Control (p=.000) |
| | | Drug | 18.64 | | | |
| | | Control | 14.29 | | | |
| | Motor Impulse | Alcohol | 20.98 | 13.574*** | .000 | Alcohol > Control (p=.006<br>Drug > Control (p=.000) |
| | | Drug | 22.94 | | | |
| | | Control | 18.74 | | | |
| | Unsceduled(non-plan) Impulse | Alcohol | 27.8 | 16.814*** | .000 | Alcohol > Control (p=.000<br>Drug > Control (p=.000) |
| | | Drug | 29.42 | | | |
| | | Control | 24.05 | | | |
| | Total | Alcohol | 64.92 | 22.897*** | .000 | Alcohol < Drug (p=.020)<br>Alcohol > Control (p=.000<br>Drug > Control (p=.000) |
| | | Drug | 71 | | | |
| | | Control | 57.08 | | | |
| **Childhood Trauma Questionnaire** | Physical Abuse | Alcohol | 25.73 | 5,330** | .006 | Drug > Control (p=.004) |
| | | Drug | 29.55 | | | |
| | | Control | 23.66 | | | |
| | Emotional Abuse | Alcohol | 40.49 | 3.237* | .042 | Drug > Control (p=.049) |
| | | Drug | 42.19 | | | |
| | | Control | 35.64 | | | |
| | Sexual Abuse | Alcohol | 5.57 | 13.289*** | .000 | Alcohol < Drug (p=.000)<br>Drug > Control (p=.000) |
| | | Drug | 7.52 | | | |
| | | Control | 5.19 | | | |
| | Total | Alcohol | 71.8 | 5.804** | .004 | Drug > Control (p=.003) |
| | | Drug | 79.26 | | | |
| | | Control | 64.5 | | | |

*p<.05, **p<.01, ***p<.001

Table 3. Correlations Between Scales Applied to Alcohol Abusers

| | BPA T | CA | Anger in | Anger out | AC | STAI1 | STAI2 | HAMD | BI T | CT T |
|---|---|---|---|---|---|---|---|---|---|---|
| **BPA T** | 1 | | | | | | | | | |
| **CA** | .759** | 1 | | | | | | | | |
| **Anger in** | .333* | .272 | 1 | | | | | | | |
| **Anger out** | .708** | .717** | .392** | 1 | | | | | | |
| **AC** | -.474** | -.430** | .033 | -.526** | 1 | | | | | |
| **STAİ1** | .280 | .218 | .107 | .264 | -.284* | 1 | | | | |
| **STAI2** | .372** | .320* | .447** | .441** | -.396** | .595** | 1 | | | |
| **HAMD** | -.050 | -.077 | -.003 | .083 | -.120 | .411** | .411** | 1 | | |
| **BI T** | .539** | .403** | .245 | .410** | -.436** | .445** | .430** | .155 | 1 | |
| **CT T** | .398** | .287* | -.003 | .340* | -.372** | .198 | .362* | .012 | .242 | 1 |

*p<.05, **p<.01

Continuous anger (CA), Total(T), Anger control(AC)

Table 4. Correlations Between Scales Applied to Substance Abusers

| | BPA T | CA | Anger in | Anger out | AC | STAI1 | STAI2 | HAMD | BI T | CT T |
|---|---|---|---|---|---|---|---|---|---|---|
| **BPA T** | 1 | | | | | | | | | |
| **CA** | .739** | 1 | | | | | | | | |
| **Anger in** | .610** | .676** | 1 | | | | | | | |
| **Anger out** | .584** | .799** | .624** | 1 | | | | | | |
| **AC** | -.007 | .081 | .421* | .168 | 1 | | | | | |
| **STAİ1** | .393* | .272 | .265 | .274 | -.080 | 1 | | | | |
| **STAI2** | .436* | .140 | .276 | .082 | -.240 | .737** | 1 | | | |
| **HAMD** | .020 | .164 | .222 | .158 | -.088 | .195 | .202 | 1 | | |
| **BI T** | .649** | .611** | .463** | .488** | -.138 | .302 | .386* | .149 | 1 | |
| **CT T** | .199 | .109 | .394* | .071 | .086 | .280 | .346 | .284 | .165 | 1 |

*p<.05, **p<.01

Continuous anger (CA), Total(T), Anger control(AC