



# Traumatic Stress and Substance Abuse among College Students

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## Introduction

Traumatic stress generally refers to any event in which death or several physical harm has occurred or was threatened, but may also include psychological harm. Once thought of as a condition related most prevalent to the military, traumatic events and the stress that accompanies them is now being more appropriately recognized in a much broader portion of the population.

Traumatic stress has been established as a general risk factor for substance use and abuse in general population adults (Sierles, Chen, McFarland, & Taylor, 1986).

High comorbidity rates with other disorders such as major depression, bipolar disorder, and antisocial personality disorder (Orsillo, Weathers, Litz, Steinberg, Huska, & Keane, 1996) demands further research, specifically in regards to college students, a population yet to be thoroughly examined.

The purpose of this study was: (a) extend prior research on traumatic stress as a risk factor to the college student population, (b) to assess the association between exposure to traumatic stress and both alcohol and drug abuse symptom, and (c) the relationship with use of other substances. It was expected that students who report experiencing a high amount of traumatic stress would evidence greater symptoms of substance abuse than their peers. Furthermore, it was anticipated that such students would also report higher rates of use of other substances.

## Method

### Participants

- > 1540 undergraduate students (528 men, 1012 women).
- > Age: 18 to 24 years ( $M = 19.06$ ,  $SD = 1.25$ ).
- > Recruited from among the general student population.

### Assessment of Substance Abuse

**Personality Assessment Inventory** (PAI; Morey, 2007). Symptoms of alcohol and drug abuse are separate measures with the alcohol abuse and drug abuse scales of the PAI (12 items each, rated on a four-point scale). Higher scores indicate greater symptoms of substance abuse. Raw scores were converted to  $T$ -scores using college student norms.

### Assessment of Substance Use

**Drinking and Drug Habits Questionnaire** (DDHQ; Hammers & Suhr, 2010). The DDHQ is a 13-item, self-report frequency measure for usage of 13 classes of drugs. Students reported whether they had ever used each substance in their lifetime.

### Assessment of Traumatic Stress

**Personality Assessment Inventory** (PAI; Morey, 2007). Traumatic stress was assessed using the traumatic stress subscale of the PAI, consisting on 8 items, rated on a four-point scale. Higher scores indicated greater degree of traumatic stress.

### Formation of Groups

- > Participants who scored 2  $SD$  above the mean or greater on the traumatic stress subscale were categorized as the “**traumatic stress**” group. Those scoring at or below the mean were categorized as “**normal comparison**.”
- > The final sample consisted of 851 participants.
- > **Final groups:**
  - **Normal Comparison** ( $n = 658$ ).
  - **Traumatic Stress** ( $n = 193$ ).

## Results

A pair of one-way ANOVAs were calculated to separately test the difference between groups on drug abuse and alcohol abuse symptoms. Results are displayed in Table 1.

Results indicated that students in the traumatic stress group reported significantly higher on drug abuse symptoms compared to the normal comparison group. That was a medium-sized effect, accounting for 9% of the variance. In addition, traumatic stress students reported significantly higher rates of alcohol abuse symptoms. That was a large effect, accounting for 11% of the variance.

A set of 13 chi-square analyses was also conducted to compare the groups on rates usage of other substances (see Table 2). Those students in the stress group reported significantly higher rates of use of all but two of the drug classes assessed. The exceptions being alcohol and barbiturates. Differences between the groups for usage of all substances were substantial.

Table 1. Mean Drug and Alcohol Abuse Scores among Traumatic Stress Groups

Scale	Normal Comparison	Traumatic Stress	$F$	$p$	$\eta^2$
Drug Abuse	55.01 (12.49)	65.06 (19.10)	74.28	< .0001	0.09
Alcohol Abuse	47.86 (6.44)	54.13 (11.55)	94.09	< .0001	0.11

Note. Standard deviations in parentheses. All tests have  $df = 1, 847$ .

Table 2. Rates of Substance Usage between Groups

Substance Class	Normal Comparison	Traumatic Stress	$X^2$	$p$
Tobacco	9%	21%	20.78	.0001
Alcohol	82	83	.28	NS
Cannabis	27	46	11.30	.001
Cocaine	7	18	20.71	.0001
Amphetamines	2	10	28.16	.0001
Rx Stimulants	14	26	15.75	.0001
Opiates	4	10	9.62	.002
Pain Medications	12	27	26.25	.0001
Barbiturates	2	4	1.08	NS
Tranquilizers	7	20	27.11	.0001
Hallucinogens	10	19	11.24	.001
Club Drugs	11	20	10.14	.001
Inhalants	2	7	11.42	.001

Note. Entries represent percentages. All tests have  $df=1$ .

## Discussion

Results indicated that traumatic stress was associated with increased drug and alcohol abuse symptoms.

Moreover, traumatic stress was associated with significantly higher rates of usage for 11 of the 13 substance classes assessed. The exceptions involved alcohol and barbiturates. As alcohol is, by far, the most widely used substance among college students, it is likely that ubiquity of use negated those effects. Barbiturates are just very hard to come by, which may explain the unsubstantial increase in usage.

These findings support the need for better screening and intervention for students who have experienced traumatic stress. Intervention and treatment programs should then be individualized, so as to target behavioral self-regulation and emotion management skills, in accordance with the individual needs of each student regarding their traumatic stress to promote healthier behavior.

## References

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