

# Changes in Stress Reactivity among Stimulant Dependent Adults After Treatment with Mindfulness Based Relapse Prevention: Results from a Pilot Randomized Clinical Trial

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## Abstract

**Background:** In light of recent evidence suggesting the presence of stress processing deficits in stimulant users, coupled with laboratory studies demonstrating an association between stress reactivity and relapse to stimulant use, interventions that target stress-induced craving and stress reactivity may reduce relapse risk in this population.

**Objective:** This study examines changes in stress reactivity among adults with stimulant use disorders (N=22) in response to an 8 week Mindfulness Based Relapse Prevention (MBRP) intervention.

**Methods:** Study participants were enrolled in a pilot randomized clinical trial, evaluating the efficacy of MBRP, relative to a health education control condition (HE). At baseline and treatment-end, biological and subjective responses to a laboratory psychosocial stress task (i.e., the Trier Social Stress Task) were measured.

**Results:** MBRP participants evidenced significantly lower levels of salivary cortisol in response to the post-treatment laboratory stress provocation, relative to those in the HE condition. Likewise, HE participants evidenced disproportionately greater increases in subjective stress, anxiety and stimulant cravings in response to the post-treatment stress provocation, relative to those who received MBRP.

**Conclusion:** Results of this pilot investigation suggest that MBRP effectively attenuates stress reactivity among adults with stimulant use disorders. This approach may have utility as an adjunct to comprehensive programs treating stimulant addiction. Future research evaluating the impact of changes in stress reactivity on post-treatment relapse to stimulant use and the long-term effects of MBRP on stress reactivity is warranted.

**Keywords:**

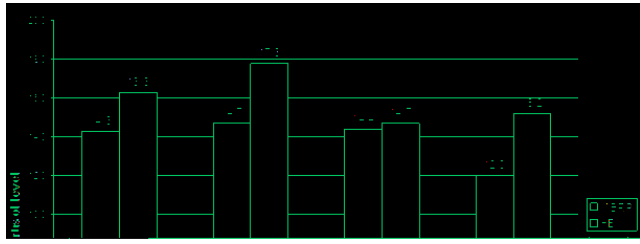
**Abbreviations:**

blfcXi Wcb

A YhcXg

G VYMG

Yrs education, M (sd)	13.5 (2)	13.6 (1.8)	13.3 (2.2)
<b>Ethnicity, % (N)</b>			
Caucasian	36.4 (8)	45.5 (5)	37.5 (3)
Hispanic	13.6 (3)	16.7 (2)	11.1 (1)
African American	50 (6)	50.0 (6)	55.6 (5)
Asian	13.6(3)	20.0 (2)	11.1 (1)
<b>Current employment, % (N)</b>			
Full time	18.2 (4)	7.7 (1)	33.3 (3)
Part time/Student	36.3 (8)	23.1 (3)	11.1 (1)
Unemployed	45.5 (10)	38.5 (5)	55.6 (5)
Full time	18.2 (4)	7.7 (1)	33.3 (3)
Part time/Student	36.3 (8)	23.1 (3)	11.1 (1)
<b>Marital status, % (N)</b>			
Married	9.1 (2)	7.7 (1)	11.1 (1)
Divorced/Separated	31.8 (7)	38.5 (5)	22.2 (2)
Never Married	59.1 (13)	53.8 (7)	66.7 (6)



60 min	10.60%	23.30%	2.87	0.09
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