

# Psychostimulant Drug Abuse and Personality Factors in Medical Students

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## Introduction

Psychostimulant medications have a high abuse potential and are appealing to college students for enhancing their examination performance.

## Purpose

This study was designed to examine the prevalence of psychostimulant drug abuse among medical students and to test the hypothesis that medical students who use psychostimulant drugs for non-medical reasons are characterized by a sensation seeking and aggressive-hostility personality and exhibit lower empathy.

## Methods

The Zuckerman-Kuhlman Personality Questionnaire and the Jefferson Scale of Empathy, in addition to demographic and study questions, were completed anonymously online by 321 medical students in 2010-2011 academic year.

**Table 1: Frequency of Psychostimulant Drug Abuse in 321 Jefferson Medical Students by Gender (who completed the On-Line Survey in January 2011)**

	Men (n = 148)	Woman (n = 173)	Total (n = 321)
Abused drugs before medical school	18	19	37
Abused drugs during medical school	7	7	14
Abused drugs to help learning	13	19	32

## Results

Forty-five students (14%) reported that they had abused psychostimulant medications either before or during medical school. Results of multivariate analysis of variance provided partial support for our research hypothesis: students who reported using psychostimulant compared to the rest, obtained a significantly higher average score on the Aggressive-Hostility personality factor. No other significant differences were observed.

**Table 2: Means, Standard Deviations, and Summary Results of Statistical Analyses of Empathy and Personality Scores for 321 Students at Jefferson Medical College by Their Report of Using Psychostimulant Drugs (who Completed an On-Line Survey in January, 2011)†**

Variables	Used Psychostimulants (n = 45)		Did not use Psychostimulants (n = 276)		
	M	SD	M	SD	p‡
Empathy	104.7	8.5	105.3	9.1	.68
Aggressive-Hostility	2.6	1.7	1.7	1.5	.0006
Impulsive Sensation-Seeking	2.4	1.7	1.8	1.7	.08
Neuroticism-Anxiety	2.5	2.0	2.7	2.1	.53
Sociability	3.9	2.2	3.8	2.2	.78
Activity	4.0	2.1	4.5	1.9	.16

† Wilks' Lambda = .95, related multivariate  $F_{(6,306)} = 2.8, p = .01$

‡ p-values for the post-hoc pair-wise mean comparisons.

## Conclusions

- Psychostimulant drug abuse among medical college students was significantly associated with aggressive/hostile personality traits
- A non-significant trend was found with psychostimulant abuse and impulsive, sensation-seeking or thrill-seeking behavior.
- 14% of medical students have abused psychostimulant drugs for non-medical reasons
- 71% of the users admitted it was for studying purposes
- Highlights a problem amongst medical students
- Further research is needed to define the effects of our findings

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