Psychostimulant drug abuse and personality factors in medical students

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What will we learn about this topic?

01 Define Psychostimulant drug abuse and personality

02 Outline methods that are used in the survey of Psychostimulant drug

03 Explain the results of the survey of Psychostimulant drug

04 Discuss the Psychostimulant drug abuse

Introduction

- The abuse of psychostimulant medications, such as dextroamphetamine or Adderall, among college and medical students has become a pressing concern in recent years.
- These drugs, which are intended to treat conditions like ADHD, have been increasingly misused for their perceived cognitive-enhancing effects, particularly in academic settings.
- This trend raises significant ethical, medical, and educational concerns, as highlighted by numerous studies exploring the prevalence, motivations, and consequences of this behavior.

Introduction

- Understanding the scope of psychostimulant medication abuse among students, along with its potential impact on academic performance, professional behavior, and overall well-being, is essential for developing effective prevention and intervention strategies.

- This introduction sets the stage for examining the complex issue of psychostimulant abuse among college and medical students, underscoring the need for comprehensive research and proactive measures to address this growing problem.

(McCabe *et al*. 2005)

Aim

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.

01

Methods

Methods

- The study, approved by the Thomas Jefferson University Institutional Review Board, involved administering a 73-item online survey to all students at a single medical school.
- The survey, posted by the student council, asked participants about their use of psychostimulant medications for medical or non-medical purposes, before or during medical school.

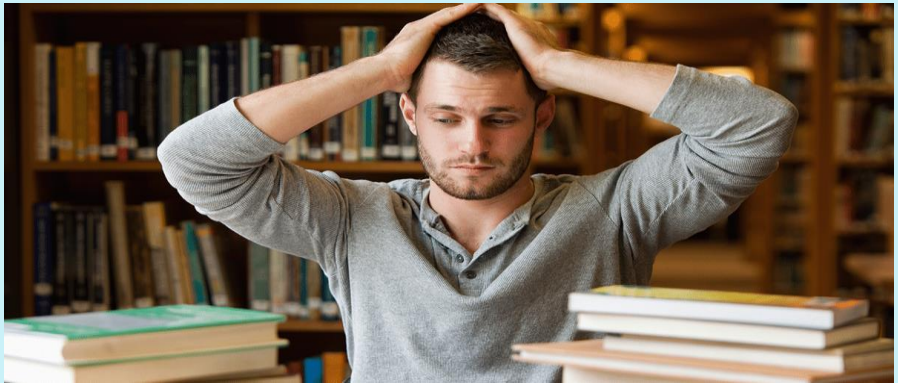
Methods

- Responses were anonymous, and participants were informed that the data would remain confidential.
- Students who reported using psychostimulant medications for medical purposes prescribed by a physician were excluded from the study.
- The survey included demographic questions, the Jefferson Scale of Empathy (JSE), and the Zuckerman-Kuhlman Personality Questionnaire (ZKPQ).
- The JSE, a validated measure of empathy, consists of 20 items answered on a seven-point Likert scale, specifically focusing on empathic orientation in patient care.

Methods

- The ZKPQ-S, a personality questionnaire, measures five big factors of personality: Impulsive Sensation Seeking, Neuroticism-Anxiety, Aggression-Hostility, Sociability, and Activity.
- Correlational and analysis of variance methods were used for statistical analyses.

(Hojat 2001; Hojat *et al.* 2002a,b,c,d; Hojat 2007; Zuckerman 2002, 2007)



02

Results

Results

- Out of 321 students included in the study, 45 (14%) reported using psychostimulant medications before or during medical school, or for studying purposes.
- More respondents were in their earlier years of medical school, with no significant difference in stimulant use between genders or across different years of medical school.
- Psychostimulant drug abusers scored significantly higher on the aggressive-hostility personality measure and showed a marginal statistical difference on the impulsive sensation-seeking personality measure compared to non-abusers.
- No significant association was found between psychostimulant abuse and empathy, with both groups scoring similarly on the empathy scale.

Results

	Men ($n = 148$)	Percent	Woman ($n = 173$)	Percent	Total ($n = 321$)	Percent
Abused drugs before medical school	18	12	19	11	37	12
Abused drugs during medical school	7	5	7	4	14	4
Abused drugs to help learning	13	9	19	10	32	10

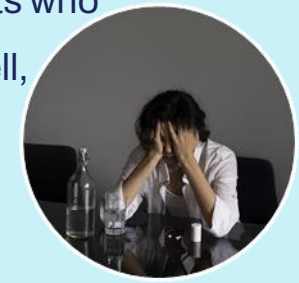
	Used psychostimulants ($n = 45$)		Did not use psychostimulants ($n = 276$)		
Variables	*M*	SD	*M*	SD	p^b
Empathy	104.7	8.5	105.3	9.1	0.68
Aggressive–hostility	2.6	1.7	1.7	1.5	0.0006
Impulsive sensation-seeking	2.4	1.7	1.8	1.7	0.08
Neuroticism–anxiety	2.5	2.0	2.7	2.1	0.53
Sociability	3.9	2.2	3.8	2.2	0.78
Activity	4.0	2.1	4.5	1.9	0.16

03

Discussion

Discussion

- **Association with Aggressive-Hostility Personality:** The study finds a significant link between psychostimulant drug abuse among medical students and aggressive-hostility personality traits, although sensation-seeking behavior showed less significant association.
- **Prevalence of Abuse:** Approximately 14% of the surveyed medical students admitted to abusing psychostimulant drugs for non-medical reasons, indicating a substantial problem within this population.
- **Potential for Additional Substance Abuse:** There's a suggestion that students who abuse psychostimulant drugs may be prone to abusing other substances as well, though this needs further verification.



Discussion

- **Motivations for Abuse:** The primary motivations for drug abuse include enhancing concentration and alertness, indicating a trend towards seeking academic performance enhancement through unprofessional means.
- **Previous Research:** Previous studies also highlight the prevalence of psychostimulant drug abuse among medical and pharmacy students, indicating a broader issue across various academic disciplines.
- **Limitations of the Study:** The study acknowledges limitations such as a small sample size and potential response bias in self-report surveys, cautioning against overgeneralizing the findings.

Discussion

- **Professional and Patient Implications:** The study emphasizes the detrimental effects of substance abuse on both the health of medical students and the quality of future patient care, particularly emphasizing the negative impact on physician-patient relationships.
- **Need for Further Research and Intervention:** The findings underscore the importance of further research and interventions to address substance abuse within medical education, particularly focusing on the relationship between personality traits and substance abuse.

(Habibzadeh *et al.* 2011)

Conclusion

Research is needed to confirm the rate of psychostimulant drug abusers among medical students in other medical schools.

That in susceptible individuals, chronic use can cause addiction leading to devastating physical, psychological, and social health consequences.

Healthcare professionals and educators can develop effective interventions to support the well-being and success of medical students.

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