

# Substance Use and Attitudes on Professional Conduct Among Medical Students - Preliminary Findings

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# Introduction

- Alcohol and drug addictions represent 80%-94% of all cases investigated by state physician impairment programs (Dupont, 2009).
- Substance use is a major mental health risk among medical students (Pickard, 2000).
- Over one-third of medical students engage in excessive drinking and substance abuse (Aristeiguieta, 1998).
- Despite their mental health problems, they continue to perform well academically (Contrad, 1988).

# Existing research - prescription stimulant use among college students

Weyandt, et al:

- 60% reported knowing students who misused stimulants.
- 50% agreed or strongly agreed that prescription stimulants were "easy to get on this campus."
- Findings reveal relationship between stimulant use and degree of psychological distress and internal restlessness.

Arria, et al:

- Of 1208 students who were not using prescription stimulants medically for ADHD, 218 (18.0%) engaged in nonmedical use of prescription stimulants.

# Existing research - prescription stimulant use among medical students

- Very few studies exist.

Tuttle, et al:

- Conducted at a public medical college.
- Survey suggests that medical students are relatively high-risk population for nonmedical prescription stimulant use.
- 33 medical students (10.1%) report prescription stimulant use for nonmedical purposes during lifetime.
- Most commonly reported motivation: to improve academic performance.

# Objectives

- To determine substance abuse trends among medical students.
- To examine how substance abuse correlates with medical students' attitudes and beliefs toward professionalism.
- Special attention paid to prescription stimulant abuse.

# Definitions

- Substance abuse:
  - marijuana use, excessive drinking, and/or use of stimulants without prescription
- Excessive Drinking:
  - at least one occasion on which 5+ drinks consumed and/or
  - 2+ drinks/day on average in men
  - 1+ drink/day on average in women
- Binge Drinking:
  - 5+ drinks for men and 4+ drinks for women on a single occasion (National Institutes of Alcohol Abuse and Alcoholism)

# Hypotheses

We expect the following results:

- Students who do not view substance abuse as serious medical concerns are less likely to seek help for these issues.
- Students who themselves engage in substance abuse, particularly alcohol and prescription stimulants, are less likely to view these behaviors as being unprofessional.

# Methods - Survey Design

- 4 components:

1. Demographics.\*
2. Health behaviors.\*
3. Mental health status.\*
4. Attitudes and beliefs about substance abuse using likert scale questions and clinical vignettes.

\*In order to compare data to national samples questions regarding demographics, health behaviors and mental health status were borrowed from a nationally distributed survey by Dr. Erika Frank.

- Pretesting.

- All survey questions were pretested.
- Cognitive interviews of a small pool of respondents representative of the sample.

# Survey Design:

## 1) Demographics

- Questions assessed:
  - age
  - gender
  - race
  - graduation year
  - prospected medical specialty choice
  - relationship status
  - evaluation of own health.

# Survey Design:

## 2) Health Behaviors

- Questions aimed to determine trends in:
  - Alcohol use.
  - Marijuana use.
  - Prescription stimulant use (academic vs. recreational purpose).

# Survey Design:

## 3) Mental Health Status

- Students were asked about:
  - Stress levels.
  - Mental health resource utilization.
  - Suicidal ideation.
  - Symptoms of depression.

## Survey Design:

### 4) Attitudes and Beliefs About Substance Abuse

- Likert scale questions assessed the extent of students' perception of substance use as a mental illness.
- Students presented with statements and asked to rate level of agreement.
  - E.g. "People who are alcoholics often lack the willpower to get better."
  - E.g. "Alcoholism is a serious medical illness."

# Survey Design:

## 4) Attitudes and Beliefs About Substance Abuse

- 3 clinical vignettes to assess attitudes toward self-care and colleague's mental health:
  1. "You are a 2nd year medical student dealing with a major personal crisis. You are constantly unmotivated and distressed, which negatively impacts your schoolwork".
    - Would you seek help? Why/why not? Where?

## Survey Design:

### 4) Attitudes and Beliefs About Substance Abuse

2. “Patrick is a 3rd year medical student whose heavy drinking on weekends results in belligerent and inappropriate behavior. Despite this, he has honored 4 out of 6 clerkships and is regarded as a model student by all the doctors”
  - Is this unprofessional? Should the medical school intervene? How?

## Survey Design:

### 4) Attitudes and Beliefs About Substance Abuse

3. “Your close friend, Sarah, is a 2nd year medical student who excels academically. However, you learn she is taking Adderall to pull all-nighters before exams. She is obtaining the Adderall from a friend and has never been prescribed this medication.”
  - Should this be viewed as drug abuse? Is this cheating? Should you intervene? How?

**2. Rate the following sentences according to your level of agreement or disagreement with them.**

	Strongly Disagree	Disagree	Neither Agree/Disagree	Agree	Strongly Agree
(A) There is little harm in the occasional use of Adderall without a prescription.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
(B) Using Adderall without a prescription to study for exams is like cheating.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
(C) I do not see Sarah's Adderall use as a problem.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
(D) Sarah's Adderall use is unprofessional.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
(E) Sarah's Adderall use is not my concern.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
(F) I do not know how I could help Sarah.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

# Methods - Survey Distribution

- All current George Washington University medical students invited to participate using an online survey engine.
- Students took the survey anonymously at own leisure.
- Starbucks \$5 gift cards offered to random participants

# Methods - Data Analysis

- Students who abuse substances were compared to those who don't.
- Substance abusers were subdivided into:
  - (1) **excessive drinkers** (greater than 5 drinks in one occasion in the past month)
  - (2) **regular marijuana users** (more than once or twice a month)
  - (3) **nonmedical users of prescription stimulants** (any use)

# Findings

- 304 responded (44%), 281 completed survey
- 84% of medical students reported drinking in the past month, and 36% drank excessively.
- Rates of marijuana use (1%) and prescription stimulant abuse (5%) were below expected rates for this demographic.
- Men were 18% more likely to abuse substances compared to women.
- Neither high levels of stress in the past year nor feeling downhearted most of the time in the past month predicted any form of substance use.

# Findings

	Nationally Representative Rates (Frank et al, 2008)	George Washington Univ Medical School Rates
<b><i>Alcohol use in past month:</i></b>		
Alcohol use in past month	78%	84%
Among drinkers, median days drinking in past month	5 days	5 days
Binge drinking in past month	34%	36%
<b><i>Stress in past 12 months (Excessive Drinkers):</i></b>		
A lot	33%	35%
Moderate	33%	43%
Little/none	41%	46%
<b><i>Nonmedical use of prescription stimulants</i></b>	Not available	5%

# Findings - Substance Use

- Substance abusers were:
  - 90% less likely to view excessive drinking as unprofessional ( $p < .01$ ) and 80% less likely to view abusing prescription stimulants as unprofessional.
  - 55% more likely to view using stimulants without a prescription as being acceptable ( $P < .01$ ).
  - When faced with vignette of a colleague abusing substances, 56% less likely to believe that the medical school should intervene ( $P < .05$ ).

## Findings - Prescription Stimulant Use

- Students abusing prescription stimulants were 18% more likely to endorse SI in the past 12 months than non-abusers ( $p < .05$ ).
- Regardless of substance use behaviors, students did not believe that a colleague's stimulant use was their concern nor did they believe they knew how they could help a colleague abusing stimulants.

# Conclusions

- Substance use rates were consistent with national samples, with the exception of prescription stimulant use, which was surprisingly low.
- Substance use behaviors seem to influence attitudes and beliefs toward professional issues regarding substance use.
- Of particular interest is the finding that prescription stimulant users seem to be at the most at risk for SI.
- Since this study is limited by small subgroups future studies should examine identification, screening, and attitudes, beliefs and behaviors of this population.
- Study findings have implications for medical student education and training.

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