

# Prescription Drug Misuse: Stimulant use Among Undergraduate Nursing Students

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## BACKGROUND & SIGNIFICANCE

- Prescription Drug Misuse (PDM) involves three behaviors: medical misuse, nonmedical use and diversion of medications.
- Prescriptions for stimulants and PDM continue to increase.<sup>1,3</sup>
- Stimulant medications have a high potential for abuse.<sup>2</sup>
- Rates of nonmedical use of prescription stimulants (NPS) among college-aged individuals (18-25) are greater than in all other age groups, and nonmedical use is on the rise.<sup>2,4</sup>
- Individuals who report NPS generally have lower GPAs, and report other problem behaviors, including higher rates of illicit drug use and binge drinking.<sup>5-7</sup>
- National data provide evidence that nurses might be more vulnerable to stimulant abuse.<sup>8</sup>

## STUDY AIMS

Using a population-based sample of undergraduate nursing students enrolled in one Midwestern University, the study aimed to determine:

- 1) The prevalence of medical misuse and nonmedical use of ADHD stimulant medications;
- 2) The association between medical use, medical misuse and nonmedical use of scheduled ADHD stimulant medications and *CRAFTT* scores (see Figure 3 for *CRAFTT* items).

## DEFINITIONS

- Medical Use: using one's own prescription medication as prescribed.<sup>4</sup>
- Medical Misuse: using one's own prescribed medication in a manner unintended by the prescriber (e.g. snorting, using to get high, using too much).<sup>4</sup>
- Nonmedical Use: using another person's prescription medication.<sup>4</sup>
- *CRAFTT* Screening Tool (See Figure 3).

## METHODS

- A cross-sectional, population-based sample of undergraduate nursing students at a large Midwestern University during the winter semester of 2017 was examined.
- Data were collected January through February 2017 via a 28-question, web-based survey adapted from the Student Life Survey.
- The cumulative sample was 249 undergraduates.
- Respondents were asked about past 12-month use of ADHD medications and the five-item *CRAFTT* Screening Tool.

## DATA ANALYSES

- Groups were independent.
- The prevalence of ADHD stimulant use was assessed in three groups: medical users, medical misusers and nonmedical users (Figure 1).
- Logistic regression and chi-square analyses were conducted (See Figure 2).

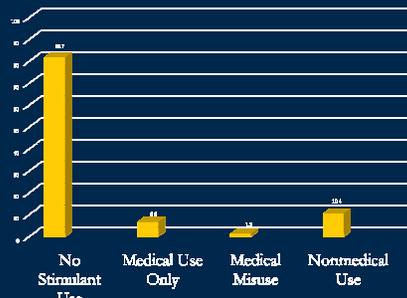
## SAMPLE CHARACTERISTICS

- The demographic characteristics of the sample (N=249) closely resembled the overall population of undergraduate nursing students. (Response rate = 38%)
- The sample was comprised of 22.5% Freshmen, 31.3% Sophomores, 18.1% Juniors, and 28.1% Seniors.
- Over 76% of respondents reported a GPA of 3.5 or higher.

## RESULTS

- As seen in Figure 1, 10.4% of respondents reported nonmedical use in the past 12 months, compared to 6.6% medical use only, 1.2% medical misuse, and 81.7% no stimulant use.
- 51.5% of all respondents screened positive on the *CRAFTT*, indicating behaviors associated with substance misuse.
- Results from chi-square analyses (Figure 2) indicated that 86.4% of those who reported nonmedical use of prescription stimulants in the past 12 months also had positive scores on the *CRAFTT*.
- Results from the multi-variate logistic regression analyses were robust when accounting for covariates (sex, grade level, and GPA), and supported the association between nonmedical use and positive *CRAFTT* scores.

% Stimulant Medication Behaviors Among Nursing Students in the Past 12 Months (Figure 1)



% Stimulant Medication Behaviors Associated with *CRAFTT* Scores Among Nursing Students (Figure 2)

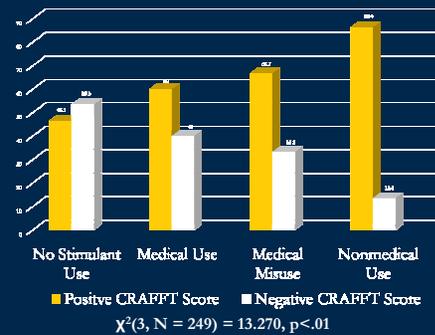


Figure 3

C	• "Have you ever ridden in a car driven by someone (including yourself) who was high or had been using alcohol or drugs?"
R	• "Do you ever use alcohol or drugs to relax, feel better about yourself, or fit in?"
A	• "Do you ever use alcohol or drugs while you are by yourself (alone)?"
F	• "Do you forget things you did while using alcohol or drugs?"
F	• "Do your family or friends ever tell you that you should cut down on your drinking or drug use?"
T	• "Have you ever gotten into trouble while you were using alcohol or drugs?"



## CONCLUSIONS

- Past 12-month nonmedical use of prescription stimulants (10.4%) was higher than that of the general 2013 population of students (9.3%) at the same Midwestern University. This difference may be attributed to the rising rates of NPS in college populations or differences between nursing and other students.
- The high prevalence of positive *CRAFTT* scores (51.5%) poses a concern for substance misuse problems among nursing students. Our results suggest a strong association between the nonmedical use of prescription stimulants and positive *CRAFTT* screenings.
- Substance misuse and impairment, especially when on the job, should be addressed before nursing students enter the workplace.
- Conclusions are constrained by the response rate and regional sample.

## REFERENCES

- <sup>1</sup>SAMHSA (Substance Abuse Mental Health Services Administration), 2015. Types of Commonly Misused or Abused Drugs. Rockville, MD: Office of Applied Studies. Available at <http://www.samhsa.gov/prescription-drug-misuse-abuse/types>. Accessed 19 March 2016.
- <sup>2</sup>Ghandour, L. A., El Sayed, D. S., & Martins, S. S. (2012). Prevalence and patterns of commonly abused psychoactive prescription drugs in a sample of university students from Lebanon: An opportunity for cross-cultural comparisons. *Drug and Alcohol Dependence, 121*(1), 110-117.
- <sup>3</sup>Muzina, D. (2014). REPORT: Turning attention to ADHD. St. Louis: Express Scripts. Retrieved July 06, 2015, from <http://lab.express-scripts.com/lab/insights/industry-updates/report-turning-attention-to-adhd>
- <sup>4</sup>McCabe, S. E., Boyd, C. J., & Teter, C. J. (2009). Subtypes of nonmedical prescription drug misuse. *Drug and Alcohol Dependence, 102*(1), 63-70.
- <sup>5</sup>Sepulveda, D. R., Thomas, L. M., McCabe, S. E., Cranford, J. A., Boyd, C. J., & Teter, C. J. (2011). Misuse of prescribed stimulant medication for ADHD and associated patterns of substance use: Preliminary analysis among college students. *Journal of Pharmacy Practice, 24*(6), 551-560. doi:10.1177/0897190011426558 [doi]
- <sup>6</sup>McCabe, S. E. (2008). Screening for drug abuse among medical and nonmedical users of prescription drugs in a probability sample of college students. *Archives of Pediatrics & Adolescent Medicine, 162*(3), 225-231.
- <sup>7</sup>Teter, C. J., Falone, A. E., Cranford, J. A., Boyd, C. J., & McCabe, S. E. (2010). Nonmedical use of prescription stimulants and depressed mood among college students: Frequency and routes of administration. *Journal of Substance Abuse Treatment, 38*(3), 292-298.
- <sup>8</sup>Dunn, D. (2005). Substance abuse among nurses—defining the issue. *AORN Journal, 82*(4), 572-596.

## ACKNOWLEDGEMENTS

The development of the Secondary Student Life Survey was supported by grants R03 DA018272 and R01DA024678 (PI: Boyd, C) from the National Institute on Drug Abuse, National Institutes of Health. Dr. Philip Veliz and Bidisha Ghosh provided statistical support, and we appreciate their contributions.