

Use of Smart Drugs for Academic and Professional Enhancement amongst California Pharmacy School Students

Mel Baron, PharmD; Richard Dang, PharmD; Melissa Durham, PharmD; Edith Mirzaian, PharmD; Aaron Boyer; Julian Elrayes; Jafar Essayli; Macy Gipson; Jasmine Hedvat; Natalie Kanimian; Ashley Liao Lee; Ye Ji Lee



Abstract

Title	Use of Smart Drugs for Academic and Professional Enhancement amongst California Pharmacy School Students	
Objective	To determine the prevalence, frequency, and reasoning for the use of smart drugs, including caffeine-containing products, stimulant substances, and nootropic supplements, among full-time California pharmacy students for the purpose of performing well academically and professionally.	
Primary Outcome	Prevalence and use of caffeine-containing products, non-prescription stimulant use, and nootropic adaptogens amongst full-time California pharmacy students	
Secondary Outcome	Reasoning behind the use of such products	
Methods	An online, anonymous, and cross-sectional survey using Qualtrics will be sent to full-time pharmacy students in the state of California. Students will answer a series of questions about their demographics, use of various smart drugs, frequency of use, and the reasons for use.	
Results	Pending	
Conclusion	In progress	

Background

Students are often searching for a competitive edge in academic and professional environments. Commonly, students consume products, deemed "smart drugs," in order to enhance their academic and professional performance. The term "smart drugs" may encompass products including stimulant substances (such as amphetamines used without prescriptions), caffeinated products (such as coffee and energy drinks), and nootropic adaptogens (such as ashwagandha).¹ One reason students report using these smart drugs includes their potential to boost stamina, focus, or performance.^{2,3} This highlights a growing issue because the use of such products has been associated with increased risks, such as abuse, dependence, and legal consequences.⁴

Previous studies have indeed shown that there is a prevalence of smart drug use among university students for the purpose of improving academic performance.^{2,3} For example, in a research study that surveyed college students at five geographically dispersed universities in the United States, a few academic-related reasons that students reported to consume caffeine include to feel awake (79%), to improve concentration (31%), and to alleviate stress (9%).² However, research fails to answer many questions regarding the usage of such smart drugs in pharmacy school students. Furthermore, there lacks research in identifying which smart drugs are more commonly used, determining how frequently students are using them, and narrowing the study population to students enrolled in pharmacy schools in the United States. Moreover, research is also lacking in identifying the demographics of pharmacy student users, such as their age, year in pharmacy school, whether they were employed or highly involved in extracurriculars while using such smart drugs, and the type of program they are enrolled in. Even more so, the reasoning behind the use of such smart drugs by pharmacy students specifically remains ambiguous. Thus, the objective of this study was to determine the prevalence, frequency, and reasons of the use of smart drugs among full-time California pharmacy students for the purpose of performing well academically and professionally.

Based on the findings collected in this study, future research may be conducted to determine the perceived risk of using these medications, their accessibility to pharmacy students, and the true effect of these products on GPA in pharmacy students. The results of this study are analyzed in hopes to find ways to educate students about the benefits and risks associated with smart drug use. Furthermore, future research can also serve to offer students alternatives to reduce stress, increase focus, and acquire competitive advantage both academically and professionally.

Data Collection

Mode of Collection: Qualtrics Survey

Disclosure Statement: objective and purpose of study, expected survey time, considerations, ensure of anonymity, contact information, electronic consent

Types of Questions:

Demographics: age group, gender, ethnicity, year in PharmD program, school enrolled, current year in school, relationship status, caregiver status

Types of Products Consumed: caffeine (coffee, caffeine pills, energy drinks etc), stimulants (amphetamines, cocaine), and/or adaptogens (ashwagandha, L-theanine)

Reasoning for Use: employment, extracurricular or co-curricular activities participation, and/or stressful events (exam, quiz, presentation, etc)

- Answered for each type of product reported to be used

Frequency of Use: once daily, multiple times daily, once weekly, 2-6 times weekly, once monthly, 2-3 times monthly, or only once/few times in the past

- Answered for each type of product reported to be used

Expected Time to Complete Survey: 10-13 minutes

Methods

Study Type: Prospective observational study

Mode of Data Collection: online, anonymous, cross-sectional survey using Qualtrics

- Will be distributed to the CAPSLEAD 2020 faculty members, who will administer the link to pharmacy students enrolled in their academic institution

Specific Variables Assessed: Refer to "Data Collection" section to the left

Population: PharmD students enrolled in 11, fully-accredited pharmacy schools in California

Inclusion criteria: Full time PharmD students aged 18 years or older, and enrolled in an accredited 3 or 4 year program in the state of California according to the criteria determined by the Accreditation Council of Pharmacy Education (ACPE)

Exclusion Criteria: Students who will not choose to participate, will not complete the study, will not submit their answers, will not complete the survey in January 2021, or will not meet the inclusion criteria

Statistical Analyses: Descriptive statistics via the built-in Qualtrics software

Possible Challenges

- Limiting survey fatigue
- Incentivizing students to take the survey
- Ensuring anonymity
- Reluctance of students to report usage of smart drugs, considering the legal consequences that may follow

Results & Conclusions

Results and conclusions are still pending as we are awaiting IRB approval.

Contact

University of Southern California School of Pharmacy CAPSLEAD (2020-2021)

SmartDrugsUseResearchStudy@gmail.com

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