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Stimulating an Intervention: A Response to Prescription Stimulant Misuse Among College Sorority Women



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Executive Summary

A Growing Problem

Prescription drugs are the second most abused and trafficked types of drugs in the world rivaled only by cannabis (International Narcotics Control Board [INCB], 2015). Stimulants are one of the most common types of prescription medications that are abused, and of these stimulants amphetamines are the most popular, known commonly by names like Dexedrine, Adderall, and Ritalin (United Nations Office on Drugs and Crime [UNODC], 2014; INCB, 2015). Recent global trends of prescription stimulant use are a relatively new phenomenon. For example, the use of Ritalin increased from less than 500 million daily doses globally in 1998 to 2.5 billion daily doses in 2013 (INCB, 2015).

Usage within the United States mirrors the global trends. Stimulants began to be prescribed more widely and frequently across the nation in the late twentieth century, with the rate increasing from 0.6% in 1987 to 2.9% by 2002 (Weyandt et al., 2016). Amphetamine prescriptions exceeded 8 million in 2000, which was an increase of 1600% in just nine years' time (Berman et al., 2009). Currently, the United States consumes more than 80% of the world's Ritalin and it currently has the highest per capita consumption of amphetamine and second highest per capita consumption of methylphenidate, another common stimulant (Weyandt et al., 2016). Increased overall use has also allowed for increased misuse as reflected in the increased rates of emergency room visits, overdose deaths from prescription drugs, and treatment admissions for prescription drug disorders in the United States between 2003 and 2018 (NIDA, 2018). Nationally, prescription stimulant misuse has a prevalence rate of 2% among people aged 18-49, with misuse having increased 67% between the years of 2006 and 2011 (Weyandt et al., 2016).

2018 reports show that Adderall was the most prescribed drug in South Carolina, a finding that aligns with the fact that South Carolina has one of the highest numbers of

ADHD diagnoses nationwide with 16% of children and teens having received this diagnosis (Wildeman, 2018). Increased use and availability has also led to increased misuse within the state; South Carolina has experienced such a significant problem with prescription stimulant misuse that it enacted the South Carolina Reporting & Identification Prescription Tracking System (SCRIPTS) in 2017, with the intentions of improving its ability to identify and eliminate diversion of drugs (South Carolina Department of Health and Environmental Control [SCDHEC], n.d.). While this system also focuses on other controlled substances such as opiates, stimulants are similarly monitored (SCDHEC, n.d.).

In 2018, South Carolina's capital of Columbia boasted a population of 133,451 individuals, while the University of South Carolina itself had an enrollment of 34,731 individuals, making up a considerable portion of the city's daily inhabitants (United States Census Bureau, n.d.; University of South Carolina, 2018). An increasing number of individuals with ADHD are enrolling in higher education, which means that the availability and potential for use and misuse of prescription stimulants has risen substantially among college students without the disorder (Weyandt et al., 2016). Research from 2015 estimates the prevalence rate of stimulant misuse on college campuses to be between 13-23%, putting the average at 17% (Weyandt et al., 2016). In a study conducted at College of Charleston, students who complained of ADHD symptoms were evaluated and researchers found that nearly 48% were exaggerating or giving false accounts of their symptoms (Wildeman, 2018). Adderall misuse has become so prominent that it is the second most common illicit form of drug use in college students, only behind cannabis (Lakhan et al., 2012).

Who is Affected?

When looking at gender, 2.3% of males report misuse of prescription stimulants in comparison to 1.9% of females (Centers for Disease Control [CDC], 2018). By ethnicity, misuse was found to be 0.8% among blacks, American Indians, and Alaska Natives alike and 2.5% among whites (CDC, 2018). When considering age, misuse of

prescription stimulants most often begins between the ages of 16 and 19, and is found to be most prevalent among young adults ages 18 to 25 (Weyandt et al., 2016).

The age range where misuse is most prevalent is also the age range in which most individuals enroll in higher education. In fact, it has been found that college students are more likely than their peers who do not attend college to use prescription stimulants nonmedically, at 10.7% and 7.1%, respectively (Arria et al., 2017). From a study in 2016, it was estimated that 3.7% of full-time college students in the United States had engaged in prescription stimulant misuse in the past month (Arria et al., 2017). Members of sororities and fraternities show higher rates of misuse in comparison to other college students (Weyandt et al., 2016). Misuse is also more frequent among students who have a lower grade point average (GPA), report procrastination and difficulty with time management, and for those with a history of substance use and other risky behaviors (Weyandt et al., 2016). There is also a particularly high concentration of misuse in the Northeastern sector of the United States, where a large number of Ivy League schools and extremely competitive and academically strenuous schools are located (Lakhan et al., 2012).

The average age for the onset of many mental health conditions also coincides with the college age range of 18 to 24 years, so it is likely that students either enter school with these conditions or develop them within an environment notorious for presenting a variety of new and unique stressors (Jed Foundation, n.d.). Symptoms of inattention, depression, anxiety, stress, impulsivity, and internal restlessness are all psychological risk factors predictive of prescription stimulant misuse (Weyandt et al., 2016).

Secret Weapon or Weapon of Mass Destruction?

College students profess a variety of factors motivating them to engage in prescription stimulant misuse; these reasons include recreation, weight loss, curiosity, and cognitive enhancement for the purpose of academic achievement (Weyandt et al., 2016). Among these reasons, academically-motivated usage continually stands out as

being most reported and most shrouded in misconception. A study found that students believe that prescription stimulants will enhance their concentration (65%), help them while studying (60%), and increase their alertness (48%) (Arria et al., 2017). These beliefs are at odds with what has been found in experimental evidence. In a double-blind, placebo-controlled trial, researchers found that prescription stimulant usage did not enhance any of the thirteen cognitive measures that were assessed, and similar results have been found in other similarly focused studies (Arria et al., 2017). Research has interestingly also shown a possible decrease in cognitive performance based on the fact that prescription stimulants may slow metabolic activation in the brain when performing cognitive tasks (Arria et al., 2017).

When students use prescription stimulants based on misconceived benefits, they put themselves at risk of more than just slow metabolic activation. When used as prescribed, prescription stimulants have only mild side effects that include decreased appetite, headaches, insomnia, and dry mouth (Weyandt et al., 2016). When misused, however, there can be adverse effects, with excessive doses being linked to high blood pressure, paranoia, irregular heartbeat, and cardiovascular failure (Weyandt et al., 2016). When users choose to administer the drug intravenously or intranasally, potential risks become even more elevated (Teter et al., 2012). Additionally, use of prescription stimulants nonmedically puts users at risk for dependence and other substance use (Arria et al., 2017). One study found that 12.6% of individuals who began misusing prescription stimulants at 19 became stimulant dependent and lifetime stimulant dependence increased the earlier that misuse began (Arria et al., 2017). Those that misuse prescription stimulants are more likely to drink alcohol excessively and use other illicit drugs; students who misused prescription stimulants were more than ten times more likely to use cannabis during the past year than those who had not engaged in misuse (Arria et al., 2017).

When students misuse prescription stimulants, they not only threaten their health but also their academic standing—the exact thing that they thought prescription stimulants would help boost. Nonmedical prescription stimulant use among students

was associated with increases in missing class and time spent socializing and decreases in time spent studying and grade point average (Arria et al., 2017). Poor academic performance is a concern of both the individual and the institution as it threatens degree completion and lowers retention rates. It takes less resources to retain students than to recruit new students, so prescription stimulant misuse and its consequences are a problem of interest for universities across the country.

Stimulating an Intervention

Our program focuses on academically motivated prescription stimulant misuse among college age sorority women. While men are more likely to engage in misuse, women are unique in that they develop substance use disorders more rapidly and are burdened with greater stigma when abusing substances than their male counterparts (American Addiction Centers, 2019). With greater stigma, many women are less likely to seek professional help, resist treatment until they experience a significant complication such as a hospitalization or an overdose, and are more susceptible to relapse (American Addiction Centers, 2019). Substance misuse becomes substance addiction when it begins to impede normal functioning, and we find it important to screen women for substance misuse and help them to recognize the detrimental path their behavior may go down (NIDA, 2020). Women are not the greatest misusers of prescription stimulants, but their use leads to unique escalation and challenges that we feel important to address.

We also chose to focus on this behavior at the University of South Carolina () because two conditions which increase rates of misuse—academic intensity and access to stimulants—are heightened at the . The has the third highest SAT and ACT midrange admissions requirements out of all South Carolina colleges and universities, a metric that indicates greater academic rigor as students' past academic performances are assessed to ensure preparedness for the level of coursework at the university (College Tuition Compare, n.d.). The is also within the state of South Carolina where Adderall was the most prescribed drug in 2018, meaning that many students are likely to have a

prescription offering easier access for those who are not prescribed (Wildeman, 2018). With tougher academics and greater access to prescription stimulants, the presents a high risk environment for academically-motivated prescription stimulant misuse.

Our program aims not only to assess the prevalence of prescription stimulant misuse and dispel common misconceptions of use among a high risk population, but also to build up students' capacity and confidence in intervening when they witness misuse among peers. To meet these aims, the program will include pre- and post-assessments and interventions using health communication and capacity building. This program has the potential to reduce behaviors that put students at risk of health complications, legal repercussions, and academic decline, while offering positive alternatives (i.e. tutoring resources, study tips) that can actually help to bring about the performance enhancement they seek. Participants will emerge empowered with the knowledge and skills to intervene with the peers they associate with all across campus, meaning the program has a reach beyond just those who were direct participants. Overall, this program has the potential to decrease positive sentiments surrounding nonmedical prescription stimulant use, spurring cultural change on campus that can help students to maintain higher grade point averages and help the university retain students year after year.

The proposed program is based on a study by LaBelle (2018) which applied the theory of planned behavior to study college students' intent to intervene when a peer in engaging in nonmedical use of prescription stimulants. LaBelle (2018) found that when students had more positive attitudes and associated more positive social norms with intervention, they would be more likely to intervene. It is best to enact these interventions on a peer-to-peer level because of college students' prominent reliance on their peer groups for defining their own self concept in accordance with the social identity theory (Regan & Morrison, 2011). This particular peer-to-peer approach will be a welcome and fresh approach to university administration and anti-drug organizations alike that have recognized the problem of prescription drug misuse but have found little success with the generic, widespread informational campaigns of the past. By instead

enlisting members of the peer group to speak up and explain to other peers that behaviors such as prescription stimulant misuse are not encouraged or accepted with the group, these warnings will be better received and misuse will likely be deterred for fear of no longer being within the in-group. As discussed before, university administration particularly stands to gain from this program for its success means success for students and higher retention rates at the university, bringing in both institutional prestige and financial gain. The program is attractive for members of the target population because it offers a collective way to teach valuable knowledge and skills to Panhellenic women in a community built around being a support system for its members. The program will be presented as a way for both the Office of Fraternity and Sorority Life and the executive members of each sorority to reduce harmful behaviors within the community while bolstering academic and personal successes of their members.

Stakeholders and community members from both the university and the target population will serve an active role on the planning committee which will help to plan the program and develop an appropriate curriculum. This ensures that features and topics that are a priority of each group will be addressed, while also ensuring that everything operates in a way that is fit to university protocol and target population preferences. Participants will be segmented according to their Panhellenic organization and will attend sessions only with other active members of their organization. This method of segmenting means that the participants will go through the program with the women they interact with everyday, allowing them to see who is going to benefit from the information and training, and supporting a level of comfort for participants to discuss sensitive subject matter and practice simulated intervention exercises.

Needs Assessment

Overview

The World Health Organization (WHO) defines drug misuse as “the use of a substance for a purpose not consistent with legal or medical guidelines” (British Psychological Society & Royal College of Psychiatrists, 2008). Prescription drug misuse occurs when prescription drugs are taken by the individual to whom they were prescribed in a manner or dose other than intended, or when individuals take drugs not prescribed to them (National Institute on Drug Abuse [NIDA], 2018). The three drugs most commonly misused are opioids, central nervous system depressants, and stimulants (NIDA, 2018). Prescription stimulants are a controlled substance by federal and state law, and their misuse is an illegal activity subject to criminal charges (Weyandt et al., 2016).

Prescription stimulants are approved by the U.S. Food and Drug Administration for the treatment of attention deficit hyperactivity disorder (ADHD) in children, adolescents, and adults (Weyandt et al., 2016). The most commonly prescribed stimulants include amphetamine compounds, such as Adderall, and methylphenidate, such as Ritalin (Weyandt et al., 2016).

When used as prescribed, prescription stimulants do not pose significant health risks and users report only mild side effects; the most common side effects are decreased appetite, weight loss, headache, insomnia, abdominal pain, dizziness, mood swings, and dry mouth and all depend heavily on dosage (Weyandt et al., 2016). Stimulant misuse is, however, associated with adverse effects, with excessive doses being linked to cardiovascular failure, irregular heartbeat, high blood pressure, and paranoia (Weyandt et al., 2016). When users choose to administer the drug intravenously or intranasally, potential risks become even more elevated (Teter et al., 2012).

There is also great potential for addiction as amphetamine is known to cause “severe psychological and physiological dependence” (Berman et al., 2009). These dependencies are why prescription stimulants are classified as a Schedule II medication by the United States Drug Enforcement Administration (DEA) marking them as a substance with high potential for abuse (United States Drug Enforcement Administration [DEA], n.d.).

Who is Affected & the Impact

Prescription stimulant misuse does not discriminate on a demographic basis: any population can be affected by stimulant misuse, whether directly or indirectly. The main motivation for misusing prescription stimulants is cognitive and academic enhancement, with other motives including recreational use, weight loss, and curiosity (Weyandt et al., 2016). Students are using Adderall to the point where they cannot sleep for days, are incredibly irritable, and become dependent to perform whatsoever in school or in daily life. There is also risk involved that Adderall can be used as a gateway into other potential drug use. While it does serve its purpose to help mitigate ADHD symptoms, many students admitted to using the drug for recreational purposes, like “getting high (31.0%) and experimentation (29.9%)” (Teter et al., 2012). The prominence of its use amongst college-aged young adults makes the issue even more pressing, seeing as though drug abuse often starts early in life and could prove to be a lifelong problem if one becomes dependent on Adderall to function well. Students involved in prescription stimulant misuse also often overestimate the positive benefits of the behavior while minimizing their health and legal risks, leading to even further potential for problems to arise due to inappropriate Adderall use (Kinman et al., 2017).

Target Population

Our target population for this problem are female students aged 18-25 enrolled at the University of South Carolina with an active Greek affiliation that are not prescribed stimulants. We are focusing specifically on academically motivated stimulant misuse.

Risk Factors

Behavioral Risk Factors

- Symptoms of attention-deficit/hyperactivity disorder (Benson, Flory, Humphreys, & Lee, 2015)
- Alcohol, marijuana, and other substance use (Benson, Flory, Humphreys, & Lee, 2015)
- Poor academic performance, i.e. low grade point average (Benson, Flory, Humphreys, & Lee, 2015)
- Desire to enhance academic performance (Benson, Flory, Humphreys, & Lee, 2015)
- History of skipping class (Benson, Flory, Humphreys, & Lee, 2015)
- History of inadequate study habits (Benson, Flory, Humphreys, & Lee, 2015)
- Perfectionist behavior (Benson, Flory, Humphreys, & Lee, 2015)
- College or university's geographic location (Lakhan et al., 2012)
- Academic intensity of college or university (Lakhan et al., 2012)
- Compromised appraisal of one's ability to cope (Jeffers, Benotsch, & Koester, 2013)
- Low self-esteem (Jeffers, Benotsch, & Koester, 2013)
- Appearance-related motivations for weight loss (Jeffers, Benotsch, & Koester, 2013)
- Engagement in unhealthy weight loss and disordered eating behaviors including emotion- and stress-related eating (Jeffers, Benotsch, & Koester, 2013)
- Desire to prolong the effects of alcohol (Benson, Flory, Humphreys, & Lee, 2015)
- Sensation seeking; desire to get high (Benson, Flory, Humphreys, & Lee, 2015)
- Feelings of sadness or depression (Benson, Flory, Humphreys, & Lee, 2015)
- Suicidal thoughts (Benson, Flory, Humphreys, & Lee, 2015)
- Desire to manage stress or pain (Ford & Schroeder, 2008)

- One's failure to realize that they have a substance use problem*

Environmental Risk Factors

- Greek organization membership, particularly social organizations (Benson, Flory, Humphreys, & Lee, 2015)
- Relationships with peers that are prescribed stimulants (Benson, Flory, Humphreys, & Lee, 2015)
- Relationships with peers that misuse prescription stimulants that do not necessarily have a prescription*
- Family history of substance misuse (Addiction Center, 2019)
- Stigma associated with substance misuse (National Institutes on Drug Abuse [NIDA], 2020, 2018)
- Lack of access to health care and substance use treatment facilities*

Risk Factors that Cannot be Changed

- Male gender (Benson, Flory, Humphreys, & Lee, 2015)
- Caucasian ethnicity (Benson, Flory, Humphreys, & Lee, 2015)
- Upperclassmen status at a higher education institution (Benson, Flory, Humphreys, & Lee, 2015)
- Lack of financial resources to fund substance use treatment*

** indicates committee generated risk factor*

Predisposing, Enabling, and Reinforcing Factors

Factor Type	Factor	Explanation of relationship with behavior
Predisposing	Students with low self-esteem	Students with low self-esteem may view themselves as possessing inadequate skill or talent that prevents them from excelling in an academic setting, meaning they may resist getting screened for a substance use disorder as they feel reliant on stimulants for their perceived performance enhancement.
	Underestimating the dangers of taking a prescription stimulant to which one is not prescribed	Students who are not aware of the possible health risks and legal consequences that may come with the misuse of prescription stimulants are more likely to engage in misuse and resist being screened for misuse because they do not view their use as problematic.
	Stigma associated with substance misuse	Students who misuse prescription stimulants are likely to put off being screened for a substance use disorder because of the stigma that is associated with this disorder. Asking for help makes the behavior public, increasing the chance that other people will learn about what is occurring and becoming a source of embarrassment and shame for the individual.

Factor Type	Factor	Explanation of relationship with behavior
Enabling	Relationships with peers who misuse prescription stimulants	Students who have friends or acquaintances that they know are misusing prescription stimulants creates the perception that other people similar to them are engaging in misuse which normalizes the behavior and makes them more likely to feel comfortable with and engage in continued misuse.
	Relationships with peers who are prescribed a prescription stimulant	Students with friends or acquaintances who are prescribed stimulants have greater access to stimulants supporting their continued use of the substances.
Reinforcing	Healthcare providers who do not inquire about stimulant misuse behaviors	Because many healthcare providers only inquire about tobacco and alcohol use in regular physicals, students who misuse stimulants may perceive them as less risky than other types of drugs and therefore continue to use them.
	Improved academic performance	Students who show improved academic performance after using stimulants may misassociate their success to the drug, leading them to perceive the drugs as necessary to further achievement thus promoting use. Praise from professors, peers, and parents as a result of improved academic performance may further reinforce the behavior.

Planning Committee Members

1. Addi Rall, a former U of SC Panhellenic member who has since recovered from stimulant misuse.
2. Vivianne “Vi” Vance, a U of SC Panhellenic member who has severe ADHD and has been prescribed a stimulant to mitigate these symptoms.
3. Cierra Martin, Vice President of Programming for the University of South Carolina Panhellenic Association.
4. Jon “Tad” Derrick, Assistant Director of Harm Reduction and Compliance in the Office of Fraternity and Sorority Life.
5. Rebecca Caldwell, Director of Strategic Health Initiatives at University of South Carolina Student Health Services.
6. Hannah Anderson, Secretary of Health and Wellness, University of South Carolina Student Government.
7. Dr. April Winningham, Representative of the Winningham Foundation
8. One representative from each of the following sorority chapters: Alpha Chi Omega, Alpha Delta Pi, Alpha Gamma Delta, Alpha Xi Delta, Chi Omega, Delta Delta Delta, Delta Zeta, Gamma Phi Beta, Kappa Delta, Kappa Kappa Gamma, Phi Mu, Pi Beta Phi, Zeta Tau Alpha.*

*Through the inclusion of these sorority representatives, we will obtain an accurate representation of panhellenic women throughout the planning process. They will be able to develop the teaching materials to be delivered throughout the intervention and cater them directly to our target population.

Mission Statement

Our team is committed to reducing the misuse of prescription stimulants among Panhellenic women and promoting positive academic habits.

Goals

- Educate Panhellenic women on the health risks and legal consequences of stimulant misuse.
- Refute common misconceptions about the perceived benefits of prescription stimulant use.
- Facilitate the use of appropriate treatment resources already available.
- Ensure proper knowledge of available and effective treatment options regarding stimulant misuse.
- Instill confidence in Panhellenic women to educate and provide support to others in the Greek community and beyond who engage in prescription stimulant misuse.

Objectives

Process Objectives

1. By May 2020, program coordinators will invite the nineteen potential members identified above to join the planning committee
 - a. Who: Program coordinators
 - b. What: Invite potential members to join the planning committee
 - c. When: By May 2020

d. What Extent: The 19 potential members

2. By August 2020, the planning committee will develop a 3 month curriculum for educating the Panhellenic community about the risks and misconceptions associated with prescription stimulant misuse, as well as positive academic habits and resources that can offset prescription stimulant dependence.

a. Who: Planning committee

b. What: Develop a curriculum for educating the Panhellenic community

c. When: By August 2020

d. What Extent: 3 month curriculum covering topics of risks and misconceptions associated with prescription stimulant misuse and positive academic habits and resources

3. The Panhellenic community will be anonymously assessed by the planning committee to determine the prevalence and frequency of prescription stimulant misuse among its members at the program start and at program completion.

a. Who: Planning committee

b. What: Anonymously assess the Panhellenic community

c. When: At the program start and at program completion

d. What Extent: The prevalence and frequency of prescription stimulant misuse among members

Impact Objectives - Learning

1. 75% of all U of SC Panhellenic women will be able to identify one major health risk and one major legal consequence associated with the misuse of prescription stimulants at the completion of the program.

- a. Who: Panhellenic women
- b. What: Identify health risks and legal consequences
- c. When: Completion of program
- d. What Extent: One risk, one consequence, 75% of all U of SC Panhellenic women

2. 75% of all U of SC Panhellenic women will be able to identify and refute three misconceptions associated with prescription stimulant misuse upon completion of the program.

- a. Who: Panhellenic women
- b. What: Identify and refute misconceptions
- c. When: Completion of program
- d. What Extent: Three misconceptions, 75% of all U of SC Panhellenic women

3. 75% of all U of SC Panhellenic women will be able to identify where they can access at least one local resource for substance abuse treatment upon completion of the program.

- a. Who: Panhellenic women
- b. What: Identify resources/help
- c. When: Completion of program
- d. What Extent: At least one local resource, 75% of all U of SC Panhellenic women

Impact Objective - Behavioral

1. Upon completion of the program, 75% of U of SC Panhellenic women will engage in one positive studying method.

- a. Who: U of SC Panhellenic women
- b. What: Engage in one positive studying method
- c. When: Upon completion of the program
- d. What Extent: 75% of U of SC Panhellenic women, one positive studying method

Outcome Objective

1. By 2030, prescription stimulant misuse among women in South Carolina will be reduced by 10%.

- a. Who: Women in South Carolina
- b. What: Prescription stimulant misuse
- c. When: By 2030
- d. What Extent: Reduction by 10%

The Intervention

Theoretical Foundations

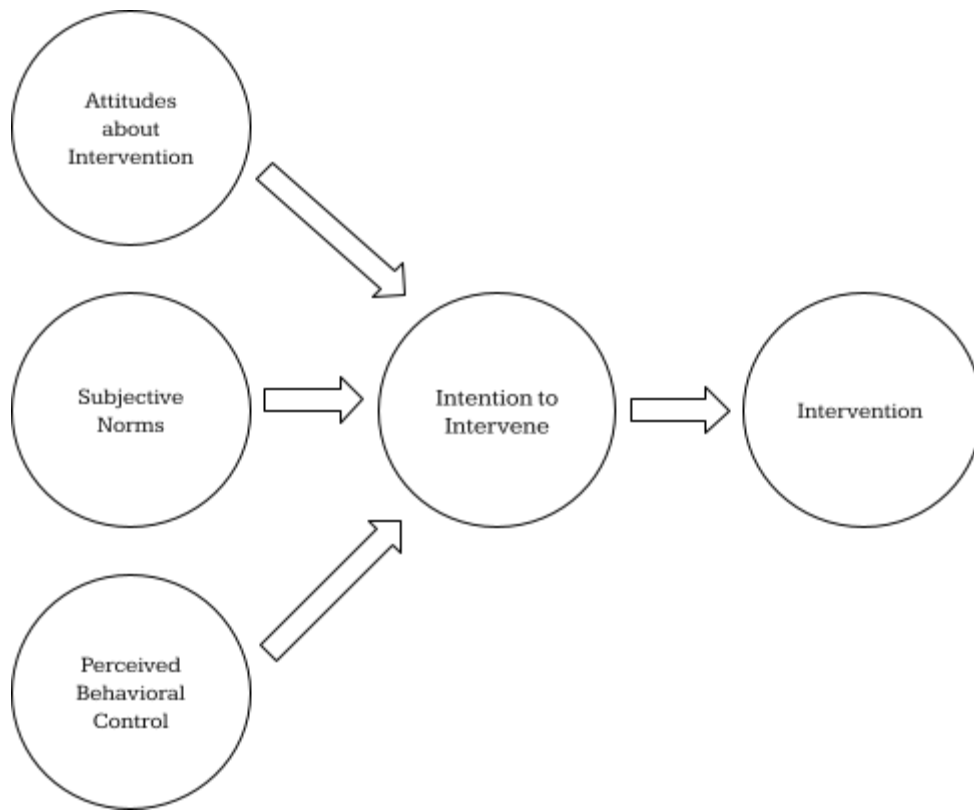
Our intervention is based on the theory of planned behavior. This theory is an extension of the theory of reasoned action adding perceived behavioral control as a core construct. Perceived behavioral control is defined as the perception of a person's ability to perform a given behavior. In order for an individual to successfully perform a behavior, they must not only form the intentions to engage, but also feel that they are able to do it by forming a sufficient perception of their own abilities. This perceived control can be increased by favorable attitudes and subject norms towards a particular behavior, and can be leveraged through a targeted and intentional intervention such as the one we have designed (McKenzie, Neiger, & Thackery, 2013).

The theory of planned behavior was used in the past by LaBelle (2018) as the basis for studying how likely individuals would be to intervene when they witness a peer engaging in prescription stimulant misuse. LaBelle (2018) found both attitudes and subjective norms to be predictive of an individuals' behavior; thus, believing that an intervention would be helpful and appropriate as well as seeing it as a socially acceptable course of action influenced intentions to intervene.

Given that prescription stimulant misuse is a behavior heavily influenced by peers as they are often how individuals first gain exposure to the health behavior and gain access to the prescription stimulants of which they misuse, it would make sense for interventions to play out at the intrapersonal level due to the influence that these student-to-student communication channels have shown to have over individuals (LaBelle, 2018). If we can dispel student misconceptions about prescription stimulant misuse to shape their behavioral attitudes and subjective norms around intervening when this behavior does occur, we can bolster their perceived behavioral control and create an army of ready and willing advocates for responsible prescription stimulant use.

Theory of Planned Behavior as it relates to

Prescription Stimulant Misuse Intervention



Attitudes about intervention are the first construct that will affect behavior change relating to prescription stimulant misuse. If a student believes that an intervention will be helpful to the individual engaging in prescription stimulant misuse as well as appropriate given the context and extent of the behavior and the relationship shared between herself and the user, then these favorable attitudes will increase the likelihood that the student will intend to intervene.

Subjective norms are the second construct that will affect behavior change relating to prescription stimulant misuse. A student's perception of the societal norms surrounding intervention affects whether or not she will decide to intervene. If a student believes that others in her social group would view an intervention as an acceptable course of action given the circumstances, then the student is more likely to act.

Perceived behavioral control is the third construct that will affect behavior change relating to prescription stimulant misuse. If a student perceives herself as being more competent and able to perform an intervention, then she will be more likely to

engage in the behavior. The more favorable the attitudes and subjective norms a student has towards intervention, the greater the perceived behavioral control will be.

Intention to intervene is the fourth construct that will affect behavior change relating to prescription stimulant misuse. The three previous constructs that have been mentioned will all contribute to forming intentions to intervene, which are a necessary step before the intervention is carried out. Favorable attitudes and subjective norms and a positive perception of behavioral control will lead to stronger intentions to intervene; intervention will allow students to point out dangerous health behaviors to peers and hopefully alter these behaviors.

The following table shows how the objectives of the program align with the constructs discussed and indicates the strategies and specific activities that will be utilized to meet these objectives:

Objective Type	Construct	Intervention Strategy	Activities
1. Learning	Attitudes about Intervention	Health Communication	• Informational sessions • Brochure on risks • Survey of attitudes
2. Learning	Subjective Norms	Health Communication	• Informational session • Brochure on risks • Survey of beliefs
3. Behavioral	Perceived Behavioral Control	Health Communication	• Informational sessions • Dramatizations • Role play exercises
4. Behavioral	Intention to Intervene	Health Policy / Enforcement (agenda setting phase)	• Setting rules/ regulations • Seek input from priority population • Establish representative group

Core of the Intervention

Our intervention includes a series of educational sessions led by Health Education Specialists and with interns for support. Each sorority will attend a total of three informational sessions over the course of three months where they will be taught a specially designed curriculum on various topics pertaining to prescription stimulant misuse. Participants will undergo a pre- and post-assessment using an adapted version of the Theory of Planned Behavior Construct Assessment as similarly utilized in LaBelle (2018) in order to assess their personal usage and beliefs surrounding the topic and to aid in evaluating participant progress (See Appendix A). The first session will focus on dispelling misconceptions by reviewing health and legal consequences of nonmedical prescription stimulant use, as well as the risk factors that make one more likely to misuse. The second session will introduce and begin practice with interventional strategies, as well as focus on connecting participants with resources which will include academic support options and substance abuse services through the university and beyond. The third session will continue with interventional exercises and a review of the information covered throughout the sessions, ending with the post-assessment to gauge participant progress. Our end goal for our intervention program is a lasting behavioral and attitude change based on the new knowledge acquired through our program and participants feeling as though they are more educated and prepared to prevent, recognize, and intervene in the situation of stimulant misuse. We also hope that our program will have the long-term benefit of reducing overall stimulant misuse amongst South Carolina women by the year 3030.

Logic Model

Inputs	Outputs	Outcomes
Personnel • Educators & Administrative Staff • Partners ◦ Funding partners ◦ Educational partners ◦ University partners/sororities Time • Meetings/Planning program • Time of program implementation Space • Work Base (500 sq. foot office, classroom spaces) Materials / Equipment • Printer, Office Supplies, Educational Supplies • Incentives • Food & Beverages Technology • Laptops, Access to Internet	• Conduct educational sessions that deliver educational resources and curriculum regarding stimulant misuse and training participants to recognize the signs and risk factors of stimulus misuse. • Provide educational resources to educate participants on prescription stimulant misuse and develop resource connections to seek help for misuse struggles, as well as assess risk factors, symptoms, and intervention strategies regarding stimulant misuse.	Short-Term Changes: • Increase participant knowledge about prescription stimulant misuse (signs, symptoms, intervention, treatment, etc.) • Increase awareness of prescription stimulant misuse in self and others and teach skills to recognize stimulant misuse and how to intervene and limit risk Long-Term Changes: • Change in attitude and behavior regarding ideas and assumptions about prescription stimulant misuse • Skills to recognize and intervene regarding prescription stimulant misuse • Decrease stimulant misuse among South Carolina women

Implementation

Resources Needed for Successful Planning, Implementation, and Evaluation

I. Personnel

- a. **Part-time Administrative Staff Member:** The administrative staff member will handle all of the logistical work that makes the sessions possible. This staff member will act as a representative of the program and will communicate with sorority leadership to make sure they know what is expected of them and address any concerns, while also communicating with the program coordinators about program progress. They will manage funds that come into the program and secure the larger operating materials, such as laptops and computers, while giving funds to the health education specialists as needed for smaller concerns of office supplies and incentives. This staff member will schedule educator shifts and session times and ensure that daily tasks and operations are supporting program objectives.
- b. **2 Full-time Health Education Specialists:** The health education specialists are concerned with everything explicitly tied to the sessions and the running of the sessions. They oversee the public health and interns and manage them according to their needs in regards to help and advice developing lessons and materials, printing out hard copies of materials, and securing incentives and food/beverages for meetings. The health education specialists need to have extensive knowledge of the curriculum and the impact objectives of the program and make sure that their work stays aligned with these tenants of the program.
- c. **3 Part-time Public Health Interns:** These interns will be undergraduate students who will work alongside the health education specialists to develop student-friendly lessons and will assist the health education specialists during educational sessions.

II. Space

The program will require a 500 square foot office space as a home base for the staff to meet and work. The administrative staff member and the health education specialists will work out of this office full-time on their respective tasks in individual offices, and there will be a common area for the public health interns to collaborate with each other and staff. With each of the 13 sororities having 3 educational sessions each, there will be 39 sessions in total each requiring a classroom space with a capacity of 350 individuals. With the Office of Fraternity and Sorority Life as a sponsoring organization in the program, we will have access to both the office and classroom spaces through the University of South Carolina.

III. Equipment

The program will require three Dell laptops for use by the three staff members in order to communicate with coworkers, program planners, participants, etc. and for the health education specialists to develop lesson materials. A printer will also be required to make hard copies of lesson materials to hand out during sessions.

IV. Supplies

The program requires various office supplies for use in the brainstorming and development of lesson materials as well as for use during educational sessions: printer paper, pencils, pens, highlighters, staplers, staples, and post-its. Food and beverages will be provided at sessions in order to keep morale up in the audience. Incentives for participation during sessions will be given away, which will include two Chegg Premium gift cards per sorority and four packs of notecards that can be used for the active study methods we will be promoting.

V. Curriculum & Materials

The curriculum for this program has unique objectives and is very specific to the selected audience of college age sorority women, so it will be developed by the program planners and health education specialists to suit these purposes. Materials for teaching

these lessons will therefore also need to be developed specifically to suit the curriculum, and this will be undertaken by the health education specialists on staff in consultation and collaboration with the public health interns. For the participant pre- and post-assessment to gauge how they have progressed in regards to the major constructs of the Theory of Planned Behavior—attitude, subjective norms, perceived behavioral control, and behavioral intention—we will use the instrumentation developed by Labelle (2018). All of the items that will be tested have passed a confirmatory factor analysis. The questions are either semantic differential items which ask participants to identify if a behavior is harmful or beneficial, or they are Likert-scale items which ask participants to indicate their responses on a 7-point scale from 1 (Strongly Disagree) to 7 (Strongly Agree). Demographic and additional information is also assessed, including participants' personal prescription stimulant usage and their perceived knowledge of the health and legal consequences of prescription stimulant misuse.

VI. Funding

Funding for the program will be split evenly between the Winningham Foundation, the Office for Fraternity and Sorority Life, and the University of South Carolina Student Health Services.

Implementation Plan

Tasks that must be completed to get the program started include the following:

1. Send invitations to the 19 desired individuals to serve as program coordinators.

2. Collect invitation responses. Officially hire or pursue alternative options accordingly.
3. Train program coordinators and establish a schedule of meeting times.
4. Hold meetings for program coordinators. The coordinators will work out program logistics together, including using members to secure funding, access and obtain necessary materials, and develop a curriculum.
5. Communicate and coordinate with sorority leadership; promote the program successfully.
6. Hold interviews for staff positions. This will be carried out by the program coordinators. These staff members will include an administrative position and health education specialists who will be actively engaged in delivering the intervention once it officially begins.
7. Hire and train staff members.
8. Hold interviews for the public health interns. This will be carried out by the staff members.
9. Develop lessons and materials for the first round of sessions. This will be done by the health education specialists and public health interns.
10. Pilot test the program. The pilot test will be carried out using the group of Sorority women selected to serve as Pi Chis who are on campus during the month of August.
11. Revise program based on pilot.

12. Prepare for “kick-off”. Secure any last-minute supplies, such as incentives and food/beverages for sessions.

Gantt Chart

The program will have 4 months of preparation, 3 months of active intervention, and 1 month of evaluation.

	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
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Send invitations to 19 desired individuals to serve as program coordinators								
Collect program coordinator responses; officially hire individuals or pursue alternatives								
Train program coordinators and establish meeting schedule								
Hold meetings for program coordinators								
Communicate and coordinate with sorority leadership; promote the program								
Hold interviews for staff positions								
Hire and train staff members								
Hold interviews for public health interns								
Hire and train public health interns								
Develop lessons and materials for first round of sessions								
Pilot test program								
	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Revise program based on pilot								
Prepare for program "kick-off"								

Hold first round of sessions								
Develop lessons and materials for second round of sessions								
Hold second round of sessions								
Develop lessons and materials for third round of sessions								
Hold third round of sessions								
Evaluate program								
Write final report								

Marketing Plan

The program is aiming to recruit full participation from the Panhellenic sorority community, which will amount to a total of 13 sororities with about 350 members each

for a total participant count of 4,550 individuals. The main route of promotion to individual participants will be via public relations, as we will rely on sorority executive councils to have a favorable view of our program and its objectives in order to continue to see the value in their chapter's attendance. Sorority risk prevention chairs will be targeted via direct marketing by email, and the administrative staff member will be responsible for gauging interest in the program and communication regarding scheduling and attendance. Keeping a personal relationship between our staff and the consumer will result in a higher attendance rate for the program and hopefully a greater satisfaction rating.

As stated above, food and beverages will be provided at sessions in order to keep morale up in the audience. Incentives include two Chegg Premium gift cards per sorority and four packs of notecards that can be used for the active study methods we will be promoting. These will be given away during sessions in order to encourage participation in activities such as completing written materials and surveys, answering questions posed by the speaker, or offering personal anecdotes when probed.

Budget

Personnel	\$ 107,500
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Educators	Full-time Health Education Specialist x 2	80,000
	Part-time Public Health Interns x 3	2,500
Administrative Staff	Part-time Administrative staff member x 1	25,000
Space		\$ 0
Office	500 square foot office space at USC – Columbia Campus	In-kind
Program Sessions	Classroom space with 350 person occupancy x 39 sessions at USC – Columbia Campus	In-kind
Equipment		\$ 2,750
Printer	HP printer/copier/scanner	750
Computers	Dell laptops x 3	2,000
Supplies		\$ 3,564
Refreshments	Food/beverages x 39 sessions	2,500
Office materials	Printer paper, pencils, pens, highlighters, staplers, staples, post-its	500
Incentives	26 Chegg Premium gift cards	390
	52 notecard packs	174
TOTAL		\$ 113,814

Total project cost (100%)	\$113,814
Amount provided by the Office of Fraternity and Sorority Life (33%)	\$37,938
Amount requested from The Winningham Foundation (33%)	\$37,938

Amount request from the University of South Carolina Student Health Services (33%)	\$37,938
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Evaluation

For our evaluation plan, we utilized both methods of qualitative and quantitative methods to ensure our program was as effective and successful as possible, while also

addressing any potential flaws or errors. A combination of both evaluation types gives a more broad and complete review of our program as a whole, both from a logistic and data-based approach and a conceptual, idea-based approach as well. Quantitative data was significant in our review for process objectives regarding inviting the appropriate number of potential members and ensuring the program was properly staffed. Our pre-assessment and post-assessment score results are also important quantitative information for ensuring we successfully had 75% of our program participants gain the needed knowledge and identification skills regarding stimulant misuse. Our outcome objective is the primary focal quantitative evaluation point, with our goal of reducing prescription stimulant misuse among South Carolina by 10% by 2030 being contingent on numerical data from now compared to 2030. Qualitative data was also significant throughout this project. This was primarily important regarding behavioral change associated with prescription stimulant misuse and the biases, assumptions, and misconceptions surrounding stimulant misuse. The learning and behavioral objectives are especially significant to qualitative data evaluation, as seen by the observations and recordings of changed behavior and new thinking and learning patterns unique to the participation in and completion of this program.

Process Objective	Evaluation
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Two months prior to the start of the program, program coordinators will invite the 19 potential members identified above to join the planning committee - Who: Program coordinators - What: Invite potential members to join the planning committee - When: Two months prior to the start of the program - What Extent: The 19 potential members	Did we do what we said we would do in terms of daily activities? - Did we invite the nineteen potential members? Yes/No What is the evidence/documentation we need to show this? - Need to collect responses to invitations
Prior to the start of the program, the planning committee will develop a 3 month curriculum for educating the Panhellenic community about the risks and misconceptions associated with prescription stimulant misuse, as well as positive academic habits and resources that can offset prescription stimulant dependence. - Who: Planning committee - What: Develop a curriculum for educating the Panhellenic community - When: Prior to the start of the program - What Extent: 3 month curriculum covering topics of risks and misconceptions associated with prescription stimulant misuse and positive academic habits and resources	Did we do what we said we would do in terms of daily activities? - Did the planning committee develop a three month curriculum? Yes/No What is the evidence/documentation we need to show this? - Need to collect completed copy of the curriculum
The Panhellenic community will be anonymously assessed by the planning committee to determine the prevalence and frequency of prescription stimulant misuse among its members at the program start and at program completion. - Who: Planning committee - What: Anonymously assess the Panhellenic community using an adapted Theory of Planned Behavior Construct Assessment (See Appendix A) - When: At the program start and at program completion - What Extent: The prevalence and frequency of prescription stimulant misuse among members	Did we do what we said we would do in terms of daily activities? - Did we assess the Panhellenic community at the program start and program completion? Yes/No What is the evidence/documentation we need to show this? - Need to collect pre-assessments and post-assessments

Learning Objective	Evaluation
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75% of all UofSC Panhellenic women will be able to identify one major health risk and one major legal consequence associated with the misuse of prescription stimulants at the completion of the program. a. Who: Panhellenic women b. What: Identify health risks and legal consequences c. When: Completion of program d. What Extent: One risk, one consequence, 75% of all UofSC Panhellenic women	Did we do what we said we would do in terms of short-term changes to our program participants in terms of KASBE? - Are 75% of all UofSC Panhellenic women able to identify one major health risk and one major legal consequence associated with the misuse of prescription stimulants? Yes/No What is the evidence/ documentation we need to show this? - Compare pre-assessment and post-assessment (administered at the beginning of first session and after final session)
75% of all UofSC Panhellenic women will be able to identify and refute three misconceptions associated with prescription stimulant misuse upon completion of the program. a. Who: Panhellenic women b. What: Identify and refute misconceptions c. When: Completion of program d. What Extent: Three misconceptions, 75% of all UofSC Panhellenic women	Did we do what we said we would do in terms of short-term changes to our program participants in terms of KASBE? - Are 75% of UofSC Panhellenic women able to identify and refute three misconceptions associated with prescription stimulant misuse? Yes/No What is the evidence/ documentation we need to show this? - Compare pre-assessment and post-assessment (administered at the beginning of first session and after final session)
75% of all UofSC Panhellenic women will be able to identify where they can access at least one local resource for substance abuse treatment upon completion of the program. a. Who: Panhellenic women b. What: Identify resources/help c. When: Completion of program d. What Extent: At least one local resource, 75% of all UofSC Panhellenic women	Did we do what we said we would do in terms of short-term changes to our program participants in terms of KASBE? - Are 75% of all UofSC Panhellenic women able to identify where they can access at least one local resource for substance abuse treatment? Yes/No What is the evidence/ documentation we need to show this? - Compare pre-assessment and post-assessment (administered at the beginning of first session and after final session)

Behavioral Objective	Evaluation
Upon completion of the program, 75% of UofSC Panhellenic women will engage in one positive studying method. a. Who: UofSC Panhellenic women b. What: Engage in one positive studying method c. When: Upon completion of the program d. What Extent: 75% of UofSC Panhellenic women, one positive studying method	Did we do what we said we would do in terms of short-term changes to our program participants in terms of KASBE? - Did 75% of UofSC Panhellenic women engage in one positive studying method? Yes/No What is the evidence/ documentation we need to show this? - Compare pre-assessment and post-assessment (administered at the beginning of first session and after final session)

Outcome Objective	Evaluation
1. By 2030, prescription stimulant misuse among women in South Carolina will be reduced by 10%. 5. Who: Women in South Carolina f. What: Prescription stimulant misuse g. When: By 2030 h. What Extent: Reduction by 10%	Did we do what we said we would do in terms of long-term changes to our target population in terms of morbidity, mortality and QOL? - Was there a reduction by 10%? Yes/No What is the evidence/ documentation we need to show this? - Compare current data with 2030 data (via CDC, state health dept.)

References

Addiction Center. (2019, December 5). *ADHD and addiction*.

<https://www.addictioncenter.com/addiction/adhd/>

American Addiction Centers. (2019, July 2019). *How substance use disorders differently affect men and women*.

<https://americanaddictioncenters.org/blog/substance-abuse-men-vs-women>

Arria, A. M., Geisner, I. M., Cimini, M. D., Kilmer, J. R., Caldeira, K. M., Barrall, A. L., Vincent, K. B., Fossos-Wong, N., Yeh, J., Rhew, I., Lee, C. M., Subramaniam, G. A., Liu, D., & Larimer, M. E. (2017, July 14). Perceived academic benefit is associated with nonmedical prescription stimulant use among college students. *Addictive Behavior*, 76, 27-33. <http://doi.org/10.1016/j.addbeh.2017.07.013>

Benson, K., Flory, K., Humphreys, K. L., & Lee, S. S. (2015). Misuse of stimulant medication among college students: A comprehensive review and meta-analysis. *Clinical Child and Family Psychology Review*, 18(1), 50-76.

<https://doi.org/10.1007/s10567-014-0177-z>

Berman, S. M., Kuczenski, R., McCracken, J. T., & London, E. D. (2009). Potential adverse effects of amphetamine treatment on brain and behavior: A review. *Molecular Psychiatry*, 14(2), 123–142. <http://doi.org/10.1038/mp.2008.90>

British Psychological Society & Royal College of Psychiatrists. (2008). *Drug misuse: psychosocial interventions* (ch.3). Leicester, England.

College Tuition Compare. (n.d.). *2020 SAT and ACT test scores comparison between colleges in South Carolina*.

<https://www.collegetuitioncompare.com/compare/tables/?state=SC&factor=sat-act-scores>

Ford, J. & Schroeder, R. (2008). Academic strain and non-medical use of prescription stimulants among college students. *Deviant Behavior* 30(1), 26-53.

<https://doi.org/10.1080/01639620802049900>

International Narcotics Control Board. (2015). *Report of the International Narcotics Control Board for 2014*.

<https://www.incb.org/incb/en/publications/annual-reports/annual-report-2014.html>

Jed Foundation. (n.d.) *Depression and anxiety among college students*.

<https://www.jedfoundation.org/depression-and-anxiety-among-college-students/>

Jeffers, A., Benotsch, E. G., & Koester, S. (2013). Misuse of prescription stimulants for weight loss, psychosocial variables, and eating disordered behaviors. *Appetite* 65(6), 8-13. <https://doi.org/10.1016/j.appet.2013.01.008>

Kinman, B. A., Armstrong, K. J., & Hood, K. B. (2017). Perceptions of risks and benefits among nonprescription stimulant consumers, diverters, and non-users.

Substance Use & Misuse, 52(10), 1256-1265.

<https://doi.org/10.1080/10826084.2016.1273954>

LaBelle, S. (2018). College students' intent to intervene when a peer is engaging in nonmedical use of prescription stimulants: An application of the theory of planned behavior. *Substance Use & Misuse*, 53(7), 1108-1116.

<https://doi.org/10.1080/10826084.2017.1399421>

Lakhan, S. E., & Kirchgessner, A. (2012). Prescription stimulants in individuals with and without attention deficit hyperactivity disorder: Misuse, cognitive impact, and adverse effects. *Brain and Behavior*, 2(5), 661–677.

<http://doi.org/10.1002/brb3.78>

McKenzie, J. F., Neiger, B. L., & Thackeray, R. (2013). *Health Promotion Programs* (6th ed.). Pearson Education.

National Institute on Drug Abuse. (2018, December). *Misuse of prescription drugs*.

<https://www.drugabuse.gov/publications/misuse-prescription-drugs/overview>

National Institute on Drug Abuse. (2018, July). *The science of drug use and addiction: The basics*.

<https://www.drugabuse.gov/publications/media-guide/science-drug-use-addiction-basics>

National Institute on Drug Abuse. (2020, January). *Substance use in women*.

<https://www.drugabuse.gov/publications/research-reports/substance-use-in-women/sex-gender-differences-in-substance-use>

National Panhellenic Conference. (2020). *National Panhellenic Conference member organizations*. <https://www.npcwomen.org/about/our-member-organizations/>

Regan, D., & Morrison, T. G. (2011). Development and validation of a scale measuring attitudes toward non-drinkers. *Substance Use and Misuse*, 46, 580-590.

<http://doi.org/10.3109/10826084.2010.518748>

South Carolina Department of Health and Environmental Control. (n.d.). *Prescription monitoring*.

<https://www.scdhec.gov/health-regulation/drug-control-register-verify/prescription-monitoring>

Teter, C. J., McCabe, S. E., LaGrange, K., Cranford, J. A., & Boyd, C. J. (2012). Illicit use of specific prescription stimulants among college students: Prevalence, motives, and routes of administration. *Pharmacotherapy: The Journal of Human Pharmacology and Drug Therapy*, 26(10), 1501–1510.

<http://doi.org/10.1592/phco.26.10.1501>

United Nations Office on Drugs and Crime. (2014). *World Drug Report 2014*.

https://www.unodc.org/documents/wdr2014/World_Drug_Report_2014_web.pdf

United States Census Bureau. (n.d.) *QuickFacts Columbia, South Carolina*.

<https://www.census.gov/quickfacts/columbiacitysouthcarolina>

United States Drug Enforcement Administration. (n.d.). *Drug scheduling*.

<https://www.dea.gov/drug-scheduling>

University of South Carolina. (2018, October 25). *Student headcount*.

<http://oiraa.dw.sc.edu/enrollment/prel2018/fall/freeze.pdf>

Weyandt, L. L., Oster, D. R., Marraccini, M. E., Gudmundsdottir, B. G., Munro, B. A.,

Rathkey, E. S., & McCallum, A. (2016). Prescription stimulant medication misuse:

Where are we and where do we go from here? *Experimental and Clinical*

Psychopharmacology, 24(5), 400-414. <http://doi.org/10.1037/pha0000093>

Wildeman, M. K. (2018, April 1). This drug is prescribed more than any other in South Carolina. Researchers aren't sure why. *The Post and Courier*.

https://www.postandcourier.com/health/this-drug-is-prescribed-more-than-any-other-in-south/article_a99872e6-3126-11e8-ad71-07a2dd354240.html

Appendix

A. Theory of Planned Behavior Construct Assessment adapted from Labelle (2018)

Attitudes

- a. If I were to intervene on behalf of a friend engaging in nonmedical use of prescription stimulants (NPS), it would be _____ (Harmful/Beneficial).
- b. It is ethical for me to intervene on behalf of a friend engaging in nonmedical use of prescription stimulants (NPS).
- c. It is my responsibility to intervene on behalf of a friend engaging in nonmedical use of prescription stimulants (NPS).
- d. It is appropriate to intervene on behalf of a friend engaging in nonmedical use of prescription stimulants (NPS).
- e. I am expected to intervene on behalf of a friend engaging in nonmedical use of prescription stimulants (NPS).

Subjective norms

- a. It is socially acceptable to intervene on behalf of a friend engaging in nonmedical use of prescription stimulants (NPS).
- b. My friends believe that it is okay to intervene on behalf of a friend engaging in nonmedical use of prescription stimulants (NPS).
- c. My friends would intervene on behalf of another friend engaging in nonmedical use of prescription stimulants (NPS).

- d. Most people like me would intervene on behalf of another friend engaging in nonmedical use of prescription stimulants (NPS).

Perceived behavioral control

- a. I am confident that I could intervene on behalf of a friend engaging in nonmedical use of prescription stimulants (NPS) without it affecting our relationship.
- b. I am confident that I could reduce my friend's NPS behavior if I confront him or her about it.
- c. I am confident that if I intervene on behalf of a friend engaging in nonmedical use of prescription stimulants (NPS), it would make a difference in his or her behavior.

Behavioral intentions

- a. I would ask him/her about these behaviors.
- b. I would approach him/her and suggest that he/she speak to a medical professional.
- c. I would share what I know about nonmedical use of prescription drugs and suggest ways that he/she might get help.
- d. I would encourage him/her to make an appointment with a medical professional.

Demographics and Additional Items

- a. What is your age?
- b. What is your ethnicity?
- c. Have you ever used prescription stimulants?

- d. How many times a week do you use prescription stimulants that are prescribed to you?
- e. How many times a week do you use prescription stimulants that are not prescribed to you?
- f. What is one legal consequence of prescription stimulant misuse?
- g. What is one health risk associated with prescription stimulant misuse?
- h. What are three misconceptions associated with prescription stimulant use? How would you challenge these misconceptions?
- i. What is one local resource for substance abuse treatment?
- j. What is one study habit that you have employed over the past month?