Butler Journal of Undergraduate Research

Volume 1

2015

Role Overload and Prescription Stimulant Use among College Students

Haley Cook
Butler University, hcook14@comcast.net

ROLE OVERLOAD AND PRESCRIPTION STIMULANT USE AMONG COLLEGE STUDENTS

HALEY COOK, BUTLER UNIVERSITY
MENTOR: KATHERINE NOVAK

Abstract

Previous research has found that prescription stimulant use on college campuses has increased in recent years although estimates of the actual amount of stimulant use vary. Studies have also found that the motives for stimulant abuse vary with some individuals indicating they use prescription stimulants for academic purposes while others use them for recreational purposes. Today, the student role includes academic, organizational involvement, and social expectations. Students, who have difficulty meeting the multiple obligations placed upon them by the student role are said to be experiencing role strain. One type of role strain is role overload, which occurs when people feel that they do not have the time or emotional capability to adequately fulfill their role. The purpose of this study is to examine the relationship between role overload and prescription stimulant use among Butler students. Data was collected using a survey administered to 175 students. Role overload was measured using an adapted version of an index created by Reilly (1982) to measure role overload among working mothers. Prescription stimulant use was measured by asking respondents whether or not they used certain prescription stimulants. Respondents were also asked about their frequency of use, motives for use, and how they acquired prescription stimulants. Results indicated that 21.7% of the respondents had used prescription stimulants in the past. The most common motivations for use were improved attention/concentration and improved study habits. While no significant relationship between role overload and stimulant drug use was found, prescription stimulant users experiencing role overload were more likely indicate that their use was motivated by the desire to get higher grades.

The link between substance abuse and college students has been studied frequently by social scientists. Alcohol, marijuana, and other illicit substances are among the drugs studied over the years. The earliest studies of the relationship between college students and substance abuse investigated drinking behavior and discovered a strong correlation between college life and binge

drinking. According to the National Survey on Drug Use and Health (2012), 60.3% of students are current drinkers and 40.1% engage in binge drinking. Studies such as the one conducted by Reed, Lange, Ketchie, and Clapp (2007) have examined the effect of peer influence on students' likelihood of abusing alcohol and found that friends, not peers or fraternity/sorority members, were the reference group which had the greatest influence on participation in binge drinking. The survey also reported that college students were more likely to abuse alcohol than others their age who were not enrolled in college.

The use of illicit drugs among college students is also a subject of frequent study. The rate of illicit drug use among college students has been reported at 22% (NSDUH, 2012), and the use of prescription stimulants is an area of particular growth. A study conducted by McCabe, West, and Wechsler (2007) found that the use rate of prescription drugs on campus increased from 11% in 1993 to 16% in 2001. With an increase in the number of prescriptions written to treat disorders like ADD and ADHD, it is to be expected that abuse will also increase. The most common drugs used to treat these disorders are Adderall (dextroamphetamine) and Ritalin (methylphenidate) which are among the most commonly misused and abused (White, Becker-Blease, & Grace-Bishop, 2006). The National Institute on Drug Abuse (2011) reported that 1.1 million Americans had abused prescription stimulants and that 6.5 percent of twelfth graders abused the prescription stimulant Adderall. Other surveys conducted by researchers have found rates of prescription stimulant abuse from 0 to almost 25% across the United States (Shillington, Reed, Lange, Clapp & Henry, 2006). Researchers have found that colleges in the northeastern United States with high admission standards have higher rates of prescription stimulant abuse within their student population (McCabe, Knight, Teter & Wechsler, 2005). Prescription stimulant users begin their abuse at a mean age of 22.1 years, which coincides with their college careers (NSDUH, 2012).

Researchers have examined how stimulant use differs across age, race, and gender but have come to different conclusions. While most studies, including a study conducted by Pilkington and Cannatella (2012), have found that men and whites are more likely to abuse prescription stimulants than their counterparts, a study conducted by Shillington et al. (2006) in California found there to be no significant difference in abuse based on gender or race. Previous studies consistently find that involvement in a Greek organization or living in Greek housing increases a person's likelihood of abusing prescription stimulants (Shillington et al., 2006). Studies have also found

that students with higher GPAs are less likely to abuse prescription stimulants (Arria, O'Grady, Caldeira, Vincent & Wish, 2008).

In addition to examining patterns of illegal stimulant use among college students, researchers have also studied the reasons why students abuse prescription stimulants. One reason for the frequent abuse of prescription stimulant use is students' nonchalant attitude toward this activity. Multiple studies, including those by Judson and Langdon (2009) and Quinter, Peterson, and Young (2006) have found that prescription abuse, in general, was more common among college students because they believe it to be safer than "hard" drugs like cocaine or heroin. As the side effects are noted on the bottle and the drugs have been studied in laboratories, individuals believe they are less harmful. Prescription drugs, as viewed by college students, are more socially acceptable than hard drugs and less likely to incur legal sanctions (Varga,2012). Studies have also found that many college students believe that experimentation with drugs and alcohol is a natural part of the college lifestyle and is therefore expected of them (Quintero, Peterson, & Young, 2006; Varga, 2012).

Prescription stimulant abusers can generally be divided into two categories: those who use prescription stimulants for academic purposes and those who use them to "party" or get high (Judson & Langdon, 2009; Quintero, Peterson, & Young, 2006). Quintero, Peterson, and Young (2006) studied the former group, focusing on the socio-cultural factors which lead to prescription stimulant abuse among college students and found that students were most likely to abuse stimulants in order to concentrate on their studies and "fulfill the role demands associated with being a college student " (p.914). This would suggest that in order to balance the varying demands of the college student role, students have utilized prescription stimulants to increase their attention spans to allow them to focus on their homework or study for a longer period of time. Aria et al. (2008) found that prescription stimulant users spent slightly more time going out, slightly less time studying, and attended fewer classes. Though very little research has been conducted in this area, some studies suggest that a person's personal expectations as well as pressure from other sources, including parents, leads college students to abuse prescription stimulants (Varga, 2012).

Given the pressure that is put on today's college students, many researchers have used strain theory to explain students' use of prescription stimulants and other substances. Agnew's (1992) general strain theory outlines three main sources of strain. The first of these is the failure to achieve positively valued goals. In college, one of these positively valued goals is aca-

demic achievement. For some, achieving success in college is difficult and not always possible even if success is their first priority. Failure to achieve academically for some students would then cause them strain. The second cause of strain is the removal of positively valued stimuli. In this context, stimuli could be receiving poor grades or losing one's academic scholarship. The third cause of strain is the presence of negative stimuli. For college students, this could mean anything from poor campus living conditions to reprimands from professors. Strain can cause college students to seek deviant ways to fulfill their goals, such as the use of prescription stimulants. (Ford & Schroeder 2009). Utilizing general strain theory, Ford and Schroeder (2009) conducted a study measuring the relationship between academic strain and prescription stimulant use. Academic strain was "operationalized as a disjunction between academic aspirations and outcomes." The researchers asked respondents how important they felt academics were to them and then asked their GPA. The negative effect which results from strain was measured by depression. They concluded that the disjunction between aspirations and outcomes can lead to academic strain. This strain can lead to depression and the resulting use of prescription stimulants.

Strain can also arise from the college student role itself. Studies typically find that the student role includes academic, organizational/recreational, and social expectations (Rabow & Duncan-Schill, 1995; Reitzes & Jaret, 2007; Stryker & Serpe, 1994). A study by Stryker and Serpe (1994) identified four main roles for college students: academic, athletic/recreational, extracurricular, and friendship/personal involvement. Stryker and Serpe (1994) as well as Reitzes and Jaret (2007) found that students ranked their academic role as most important. Stryker and Serpe (1994) also found women tended to rank personal involvement higher than men, while men gave more importance to the athletic/recreational role than women. Rabow and Duncan-Schill (1995) found that the pressure to abuse alcohol stems from feelings of anxiety and pressure in academic and social roles. These overwhelming feelings occur due to conflict between roles where students become unable to fulfill the tasks each requires, resulting in role strain or role overload.

Role strain among college students occurs when students are unable to meet the different obligations which their status as college students entails (Crawford & Novak, 2013). For them, this may be the inability to balance their time between their academic role, social role, and organizational role. The type of role strain examined in this study is role overload, which occurs when "people do not have enough time or emotional resources to fulfill the role expectations associated with one or more of their statuses" (Crawford &

Novak, 2013). Role overload has often been studied in relation to working mothers who struggle to balance their obligations as an employee and as a wife and mother. Role overload can occur when mothers feel they do not have enough time to adequately fulfill their expectations at work and at home. A number of studies have linked this form of role strain in working mothers to negative consequences, including depression and generally poorer mental health (Glynn, Maclean, Forte, & Cohen, 2009; Pearson, 2008)

Role overload has not received much attention among the college student population, though it is still relevant. College students who feel they do not have enough time in their day to complete their academics and fulfill their social and organizational obligations may be experiencing role overload. Echoing results from studies on role strain and the student role, Agrawal and Chahar (2007) found that both academic and extracurricular activities led to role stress and role overload in technical students in India. They defined role stress as anything about one's role that produces negative consequences for the individual. They found that stress can arise due to financial burdens, like student loans, and being separated from one's friends and family. Agrawal and Chahar also studied role overload, identifying qualitative and quantitative aspects to role overload. Qualitative aspects included the feeling of the work being too difficult, while quantitative aspects included the feeling of having too much to do. Both of these forms of role overload are present among college populations.

This study will examine prescription stimulant use among Butler University college students and the extent to which role overload affects the likelihood of using these drugs illegally. Components of college student status include several different roles including the academic role, the social role, and the organizational role, which may lead to role overload when combined. The expectations for each of these roles and the amount of time dedicated to them may influence a student's likelihood of abusing prescription stimulants The purpose of this study is twofold. First, the study will examine the extent to which students engage in illegal stimulant use and their motivations for doing so. Second, it explores the college student role and how it interacts with the decision to use prescription stimulants. This study will help to illustrate the many different, and often conflicting, roles and expectations which are placed on college students and how students attempt to balance these roles. Once recognized, prescription stimulant abuse can be better monitored among the student population to prevent negative health consequences.

Methods

SAMPLE

Data was collected utilizing a non-probability, convenience sampling design. Data collection began in January 2014 after receiving Institutional Review Board approval and continued through March 2014 until 175 questionnaires were completed. The questionnaires were administered in clusters to members of certain classes. Classes were not selected randomly, but attempts were made to gain access to students of all majors and years to ensure data was collected from a wide range of students. The research process began by contacting professors in several disciplines after the study's approval in November 2013. For those who agreed to let students participate in class, scheduling of time and place followed shortly. Professors were contacted until a sample size of at least 175 people was reached.

Data was collected by distributing questionnaires, which took about 10 minutes to complete, to the aforementioned sample. This method was chosen because it promotes the anonymity of the participants in the hopes they would answer truthfully. Anonymity was particularly important due to legal consequences for unlawful drug use. It also allowed for questions about a diverse array of topics, including basic demographic questions, questions on student stimulant use, and multiple measures of role strain and role overload. Additional questions about energy drink consumption and other illicit drugs were included in in case there were not a sufficiently large enough number of prescription stimulant users in the sample. The sample is 53.1% male and 46.9% female and 89.7% white. It is comprised of 19.4% freshman, 25.7% sophomores, 35.4% juniors, and 19.4% seniors. The mean age for the sample is 20 years old and 53.7% were involved in a fraternity or sorority on campus (see Table 1).

Table 1. Descriptive Statistics (n = 175)

Variable	M	SD	Observed Range	n
Female	.47	.50	0 - 1	175
Age	20.20	1.4	18 - 31	175
Greek	.59	.54	0 - 1	175
White	.89	.30	0 - 1	175
Overload Index	43.97	8.28	17 - 65	175
Stimulant Use	.22	.41	0 - 1	175

MEASURES

Role Overload. Role overload is the independent variable. It was measured using a modified version of a 13 item role overload scale developed by Reilly (1982) asking participants about their role as college students. The items were measured using a five point Likert scale ranging from 1 = strongly agree to 5 = strongly disagree. The scale included questions such as "I need more hours in the day to do all the things which are expected of me" and "There are times when I cannot meet everyone's expectations." Scores on the index ranged from 17 to 65 with high scores indicating a greater degree of role overload ($\alpha = .87$).

Academic Importance. Based on previous research linking prescription stimulant use to academic strain caused by the disjunction between grade expectations and results (Ford & Schroeder, 2008), a question was included asking participants how important their academic work is to them with response categories ranging from 1 = not at all to 4 = A lot.

Prescription Stimulant Use. Prescription stimulant abuse is the dependent variable. It was measured by asking respondents "How often, if ever have you used any of the drugs listed below? Do not include anything you used under a doctor's orders." Drug items included Ritalin, Dexedrine or Adderall. The response scale 1) Never Used; 2) Used, but not in the past 12 months; 3) Used in the past 12 months, but not in the past 30 days; 4) Used in the past 30 days (McCabe et al., 2005). Those who responded with 2, 3, or 4 were categorized as users (1) and those who responded with 1 were considered non-users (0). The same scale was used to measure students' use of energy drinks. The questions regarding energy drinks, as well as a question asking students whether they were current users of marijuana, were included in this section to see if there was a relationship between these substances and role overload. Other questions regarding frequency of use, motives for use, and acquisition of prescription stimulants were taken from White et al. (2006). Frequency was measured by asking respondents "How often do you use stimulant medication in ways that are not prescribed by a physician?" with response categories ranging from 1 = rarely (2-3 times per YEAR) to 5 = daily (1-2 times per day). The question regarding motivations asks respondents "For what purpose(s) do you use stimulant medication?" Listed motivations included improved attention/concentration, improved study habits, reduce hyperactivity/impulsivity, higher grades, and other. Respondents were instructed to circle as many motivations as they saw fit. These were then coded into dichotomies where 0 = not a motivation and 1 = a motivation. The question re-

garding acquisition of prescription stimulants asked respondents the perceived ease of acquiring it, with response categories ranging from 1 = very easy to 5 = very difficult. Respondents were also asked to write in how they typically acquire prescription stimulants.

Controls. Respondents were also asked about their sex (0 = male,1 = female), race (1 = white, 0 = non-white), Greek membership (0 = non-Greek, 1 = Greek) and age.

DATA ANALYSIS

Data was analyzed using IBM's SPSS Statistics software. Univariate descriptive statistics were conducted for each of the variables. The frequency and mean were recorded for each variable as appropriate. Bivariate correlations were run to test the research hypothesis that students who experience role overload are more likely to use prescription stimulants. They were also conducted for each control variable and role overload, as well as each control variable and prescription stimulant abuse. Correlations were also conducted between each of the variables and energy drink use, as energy drinks have a similar effect as prescription stimulants, though milder. The relationship between each variable and marijuana use was also studied to see if there was a link between role overload and another illicit drug.

Results

As shown in Table 2, of the 175 respondents, 21.7% stated they had used prescription stimulants in the past. Of those, about 17% have used it in the past year and 9% in the past 30 days. The stimulant that respondents used most frequently was Adderall. Of those who stated that they had used prescription stimulants, 73% stated that it was either very easy or somewhat easy to attain prescription stimulants on Butler's campus. Most stimulant-users (67%) stated they acquired these stimulants from friends who had a prescription for it. Of those who used prescription stimulants, 54.8% said they used them rarely (2-3 times per year) and 35.7% used them occasionally (1-2 times per month) (see Table 2). Sixty percent of users were involved in Greek life and 42.1% were juniors. The most frequently stated reasons for prescription stimulant use were improved attention/concentration and improved study habits and the least frequent responses were reduced hyperactivity/impulsivity and partying. A correlation between sex and stimulant use found that

men were more likely to use prescription stimulants than women (see Table 3).

Using Reilly's (1982) scale to measure overload, those who experience the least overload have a score of 13 and those who were the most overloaded would have a score of 65. The mean on this measure for the 175 respondents was 43.97 with a minimum of 17 and a maximum of 65, demonstrating a relatively high degree of overload. A correlation between sex and role overload found that women were more likely to experience role overload than men. The relationship between role overload and prescription stimulant use was negative: those who experience role overload are less likely to use prescription stimulants, though this relationship was not significant. The same pattern was shown with role overload and marijuana use, though more exaggerated and statistically significant. Those who used marijuana were also significantly more likely to use prescription stimulants (see Table 3). Another correlation found a significant relationship between sex and marijuana use, where men were more likely to report the current use of marijuana.

Table 2. Percentage Distribution on Variables Describing Stimulant Use Among Students (n = 42)

Variable	Percent
Frequency of Use	
Rarely (2-3 times per year)	54.8
Occasionally (1-2 times per month)	35.7
Often (2-3 times per week)	7.1
Frequently (5-6 times per week)	2.4
Purpose of Use	
Improved attention/concentration	16.0
Improved study habits	13.7
Reduce hyperactivity/impulsivity	2.9
Higher grades	8.0
Partying	6.3
Difficulty of Attainment	
Very easy	39.0
Somewhat easy	34.1
Neither easy nor difficult	19.5
Somewhat difficult	2.4
Very difficult	4.9

Table 3. Bivariate Correlations of All Variables (n = 175)

	1	2	3	4	5	6	7	8	9
Female	1.00								
Age	-.153	1.00							
Greek	-.023	-.020	1.00						
White	-.021	-.069	.035	1.00					
Overload	.258**	-.035	.138	.094	1.00				
Academic Importance	.274**	-.128	.114	-.016	.053	1.00			
Marijuana Use	-.254**	.017	-.027	-.082	-.240**	-.261**	1.00		
Stimulant Use	-.257**	.079	.119	-.091	-.002	-.237**	.394**	1.00	
Energy Drink Use	-.195*	.202**	.004	.000	-.002	-.136	.153*	.211**	1.00

Note: *p < .05; **p < .01

Results indicated a significant negative relationship between academic importance and prescription stimulant use. As academic importance increased, the use of prescription stimulants decreased. Across the different variables regarding the student role, those with a greater emphasis on the academic aspect of their student role were less likely to use both prescription stimulants and marijuana.

Though the relationship between role overload and stimulant use was non-significant, there was a significant relationship between role overload and using stimulants motivated by a desire for higher grades (see Table 4; p<.1). This relationship was also demonstrated by a regression analysis (see Table 5), which found the relationship to be even stronger (p<.05) when holding demographic variables constant. While there was no significant relationship between role overload and stimulant use among this sample, these results provide partial support for the research hypothesis because there was a significant relationship between role overload and using prescription stimulants for higher grades.

Discussion

Demographic results were consistent with past studies where prescription stimulant use was higher among males and sorority/fraternity members, but showing no significant relationship between race and stimulant use. One significant result was that students who placed a greater importance on academics were less likely to use prescription stimulants. While this result would be expected for other illicit drug use, it is unexpected for prescription stimu-

Table 4. Role Overload and Motivations for Use (n = 42)

	1	2	3	4	5	6
Overload	1.00					
Improved Attention/Concentration	-.040	1.00				
Improved Study Habits	.113	.065	1.00			
Reduce Hyperactivity/Impulsivity	.080	.094	.011	1.00		
Higher Grades	.292#	.159	.084	.203	1.00	
Partying	-.062	.176	.286#	.111	.377*	1.00

Note: #$p < .1$; *$p < .05$; **$p < .01$

Table 5. Regression of Dependent Variable: Motivation for Use—Higher Grades (n = 14)

	B
Higher Grades	
Female	-.280
White	.368
Greek	-.020
Academic Importance	-.113
Overload Index	.019

Note: $r^2 = .257$ ($p < .05$)

lants as they are often used for academic purposes (Judson & Langdon, 2009; Quintero, Peterson, & Young, 2006). It was also found in the study that women had higher scores on the role overload index and were more likely to express that they had difficulty meeting all of their obligations.

A number of studies have been conducted in the past to examine the relationships between the college students and prescription stimulant use, including its prevalence and causes. However, these studies have largely lacked a theoretical guideline to their research and have failed to examine the strain placed on students by role overload. This study aimed to fill that gap by examining the relationship between prescription stimulant use and role overload.

One of the most important findings of this study was the high degree of role overload experienced by today's students. With a mean overload index score of 43.97, it is clear that the student experience comprises many frequently conflicting expectations. The strain students experience due to role

overload may result in the use of drugs and alcohol, as well as depression. The results of this study, however, showed no significant relationship between role overload and the use of prescription stimulants. Though there have not been previous studies investigating the relationship between role overload and stimulant use, the results are consistent with a previous study on the relationship between academic strain and stimulant use. Ford and Schroeder (2009) found no direct relationship between academic strain and stimulant use, but that academic strain can lead to depression, which can increase the likelihood of prescription stimulant use. The results showed a relationship between role overload and using prescription stimulants for the purpose of getting higher grades (see Table 5). While students experiencing role overload are not more likely to use prescription stimulants, those who do are more likely to use them for academic purposes.

LIMITATIONS AND FUTURE RESEARCH

One limitation of this study is that it is based on a self-report survey. Students may choose not to report their stimulant use truthfully, which could lead to the underreporting of stimulant use and bias study findings. This underreporting may be due to fear of legal repercussions. The study is also cross-sectional, so causal inferences cannot be made. The sample is not representative of the total population of Butler University students and is not generalizable to all college student populations. Furthermore, the relatively small sample size limits the ability to draw conclusions from the data.

In the future, more attention should be paid to the motivations for prescription stimulant use by college students and methods of acquisition. Future research is needed to investigate use patterns, such as the use of stimulants during midterms and finals, as well as the relationship between theory and prescription stimulant use. Given a larger sample, researchers may be able to draw more definitive conclusions about the relationship between role overload and other forms of role strain and the use of stimulants. Under certain conditions, role overload may be more likely to influence stimulant use. It would be beneficial for future studies to examine subjects who are experiencing depression or whose academic expectations and outcomes are incongruous to see if this increases their likelihood of abuse. Once motivations, patterns of use, and theoretical bases have been studied further, solutions can then be found to assist universities in implementing policies to limit the use of prescription stimulants on campus.

References

Agnew, R. (1992). Foundation for a general strain theory of crime and delinquency. *Criminology, 30*(1), 47-88. doi: 10.1111/j.1745-9125.1992.tb01093.x

Agrawal, R. K. & Chahar, S.S. (2007). Examining role stress among technical students in India. *Social Psychology of Education, 10*(1), 77-91. doi: 10.1007/s11218-006-9010-y

Arria, A., O'Grady, K., Caldeira, K., Vincent,K., & Wish, E. (2008). Nonmedical use of prescription stimulants and analgesics: Associations with social and academic behaviors among college students. *Journal of Drug Issues, 38*(4), 1045-1060. doi: 10.1177/002204260803800406

Crawford, L & Novak, K. (2013). *Individual and Society: Sociological Social Psychology*. Routledge. doi: 10.4324/9781315856520

Ford, J. & Schroeder,R. (2009). Academic strain and non-medical use of prescription stimulants among college students. *Deviant Behavior, 30*(1), 26-53. doi: 10.1080/01639620802049900

Glynn, K., Maclean, H., Forte, T., & Cohen, M. (2009). The association between role overload and women's mental health. *Journal of Women's Health, 18*(2), 217-223. doi: 10.1089/jwh.2007.0783

Judson, R. & Langdon, S. (2009). Illicit use of prescription stimulants among college students: Prescription status, motives, theory of planned behaviour, knowledge and self-diagnostic tendencies. *Psychology, Health & Medicine, 14*(1), 97-104. doi: 10.1080/13548500802126723

McCabe, S., West, B.T., &Wechsler, H. (2007). Trends and college-level characteristics associated with the non-medical use of prescription drugs among US college students from 1993 to 2001. *Addiction, 102*(3), 455-465. doi: 10.1111/j.1360-0443.2006.01733.x

McCabe, S., Knight, J., Teter, C., & Wechsler, H. (2005). Non-medical use of prescription stimulants among US college students: Prevalence and correlates from a national survey. *Addiction, 100*(1), 96-106. doi: 10.1111/j.1360-0443.2005.00944.x

National Institute on Drug Abuse. (2011). *Commonly Used Prescription Drugs Chart*. Retrieved from http://www.drugabuse.gov/drugs-abuse/commonly-abused-drugs/commonly-abused-prescription-drugs-chart

National Survey on Drug Use and Health. (2012). *Substance Abuse and Mental Health Services Administration*. Retrieved from http://www.samhsa.gov/data/NSDUH/2012SummNatFindDetTables/NationalFindings/NSDUHresults2012.htm#ch3.1.6

Pearson, Q. (2008). Role overload, job satisfaction, leisure satisfaction, and psychological health among employed women. *Journal of Counseling & Development, 86*(1), 57-63. doi: 10.1002/j.1556-6678.2008.tb00626.x

Pilkington, M., & Cannatella, A. (2012). Nonmedical use of prescription stimulants: Age, race, gender, and educational attainment patterns. *Journal of Human Behavior in the Social Environment, 22*(4), 409-420. doi: 10.1080/10911359.2012.664968

Quintero, G., Peterson, J., & Young, B. (2006). An exploratory study of socio-cultural factors contributing to prescription drug misuse among college students. *Journal of Drug Issues, 36*(4), 901-931. doi: 10.1177/002204260603600407

Rabow, J. & Duncan-Schill, M. (1995). Drinking among college students. *Journal of Alcohol & Drug Education, 40*(3), 52-64.

Reed, M. B., Lange, J.E., Ketchie, J.M., & Clapp, J.D. (2007). The relationship between social identity, normative information, and college student drinking. *Social Influence, 2*(4), 269-294. doi: 10.1080/15534510701476617

Reitzes, D.C & Jaret, C. (2007). Identities and social-psychological well-being among African American college students. *Sociological Focus, 40*(4), 392-412. doi: 10.1080/00380237.2007.10571317

Reilly, M. (1982). Working wives and convenience consumption. *Journal of Consumer Research, 8*(4), 407-418. doi: 10.1086/208881

Shillington, A., Reed, M., Lange, J., Clapp, J., & Henry, S. (2006). College undergraduate Ritalin abusers in southwestern California: Protective and risk factors. *Journal of Drug Issues, 36*(4), 999-1014. doi: 10.1177/002204260603600411

Stryker, S & Serpe, R.T. (1994). Identity salience and psychological centrality: equivalent, overlapping, or complementary concepts? *Social Psychology Quarterly, 57*(1), 16-35. doi: 10.2307/2786972

Varga, Matthew. (2012). Adderall abuse on college campuses: A comprehensive literature review. *Journal of Evidence-Based Social Work, 9*(3), 293-313. doi: 10.1080/15433714.2010.525402

White, B.P., Becker-Blease, K. & Grace-Bishop, K. (2006). Stimulant medication use, misuse, and abuse in an undergraduate and graduate student sample. *Journal of American College Health, 54*(5), 261-268. doi: 10.3200/JACH.54.5.261-268