

Adderall Usage Among College Students

A study of the effects of non-prescription Adderall usage on college students, motives behind usage, and student attitudes towards these types of drugs.

Tag Words: Adderall, Concerta, Psychostimulant Drugs, motives, attitudes, college students, non-prescription, prescription

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Summary:

Many college students believe that using Adderall can help them improve academic performance by helping them stay awake and concentrate longer than they normally would. Some justify their usage of the drug by saying it is FDA-approved and because it does not give you a “high” like other illegal substances. However, non-prescription use of Adderall can lead to many harmful side effects, one of them being death. Our project surveyed college students to determine their motivations behind non-prescription use of Adderall, how it affected them, and their attitudes towards using the drug for enhancing academic performance.

Video Link:

http://www.youtube.com/watch?v=TaKvuhod_m0

The Issue: Adderall Usage

Adderall, Psychostimulant Drugs, and ADD/ADHD (PA)

Adderall had been known to be a psycho-stimulant drug, which work by increasing the amount of dopamine and nor-epinephrine in the brain. Adderall contains racemic aspartate mono hydrate, racemic amphetamine sulfate, dextroamphetamine saccharides and dextroamphetamine sulfate. Adderall and Ritalin, also known as amphetamine and methylphenidate has been a very big influence in assisting people diagnosed with a psychiatric disorder such as Attention Deficit Hyperactivity Disorder (ADHD), which can be seen in all age groups (Chau 2007).

Attention Deficit Hyperactivity Disorder is a disorder that causes the stress level to rise in people diagnosed with Attention Deficit Hyperactivity Disorder. The exact cause of Attention Deficit Hyperactivity disorder is still a mystery, scientist have done research in National Institute of Mental Health (NIHM) that Attention Deficit Hyperactivity disorder affects the regions of the frontal lobes, temporal gray matter, caudate nucleus and cerebellum. Adderall has been said to increase concentration, improve mood, while decreasing stress, which are qualities possessed by individuals with Attention Deficit Hyperactivity Disorder. People assume that since Adderall could be prescribed by a doctor, it is not as harmful like the other illegal stimulant drugs such as methamphetamine, hence the reason for Adderall's legality. Adderall can be also as addictive and abusive as cocaine and crystal meths due to the fact that it affects the mesolimbic reward pathway in the brain.

Adderall is a prescribed drug that is usually given from a reputable pharmacy. Adderall is mainly administered orally (mouth) and takes about half an hour to start working. Figure 1 shows how the concentration (ng/ml) affects a person based upon time elapsed. People sometimes regret taking medication for ADHD/ADD because their exams have been postponed, and do not require any sleepless night. It is hard to reverse the intake of the medication and thus some people may end up staying awake and alert for days, wishing they could somehow fall asleep. Also, because people have different metabolism, one pill, or dose of ADHD/ADD (Adderall, etc) medication can be harmful to one individual, while another individual could take two pills of Adderall and would not feel any effects. For safety reasons then, the Food and Drug Administration (FDA) enforces that medications from ADHD/ADD should be prescribed by a doctor. The FDA also restricts this medication due to its cardiovascular effect. In fact, there was a survey with one hundred and thirty seven patients who were treated with Adderall (or similar medication for ADHD/ADD) in which the results indicated that the patients experienced changes in their blood pressure and pulse (Findling 2001). An individual with high blood pressure could suffer a cardiac arrest at anytime and if not medically attended to within minutes, this could result in death.

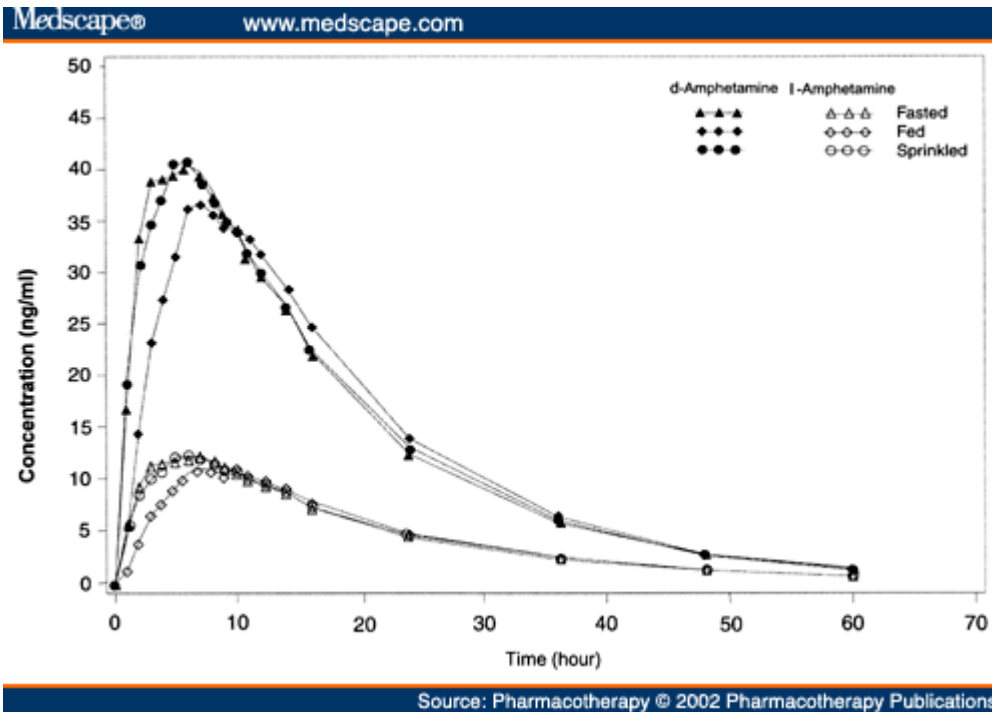


Figure 1

Ritalin is also a drug given to ADHD/ADD patients for healing, it is a psycho stimulant drug approved by the FDA for treating ADHD/ ADD, postural orthostatic syndrome and narcolepsy. There have been some argument that between Ritalin and Adderall, which was is more effective after 4 or 5 hours after ingestion. This lead State University of New York (SUNY) at buffalo to conduct a research involving twenty five individuals to take a 10 mg of Ritalin, 17.5 mg of Ritalin, 7.5 mg of Adderall, 12.5 mg of Adderall, randomly twice a day, over an eight week period in the summer. The results were measured by" taking the placebo-minus-drug mean difference divided by the placebo standard deviation for each child, and were compared hourly between first daily ingestion-subject, double-blind, placebo-controlled, crossover design lasting eight weeks and second ingestion". The result of the research came back to find that both drugs gave a side effect, and Adderall to be more effective after a four to five hour period after in gestation, hence Adderall popularity among college aged students. "The lower dose of Adderall produced effects comparable to those of the higher dose of Ritalin.. The 7.5-mg twice-a-day dose of Adderall and the 17.5-mg twice-a-day dose of Ritalin produced equivalent behavioral changes.". So a 2.5 mg Adderall is equivalent to about 6mg of Ritalin making Adderall two to three times more potent than Ritalin (methylphenidate). The chemical structure for Ritalin is shown below.

Adderall Usage among College Students: A True Life Story (NS)

At around 11pm, 20 hours before my friend Michelle was to take her calculus II exam, she called me with a familiar tone. A tone that leaked with desperation and anger. She had two whole chapters to study before her exam and in all likelihood, will not be able to complete a chapter before she passes out on her couch within the next 20 hour period. Nearly two hours after having

her short melt-down with me, she called back informing me she was done with the first chapter and now on the second. Not hiding anything from me, she said she stole a pill of prescribed Adderall which belonged to her mother. By and large, she was able to not only complete her studying which would have been impossible to finish without a whole pill of Adderall, but she said she was able to pay more attention and understood the calculus problems more than she did without it. She had a 95 on the exam.

In reality, this is what is occurring in almost all universities, if not at least in Rutgers. If you get a chance to be close to a large group of six people studying for exams at any one of the big new Brunswick libraries (i.e. Alexander and LSM), you will hear how common the use of the drug Adderall and its other supplements are being abused just for an easy A. Side effects and warning labels of the drug are almost ignored as the drugs are bought either in a plastic bag or just handed off in a tissue paper. Does the usage of Adderall help a student who is not prescribed with the drug or does it pose more medical problems to the student's body? We must explore the abuse of the drug Adderall by college students, and try to determine if the use of it increases their academic success in their classes and in their GPA as a whole to answer such questions.

Before we talk about the abuse and use of Adderall, we need to know why this drug was first produced for, and the primary use of it. According to drugs.com "Adderall is a central nervous system stimulant. It affects chemicals in the brain and nerves that contribute to hyperactivity and impulse control". As a nervous system stimulant, it is found on drugs.com to take care of narcolepsy and ADHD (Attention Deficit Hyperactivity Disorder). Adderall is a medication used to not only help individuals cope with having ADD, but to also relieve them of their handicap either temporally or for longer periods. Attention Deficit Disorder (ADD) is a disease known to start during one's childhood. The kids-health website recognizes a kid to have this disease if the child acts without thinking, is hyperactive and has trouble focusing. ADD as shown on the kids-health website "impairs a child's ability to function socially, academically, and (even) at home" (<http://kidshealth.org/parent/medical/learning/adhd.html>). Sometimes ADD in a kid can go unnoticed due to the fact that kids are hyperactive and have less attention span for issues or situations that they do not take any interest in. That is why there are treatments now to help manage one's life if he or she has ADD.

The life of a college student is not a luxury, which is why as a SEBS biological science student, I can relate to the students who are taking STEM (Science, Technology, Engineering, and Mathematics) classes. The pressure to graduate and also attain a higher GPA in order to move on to a graduate school, has most students scrambling around to find anything that will work for them or make their lives a little easier, and at least to be able to reach his or her attainable goals. This however does not mean that college is so difficult that individuals need a brain boost just to keep up with the work load. On one hand, the problem with "brain boost Adderall" is, only a few college students will actually take time to read the warning signs on it. Not only is it due to the fact that students do not only buy or receive the drug from their friends by hand or in a bag, most do not care to research on it. For instance, if a student is swamped on work, and needs Adderall

for a boost and extra concentration to finish his or her work, there is little to no chance of him or her researching a pill that was given to her by a trusted friend. Incidentally, there is an article on Adderall.net describing the dangers of the side effects on the drug. Amphetamine, a substance found in Adderall, is known to cause drug dependence if intake of Adderall is prolonged. Additionally, insomnia, anxiety and irritability, hallucinations, symptoms of depression, seizures, high blood pressure and rapid heart are all the few but extremely dangerous side effects of abusing Adderall. In light of this, on February 10th 2005, Adderall.net reported 20 sudden deaths and 12 strokes from the use "Adderall XR", which made Canada pull the drug off the market. As a result, college students should be more informed if not aware of the risk of abusing Adderall, and know that its usage and overdose might end their life at any given time.

Kouzoukas, Pandina, Ogilvie are three PhD psychology students who researched on the "illicit use of non-prescribed Adderall among college students" in Rutgers. Their result showed that the average for students who used Adderall for academic advancement had lower GPAs. How is this possible when the same data showed that at least 70% of the students used Adderall specifically for academic advancement? If the students had lower GPA and were struggling with their academics before, their GPA before and after should have been taken into account. Also, did their studying habits change because they thought the use Adderall meant they needed to study less? As described above, Adderall is a central nervous system stimulant, which only helps one to study easier if actual studying takes place.

To add to the above, the main reason most people take Adderall is to increase their GPA. In some situations, some students use it as a "party" drug where they either ingest it orally or sniff it directly into their system through their nose (nyu.com). Most importantly, there seem to be twice an increase in the usage of Adderall and its supplements from 1993 to 2005 as noted by a survey and research conducted by Columbia University's National Center for Addiction. As a couple of students described it, Adderall is considered as a "minidose of speed" which makes you "become more focused... and concentrate" when studying (nyu.com). Most of the students who enroll in renowned schools such as Columbia and NYU feel like without the use of Adderall, they will not be able to keep up with the stress and workload of their classes. Before the use of Adderall, students used stimulants such as coffee and energy drinks to keep up to study. However now Adderall and its supplements have become the new-age stimulant where without it, some students cannot even concentrate to study for over an hour. Conducting a survey in 119 universities across the United States, it was "revealed that 25% of students at very competitive colleges have used Adderall in order to enhance their study habits" (healthpsych.edu). Not only was it discovered that a quarter of students admitted to using Adderall at least once to help them improve their studies, but also the users were the more intelligent and attended highly competitive colleges.

In the eyes of the college student, the effect that Adderall has on students' GPAs is one that enhances their GPAs instead of decreases it. Accordingly, the dramatic increase of this drug on the market for both prescribed and non-prescribed users indicates that students actually do

believe that Adderall helps them to study and retain a lot more than when not using them. Yet, if Adderall was in actuality, not helping to boost college students' GPAs, why would there still be a correlation with the dramatic increase in the manufacture of the drug Adderall and the use of it by college students? Though the side effects of using this drug are scary, many students still run after it as the best way to study for their exams and for writing papers. The stress and workload of college has students like my friend Michelle scrambling to find the easiest fix to help her get an A. Ask her why she takes Adderall when she knows the risk of taking unprescribed dangerous drugs and she will tell you that the immediate risk is less than the overall benefit of having a 3.8 GPA in a science major.

Previous Studies on Adderall Usage among College Students (NG)

With ADD/ADHD diagnoses on the rise, pharmaceutical companies have responded by increased production of ADD/ADHD medications to meet demand. Among the more widely used drugs are Adderall, Concerta, Vyvanse, and Ritalin. Each one of these drugs acts in slightly different ways to control the symptoms of ADD/ADHD including hyperactivity, inattentiveness, and impulsivity.



Figure 2. (From left to right)
Concerta, Adderall, Vyvanse, and
Ritalin

Adderall is an immediate-release medication, though it is also sold in an extended release form. Side effects may be severe, and range from increased blood pressure to sudden death. This makes the medication of even greater concern when misused, especially among college-aged students. Whereas Adderall is a methamphetamine, Concerta and Ritalin both belong to the methylphenidate family of drugs. Concerta is only sold as an extended-release capsule and last up to twelve hours. Ritalin is sold as both short-action and long-action drugs. There are two

forms of the long-action drugs, Ritalin SR and Ritalin LR. Vyvanse is different from all three drugs, and is a member of phenethylamine and amphetamine chemical classes. Vyvanse is sold as an extended-release tablet.

Non-prescription use of drugs such as Ritalin, Adderall, Aderall XR, Concerta, Methyln, Vyvanse, and other similar ones used in the treatment of ADD/ADHD are widely believed to improve academic performance. As a result, college students across the United States use them to try and get better grades. In fact, a recent study shows that even post-baccalaureate students continue to use Adderall in an attempt to get better grades; 12.4% of dental and dental hygiene students in dental schools across the Southeastern United States were found to be users (McNiel et al., 2010).

Evidence showing that college students truly believe Adderall can help increase academic performance can be found in an ongoing study by Fagan et al. (2009), in which one-hundred and forty-seven students attending Rutgers University were surveyed about the use of these drugs as well as their understandings of what these drugs do. They found that of the students who have taken such psychostimulant medication, 88% indicated that they believe the drugs assisted in improving their academic achievement. Furthermore, among all students, regardless of them having ever used psychostimulant medication, Fagan et al. found that 63% still believed these drugs improve one's academic achievements.

In fact, many students justify their use of these drugs based upon the belief that psychostimulant medication will improve academic performance. De Santis and Hane (2010) found such beliefs to be the number one justification behind Adderall usage among students they interviewed, labeling the "I'm doing it for the right reasons" argument. Other arguments they heard were that Adderall comes from a medical-establishment, it does not get you high, and that there are no internal/physical side effects.

Returning to the study by Fagan et al. (2009), in addition to investigating students' attitudes towards these drugs, they also compared the differences in grade point averages (GPA) between students taking psychostimulant medications and students who were not taking them. Initial results indicated that the GPA of students taking psychostimulant medication was lower than that of students not on the medications (3.071 as compared to 3.267), a result which Fagan et al. found surprising. Their explanation for this occurrence is that because:

"The majority of students who have taken psychostimulant medication were within the age range of 21 to 25... [and] because as a student moves further into their academic career, they face more challenging courses, or the student is taking the medications as a last ditch effort to try to save their struggling grade point average prior to graduation" (Fagan et al., 2009)

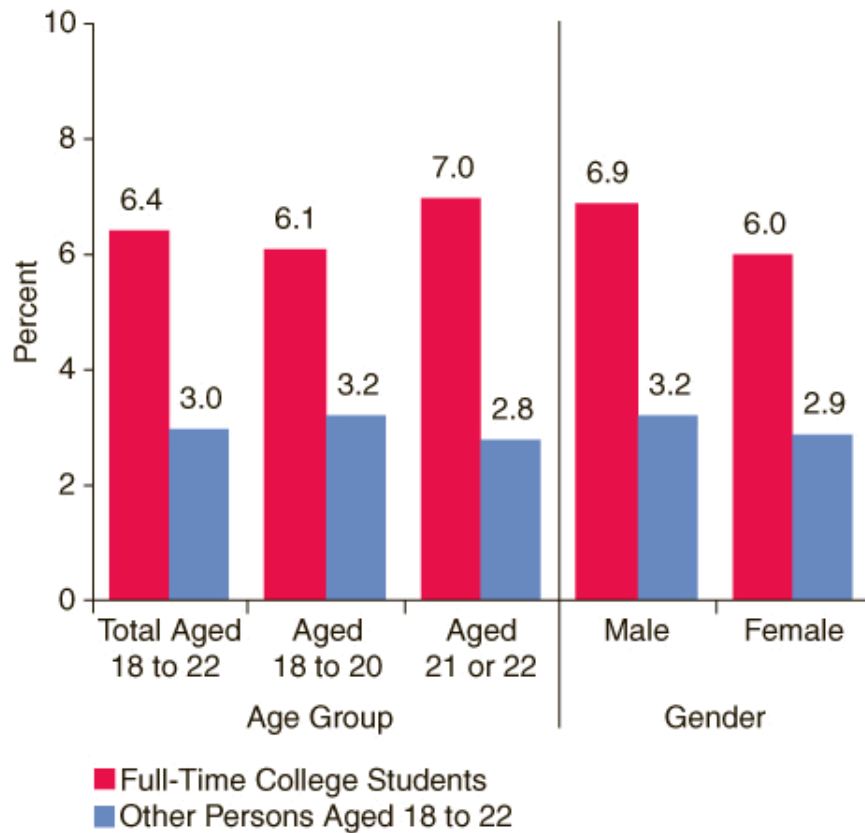
However, as this study is an ongoing one, Fagan et al. indicated that more data on the GPAs of students who use and do not use psychostimulant medication is needed to come to a conclusion

on the subject. Finally, the study also reported statistics about student knowledge on the side effects of these drugs. Fagan et al. report that 63% of students were never educated about these medications, and merely 27% were aware of their dangerous side effects such as sudden death.

Like Fagan et al., many other studies have been conducted on the use of psychostimulant medication use, and the motives for using them. A recent study, by Rabiner et al. (2009), investigated motivations and perceived consequences associated with use of ADHD medication. For this project, 3,400 undergraduate students from one public and one private university, located in the southeastern, were surveyed. Results from the study found several statistically significant predictors of nonmedical ADHD prescription drug use, and among these was GPA. They found that nonmedical users on average had a lower GPA (3.16) than other students (3.28) and that their concerns about academic performance were higher (Rabiner et al., 2009). Their reasoning behind this statistic is that "... [nonmedical users] may have been less prepared to meet the academic demands of college to begin with..." and they noted it would be interesting to analyze their GPAs and test scores from high school (Rabiner, et al., 2009).

Another study, conducted by McCabe et al. (2005), also showed the same correlations between GPA and nonmedical use of psychostimulant medication. They reported that students having a GPA equivalent to a B+ or higher exhibited an odds ratio of 0.54 for use within the past year and 0.57 for use within the past month (S. E. McCabe, Knight, Teter, & Wechsler, 2005; Sean Esteban McCabe, Teter, & Boyd, 2006). Thus, students with generally higher GPAs are roughly half as likely to use psychostimulant medication as those having lower GPAs. McCabe et al. do not suggest any reasons behind this statistic like the other previously mentioned studies, instead relating it to statistics showing increased substance abuse among students with lower GPAs. Furthermore, a similar study from 2005 study by McCabe, Teter and Boyd, found the correlation between illicit use of ADHD medication and a lower GPA to be quite higher, with odds ratios nearing 7.5 (S. E. McCabe, et al., 2005). In addition to a correlation between lower GPAs and non-prescription Adderall usage, research shows that male college students are more likely to be abusers of ADHD/ADD medication than female college students (Figure 3).

One question brought up by Fagan et al. is the differences in the correlation of GPAs and medical/non-medical use of psychostimulant medication. Though McCabe, Teter and Boyd reported on this topic, their results were not comprehensive and failed to show differences in the correlation of GPA and medical/non-medical use of ADHD medication based upon the time at which the individual was first prescribed the medication. Thus, we will be conducting a survey to collect data on this question, as an extension of the study by Fagan et al. The survey will be administered to the Rutgers University body and made available online using various social networking media.



Source: 2006 and 2007 SAMHSA National Surveys on Drug Use and Health (NSDUHs).

Figure 3

However, the overall hypothesis of Fagan et al.’s study is “... that students may be misusing the drugs as a way to enhance their academic performance in school as a result of insufficient information about these medications and their side effects” (Fagan et al., 2009). Once again, Fagan et al. did indeed find that the majority of students misusing psychostimulant medication did so to enhance academic performance, and many studies agrees with this finding. However, whether or not misuse for academic enhancement is caused by insufficient knowledge about psychostimulant medication is a question that has not been conclusively answered. Fagan et al. only found that of those who misuse the drug, 63% were never educated about them, and only 27% knew about dangerous side effects such as sudden death. This data does suggest though, a correlation between insufficient knowledge of the drug and abuse of the drug. Our survey will further investigate the reasoning behind the misuse of psychostimulant drugs as well as its effectiveness among those with a prescription and those without one. We will also look at the various factors that influence a student’s decision to take these drugs.

A reason for poor performance that people claim after taking Adderall in the survey might not be the effect of Adderall, but due to other factors. Factors that affect poor performance at test are

stress, inability to process information, and no regards for taking test. With College work, and the ways in what students learn are evolving, lately students have come under extreme pressure of insufficient time to finish such course loads, which in the end results leads to stress. Stress can occur from student who do not manage their time properly leading to insufficient time to finish a project or study, which in turn leads to a lower academic performance (Macan, 1990).

Sometimes, students take Adderall when they know they are under severe time constraint to get something done, and if they do not accomplish what they aim to get done, they can blame the drug for not being effective. Inability to process information by student can also be a reason causing student to perform poorly academically. Receiving and processing information are two entirely different factors, because everybody if usually attend lectures receive the information and it's the job of the student to process the information in a way that the student will understand .Another factor to poor performance by student is that the students have no regards for taking any test, because they feel that it's irrelevant to how successful someone gets in future. Hence the result of the community service project will have to take such individual into consideration to avoid any kind of bias.

Another consideration we took into account is that Adderall comes in different color depending on the concentration, as Figure 3 illustrates. When students are being sold Adderall from patients, often times the pills are not given in a bottle. Students might normally associate the Adderall with the color blue, and since no medication bottle is given to student who are not prescribed Adderall, how do they know for sure that what they are taking is in fact Adderall? Exacerbating this problem, Fox News recently reported that Adderall has been at a shortage in pharmacies this year due to high demand for the medication last year. This encourages counterfeiters to take advantage of this opportunity because they know it will become much easier to trick someone into buying a medication for ADHD/ADD since they could argue such things as "these are the new drugs Adderall is coming out with to flood the supplement high demand" to any college age student, and could merely be selling students a placebo. For this reason, we included a question in the survey asking non-prescription Adderall users to describe the pill they are taking, so we could have the minimum error associated with the survey.

PA



Figure 4

However, our proposed study, as well as those mentioned previously, must all be subjected to a certain level of scrutiny. For instance, these studies are limited to one or two institutions, thus it is difficult to decisively apply the findings from these studies to college undergraduates across the nation. Furthermore they can only be used to characterize behavior of students at the home institution of the study if the sampling size is large enough to include a significant portion of students attending the home institution. For example, Rabiner et al. note that a bias may have been introduced since only 35% of the total student population took the survey. However, they maintain that the demographics of those who completed the survey are similar to those of the institution, and thus this bias may have been removed as a result (Rabiner, et al., 2009).

The Service Project: Survey

For our service project, we went out into the community and surveyed college students about their experiences with Adderall Usage. The following is a text version of the survey we used:

Adderall Use Among College Students

1. Gender

- male
- female

2. Age

- Under 18
- 18-24
- 25-35
- 35+

3. Have you ever taken medications for ADHD/ADD (these may include Adderall, amphetamine salts, Concerta, focalin, methylin, Ritalin, Strattera, Vyvange or others)?

- Yes, I have a prescription.
- Yes, but I do NOT have prescription (please skip to question 7)
- No, I have never taken these drugs (please skip to question 11)

4. When were you first diagnosed with ADHD/ADD and prescribed Adderall (or similar medication)?

- Elementary School
- Middle School
- High School
- College
- Post- College

5. Who first suggested you get checked for ADHD/ADD?

- Parent
- Doctor
- Friend
- Relative
- myself
- Other, Please specify what were the symptoms that led to the ADHD/ADD diagnosis? Were you truly experiencing these symptoms or were you trying to persuade the doctor into giving you the prescription?

6. If prescribed during high school or college, what was your GPA the semesters before and after your initial use?

7. Why are you taking this medication?

- To improve academic performance
- Weight loss
- Sleep control
- Help focus and concentrate
- Recreation (i.e. using it with alcohol)
- Other, please specify

8. How did the medication affect you?

- Improved concentration and focus
- Kept you awake
- Lost Appetite and /or lost weight
- Improved academic performance
- Lowered academic performance
- Worsened study habits
- Made me anxious and jittery
- Other, please specify

9. Where did you obtain the drug from?

- Pharmacy
- Purchased on internet
- Friend
- Friend of a Friend
- Relative
- Stranger

- Please specify how confident are you that the drug you received was in fact Adderall (or similar ADHD/ADD medication) based on a scale of 1 to 5, 5 being the most confident and 1 being the least confident

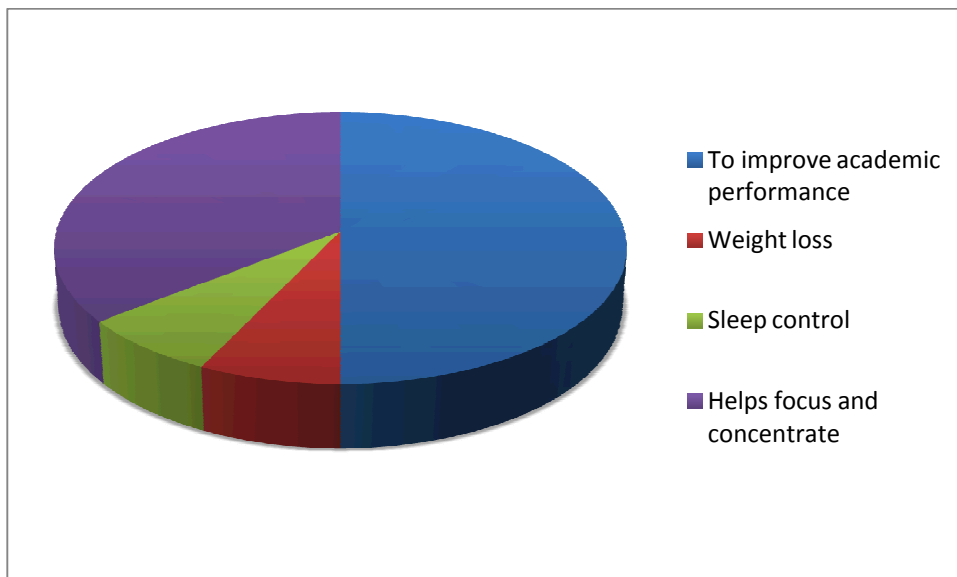
10. Would you consider getting a prescription? Why or why not? Skip this question if you already have a prescription

11. Do you think a person is at a disadvantage academically/ professionally by not taking ADHD/ADD medications? Why or why not?

12. Everyone’s academic performance could be improved. Is your academic performance hampered by one or more of the following factors that aren’t necessarily treated through ADD/ADHD medication? Select all that apply.

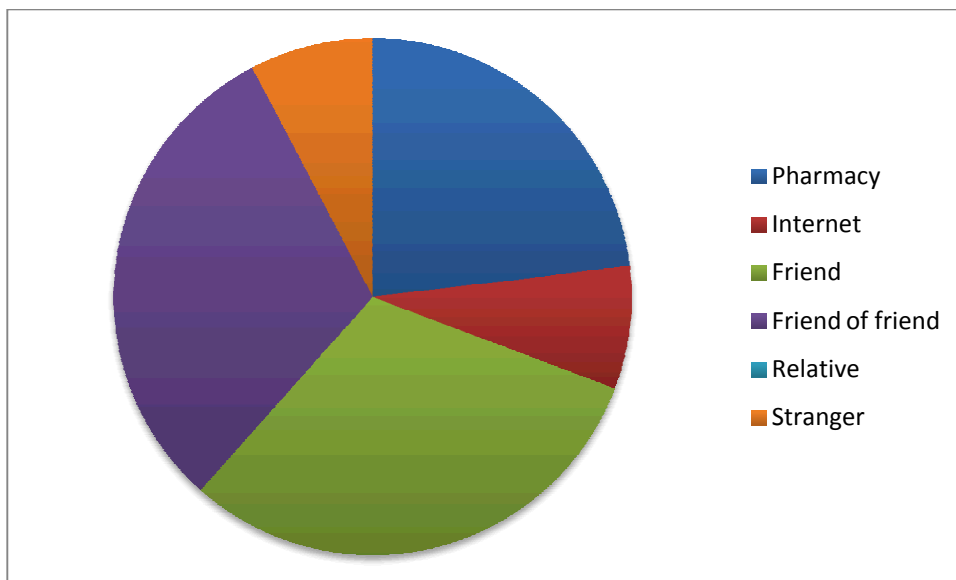
- Poor knowledge base (I didn’t really learn or don’t remember material taught in grade school)
- Inability to process information
- Lack of motivation.
- Negative attitude/Low self-esteem
- Other, please specify

24 students, involving 18 males and 5 females, completed our survey. Due to time constraints and numerous revisions to the questions, we were unable to gather as many results as we wanted to. From the results we did obtain, students are evenly split in terms of why they are taking this medication. The two reasons students gave for using Adderall is to help increase academic performance and to help them stay focused and more concentrated on their tasks.



Let's not forget however that staying focus and being more concentrated are one of the most important states that an individual needs to be in in order to study. On another note, when asked how Adderall affected them, participants gave a wide array of answers. Which the most common effect was improved concentration and focus. The second most common effect was that it kept the student awake.

Interestingly, only 2 participants out of the 8 that indicated they have taken psychostimulant drugs before, reported improved academic performance. In fact, many users reported anxiousness and jitteriness, loss of appetite and severe headaches. One participant even reported lowered academic performance from using the drug. When asked where they obtained the drug, respondents reported buying it from both unreliable sources (i.e. strangers and the internet) as well as reliable ones (i.e. Pharmacy and friends).

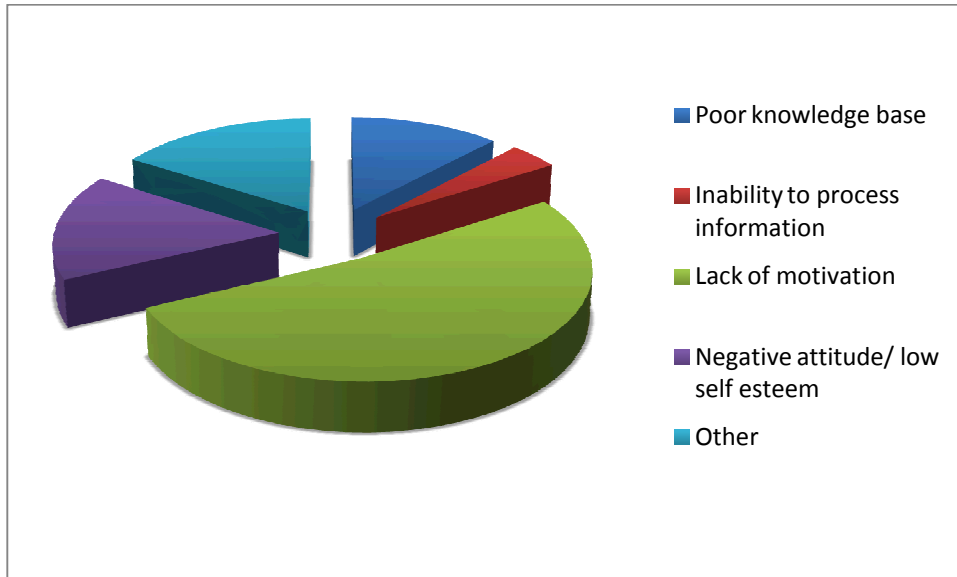


One non-prescription user indicated they were not at all confident they had received the right pill at all, while most reported they were confident they received the medication they asked for if bought without a prescription.

When asked whether or not students are at a disadvantage by not taking psychostimulant drugs, respondents gave a split opinion. Students who believed taking psychostimulant drugs does not put you at an advantage generally agreed that those who are prescribed these medicines truly require them and would be at a disadvantage without them. Those who believe taking psychostimulant drugs puts others at a disadvantage generally agree that ADD/ADHD patients do not have any harder of a time focusing on tasks than normal people, and thus these drugs are giving them an unfair advantage.

Finally, participants were asked to identify one of several factors that may be attributing to their poor academic performance that are not symptoms of ADD/ADHD. The most popular factor was

a lack of motivation. Other factors reported were poor knowledge base, inability to process information, negative attitude, and lack of interest.



Though these results are all preliminary data, by collecting more responses we are confident we can obtain a better look at student attitudes towards Adderall usage and the effect these drugs have on them.

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Editorials

Nathaniel Girer

ADDERALL USAGE AMONG COLLEGE-AGED STUDENTS

Word out on the street has it that Adderall can help you do better in school. Not only that, it can help you lose weight and allows you to concentrate better! Or can it?

Studies show that as many as 63% of students at Rutgers University believe that Adderall and other similar drugs can help boost academic performance. However, statistics show that the exact opposite is true. Adderall users have a lower GPA on average than students not on this medication. One study reported the average GPA of students using Adderall to be 3.071 and that of students not on the medication to be 3.267.

Now you might be saying, so what if Adderall usage does not always correlate with a higher GPA, maybe it will work for me; after all, everybody knows there are no dangerous side effects. This is always far from the truth. Adderall usage can lead to very dangerous side effects. Of those Rutgers students surveyed, only 27% knew about the most important possible side effect, death.

Improper Adderall usage is both dangerous and ineffective for improving one's GPA as many studies have shown. We, the authors of this editorial, as a part of Dr. Fagan's Ethics in

Science class, are seeking to find out motives behind Adderall usage among Rutgers students. In doing so, we hope to bring our community's attention to the harmful side effects of Adderall abuse and help stop this dangerous habit. We kindly ask the readers of The Daily Targum to take two minutes out of their day and fill out our survey on Adderall use. By collecting data on motives behind adderall usage, we hope to develop new strategies for solving the problem of rampant abuse of psychostimulant medications in our community. Not only is it wrong but dangerous as well! Our survey is available at <http://www.surveymonkey.com/s/YCMN3FY>.

Patrick Ayoola:

Students at Universities now turn to a drug prescribed for people with ADHD to improve their study skills. With procrastination, tough deadlines and a highly competitive academic environments, Adderall has been the answer for students to maintain focus on otherwise tedious assignments long into the night.

Student feel that Adderall use gives more advantage to people that don't require Adderall because they provide academic enhancement to students.

Approximately 70 percent of all college students have used Adderall non-medically. Doctors who prescribe Adderall for medical use first make sure that their patients' bodies are healthy enough to handle its effects. It is unfortunate to think that not only are students turning to ADD medications to assist them in their studies and help them succeed in school, but they feel the need to also use Adderall for paying video games all night.

Adderall is used to treat ADD and controls a person's focus and their ability to remain quiet and still. With these benefits, many forget to consider the side effects of the drug, which are worse for a person who does not have ADD. Some of the side effects of Adderall and other ADD medications include nervousness, restlessness, and difficulty sleeping and long-term effects can lead to depression and anxiety. If a student is relying on Adderall and they suddenly stop taking it, they may develop severe depression and extreme tiredness.

The risks that students are willing to sacrifice to do better academically are neither safe nor healthy. As a college student, I understand why other students might choose to take Adderall, but I don't believe it is a good decision. I have many moments when I want the ability to focus and to free myself from all distractions, but the long term side effects is not just worth it.

It seems like there is a drug, pill, food and drink for anyone and everything nowadays. Students become convinced that the natural state of their bodies is never sufficient enough to get them through a hectic day's schedule. Instead, they rely on Adderall.

Nana Sasu

EFFECT OF ADDERALL ON COLLEGE STUDENTS

The main reason most people take Adderall is to increase their GPA. In some situations, some students use it as a "party" drug where they either ingest it orally or sniff it directly into their system through their nose (nyu.com). Most importantly, there seem to be twice an increase in the usage of Adderall and its supplements from 1993 to 2005 as noted by a survey and research conducted by Columbian University's National Center for Addiction. As a couple of students described it, Adderall is considered as a "minidose of speed" which makes you "become more focused... and concentrate" when studying (nyu.com). Most of these students enroll in renowned schools such as Columbian and NYU who feel like without the use of Adderall, they will not be able to keep up with the stress and workload of their classes. Before the use of Adderall, students used stimulants such as coffee and energy drinks to keep up to study. However now Adderall and its supplements have become the new-age stimulant where without it, some students cannot even concentrate to study for over an hour. Conducting a survey in 119 universities across the United States, it was "revealed that 25% of students at very competitive colleges have used Adderall in order to enhance their study habits" (healthpsych.edu). Not only was it discovered that a quarter of students admitted to using Adderall at least once to help them improve their studies, but also the users were the more intelligent and attended highly competitive colleges.

In conclusion, the effect that Adderall has on students' GPAs is one that enhances their GPAs instead of decreasing it. Accordingly, the dramatic increase of this drug on the market for both prescribed and nonprescribed users should indicate that students actually do know that Adderall helps them to study and retain a lot more than when not using them. If Adderall was not helping to boost college students' GPAs, why would there still be a correlation with the dramatic increase in the manufacture of the drug Adderall and the use of it by college students? The side effects of using this drug is scary, but yet more students still run after it as the best way to study for their exams and for writing papers.