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ADHD Stimulant Justification among College Students

Thesis Submitted in Partial Fulfillment of Honors

By

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Midway Honors Program

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ABSTRACT

The purpose of this paper is to understand ADHD stimulant abuse among college students. Adderall and other ADHD stimulants are socially acceptable in the college student community. Students believe Adderall is safe, harmless, and beneficial, but the United States Drug Enforcement Agency (DEA) classifies Adderall, along with other ADHD stimulants, as Schedule II substances because of their addictive nature. Among the average college student population, Adderall is not perceived as a dangerous Schedule II drug such as cocaine, oxycotin, opium, or morphine. Instead, Adderall is seen as a way to “perk up” and become or stay alert. College students rationalize that using the drug is no different than drinking coffee, using energy drinks, or taking energy tablets. College students are in denial that ADHD stimulants are dangerous and addictive in nature like any other habit-forming narcotic. The goal of this paper is to discuss and understand why college students abuse ADHD stimulants and rationalize their behavior for doing so. Suggestions for educators, researchers, and medical practitioners are also included. The significance of this paper is to convey a better understanding as to why college students abuse ADHD stimulants.

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INTRODUCTION

The purpose of this paper is to understand Attention Deficit Hyperactivity Disorder (ADHD) stimulant abuse among college students, and the effects of these ADHD stimulants on the users. Exploring the relationship between the illicit use of ADHD drugs and rationalization of behavior among college students will convey a better understanding as to why college students abuse ADHD stimulants. It is important to note that rationalization in this sense refers both to the students' denial of the drugs as habit forming and the students' view that these stimulants are positive reinforcement drugs.

Adderall (mixed salts amphetamine) is the most commonly prescribed medication for children and adults with ADHD. Adderall is also the most common ADHD stimulant illegally or illicitly used by college students without a prescription (Desantis & Hane, 2010). Students use the drug as a study tool. Adderall and other ADHD stimulants are seen as socially acceptable in the college student community. Students believe Adderall is safe, harmless, and beneficial, but the United States Drug Enforcement Agency (DEA) classifies Adderall, along with all other ADHD stimulants, as Schedule II substances because of their highly addictive nature. The DEA classifies ADHD stimulants as Schedule II because of the high degree of potential for abuse. Students can develop psychological and physical dependencies upon ADHD stimulants because of their highly addictive nature (Woodsworth, 2000).

Among the average college student population, Adderall is not perceived as a dangerous Schedule II drug such as cocaine, oxycotin, opium, or morphine. Instead, Adderall is viewed as a way to "perk up" and become or stay alert. Students using Adderall with the "good" intentions of studying and becoming more alert and focused, and ultimately to get better grades is seen as socially acceptable behavior among college students. College students rationalize that using the

drug is no different than drinking coffee, using energy drinks, or taking energy tablets. This perception of Adderall is false. In contrast, Adderall is a dangerous, habit-forming drug that has all of the addictive traits of other Schedule II drugs. Because of its addictive traits, Schedule II drugs can cause severe psychological and physical dependence due to their high abuse potential. Schedule II drugs include narcotic stimulants, and depressant drugs and are considered controlled substances. A controlled substance is a drug in which its use and distribution are highly controlled because of their highly addictive nature and risk potential for abuse (Rabiner, Anastopoulos, Costello, Hoyle, McCabe, & Swartzwelder, 2009).

College students seem to have no problem with taking ADHD stimulants as long as they are taking the drug for academic use. It does not matter how addictive the stimulants are or what schedule they are as long as they are taken for academic purposes. College students are in denial that ADHD stimulants are dangerous, addictive, or used to “chase” a high like on any other habit-forming narcotic drug (Desantis & Hane, 2010).

The goal of this paper is to discuss and understand why college students abuse ADHD stimulants and providing the rationalization of their behavior for doing so. As stated, the purpose of this paper is to understand ADHD stimulant abuse among college students.

RATIONALE/SIGNIFICANCE OF STUDY

As apparent in the literature, college students justify the use of ADHD stimulants by claiming that these drugs help them focus more on their studies. The significance of this paper is to convey a better understanding as to why college students abuse ADHD stimulants. There are many college students who use and abuse ADHD stimulants because they want to study longer, focus better, and to make better grades. Many college students used ADHD medication solely for academic reasons (Rabiner, Anastopoulos, Costello, Hoyle, McCabe, & Swartzwelder, 2009). Students view ADHD drugs as academically beneficial. College students use these drugs to prolong attention and stamina during study time. College students believe that by using Adderall, an ADHD stimulant, they will perform better academically and thus make a better life for themselves.

A 2008 survey supplied significant statistical data that revealed how prevalent the illicit use of ADHD stimulants are on college campuses. Out of 1,811 students who were surveyed, 34% had used ADHD stimulants without a prescription. The numbers were significantly higher if students were members of social Greek organizations (48%), juniors (49%), or seniors (55%) (Desantis & Hane, 2010). Another survey of students at 119 college campuses nationwide concluded that, on particular campuses, up to 25% of students' misused ADHD stimulants in the past year. A 2004 survey at the University of Wisconsin found that 14% of students had abused ADHD stimulants (Diller, 2006). In addition to studies about illicit use, according to a 2005 report by the National Center on Addiction and Substance Abuse, between 1992 and 2002, the number of prescriptions of ADHD stimulants has increased by 369% to 23.4 million. According to IMS Health, a pharmaceutical information and consulting company, in 2005 there were 31.8 million ADHD stimulant prescriptions filled (Diller, 2006). ADHD stimulant use has been on the

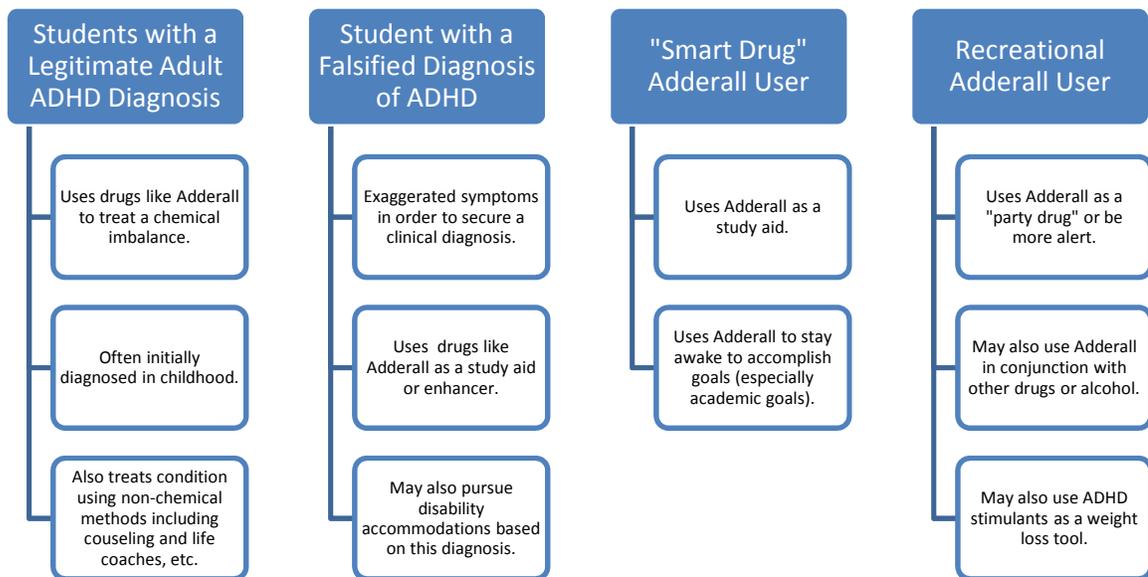
rise among adults and post secondary students. Illicit use of ADHD stimulants among college students has been on the rise as well. In addition, there has been a 90% increase from the years 2002 to 2005, in the number of adults being prescribed ADHD medication in America (Harrison, Edwards, & Parker, 2007). Many students who have been prescribed ADHD medication do not use the stimulants every day. This misuse of ADHD stimulants lead to diversion and illicit use of the stimulant on college campuses. This information suggests that ADHD stimulants are being over-prescribed, and that many students do not need even need the drugs. ADHD being over-diagnosed leads to ADHD stimulants being misused or abused, and often times diverted to students without a prescription. The rise in the number of ADHD stimulant prescriptions leads to easier access of the drugs on college campuses (Desantis & Hane, 2010). With a prescription or without a prescription, on college campuses, ADHD stimulant use is steadily increasing.

METHODOLOGY

The researcher adopted a systematic review of existing literature as the research method for this study. The existing studies searched and used were focused upon patterns of misuse and illicit use of ADHD stimulants, and the diversion of ADHD stimulant prescriptions. The literature search was completed by doing a data base search on www.sherrod.etsu.edu by searching data bases, and finding articles under research tools. Data base searches such as Pub Med, Psych Info, Pro Quest, Omni File, and Student Info Trac were used to complete a data base search. On these data bases, phrases such as (college and university) and (Student*) and (ADHD or Stimulant) were used to refine the search results within these databases. The asterisk (*) notation is used when the researcher wants to limit articles to a certain subject to show up in a data base search. For example, using (and) in (college and university) will access articles from students from both colleges and universities and (Student*) will access only students. In addition, using (or) in (ADHD or Stimulant) will access students with ADHD or students using these stimulants.

Search results were narrowed by refining each search phrase. For example, (college and university) and (Student*) and (ADHD or Stimulant) was used to search for students who attend colleges and universities who have ADHD or use ADHD stimulants. This same search phrase was extended to (college and university) and (Student*) and (ADHD or Stimulant) and (Misuse or abuse) or (Justification) to search the same criteria, in addition to, students who misuse or abuse ADHD stimulants and who also justify the use of the stimulants. Also, another search was completed by using the search phrase (college and university) and (Student*) and (ADHD or Stimulant) and (Diversion) or (Illicit Use) as key words. These search criteria target students who attend both colleges and universities who either have ADHD or are students using ADHD

stimulants, but also divert or illicitly use ADHD stimulants. In addition, the key word “not” was used in front of the word “treatment” to eliminate articles that focused solely on clinical treatments. The articles searched were narrowed to those written between the years 1998-2012. The chosen articles also address topics of misuse, abuse, justification, illicit use, diversion and holistic literature of ADHD stimulant medication of college students. Articles were excluded if the studies did not systematically document misuse, abuse, justification, illicit use, or diversion of ADHD stimulants. Also, studies were not included if they only examined clinical treatment or other psycho-stimulant abuse or misuse including other drugs such as cocaine, heroin, or methamphetamine. The literature search yielded a total of 40 abstracts, of which 17 articles met sufficient criteria for inclusion. Of the included articles, 8 of the 17 included studies that focused on students who justified the use of ADHD stimulants. The other nine articles included studies focused on effects of ADHD stimulants abuse on its users. To add clarity, below is a detailed information graphic explaining the four populations of students discussed within this paper.



FINDINGS/LITERATURE REVIEW

The purpose of this literature review is to explore and understand college students' abuse of ADHD stimulants as presented in existing literature. The first part of the literature review investigates the effects of ADHD stimulants on college students as well as identifying the difference, if any, the effects these stimulants have on students with or without ADHD. The next section of the literature review will help explain why college students abuse ADHD stimulants. There are many motives and advantages for students to try and continue using ADHD stimulants, and that will be discussed. Lastly, many social factors, as well as psychological factors, that contribute to the use of ADHD stimulants will be discussed.

There are many motivations and reasons why college students abuse ADHD stimulants. In addition, the literature review attempts to reveal a number of other important factors contributing to illicit ADHD stimulant use among college students. These factors have an impact on college students, and ADHD stimulants have an impact on college campuses in American communities and communities worldwide.

There is a documented growing trend in illicit use of ADHD stimulants on college campuses. Many of these college students have never had any previous history or diagnosis of ADHD, but illicit usage on college campuses is increasing in alarmingly high numbers (Diller, 2006). Also, many "traditional" college students (under the age of 25) and "non-traditional" college students (over the age of 25) are both using ADHD drugs illicitly without a prescription or a diagnosis (Desantis, Webb, & Noar, 2008).

ADHD stimulants are amphetamines that are known to be habit-forming. The federal government categorizes ADHD stimulants as schedule II drugs, and according to the FDA, schedule II drugs have the highest abuse potential and profile of dependence of any drug that has

a medical purpose (Cooper, 2011). Even though the stimulants are classified as dangerous and habit-forming, they are still very easy for college students to get.

Physiological Effects of ADHD Stimulant Use

ADHD stimulants have an effect on many students nationwide. The role of ADHD stimulants, often in combination with psychotherapy, helps to improve the symptoms of ADHD as well as self-esteem, cognition, and social and family interactions of the user. However, the adverse effects of ADHD stimulants are numerous on its users and include increased blood pressure, heart rate, body temperature, and decreased sleep and appetite. Repeated use of ADHD stimulants can lead to malnutrition and its consequences, and feelings of hostility and paranoia. At high doses, ADHD stimulants can lead to serious cardiovascular complications, including stroke or death (NIDA, 2009).

ADHD stimulants work by increasing dopamine levels in the brain. Dopamine is a brain chemical or neurotransmitter in the brain associated with attention, pleasure, and movement. ADHD stimulants release a signal to the brain to increase the attention and pleasure centers of the brain, resulting in an overall therapeutic effect for the user. However, the additional increase in pleasure and attention leads to an increased body temperature, heart rate, blood pressure, and decreases in sleep and appetite. (NIDA, 2009)

Another effect of ADHD stimulants is addiction, especially in individuals illicitly using the stimulants without medical supervision. Addiction is most likely to occur in illicit users because when ADHD stimulants are taken in high doses and routes other than what is prescribed by a doctor, they can induce a rapid rise in dopamine to the brain. Furthermore, if ADHD stimulants are used in a chronic manner, there will be withdrawal symptoms. Withdrawal

symptoms of ADHD stimulants include fatigue, depression, dejection, and disturbed sleeping patterns.

A variety of harmful effects exist around the illicit use of prescription drugs for college students. These effects can range from overdose and death and other adverse events to chemical dependency. When ADHD stimulants are combined with alcohol and/or other prescription or illegal drugs, these effects can be even more devastating. For example, the Civil Aviation Safety Authority (CASA) reported in 2005 that controlled prescription drug-related visits to emergency departments have increased more than three and a half times more than heroin-related visits and four times more than cocaine-related visits (Workman & Eells, 2010). In addition, in February 2006, the Drug Safety and Risk Management Advisory Committee of the United States Federal Drug Administration (FDA) voted to recommend a “black-box warning” describing the cardiovascular risks of stimulant drugs. This move followed reports of sudden deaths from stroke, heart attacks, and high blood pressure in Adderall and Ritalin users. The review included six cases of sudden death in adults from the FDA’s Adverse Event Reporting System. The black-box warning was not implemented, but the FDA directed ADHD stimulant manufacturers to revise the product labeling to reflect their concerns for doctors. An additional part of the revised labeling process was the creation of a Patient Medication Guide for each individual stimulant (McCarthy, Cranswick, Potts, Taylor, & Wong, 2009).

The FDA and the Agency for Healthcare Research and Quality are collaborating in the largest studies to date, examining the potential for increased heart attack, stroke, high blood pressure, and other cardiovascular problems associated with ADHD medications. The study is ongoing, but concern still surrounds sudden death issues and prolonged use associated with ADHD stimulants. The aim of the study is to identify cases and causes of death in a group of

patients prescribed ADHD stimulants and to determine associations between the stimulants and sudden death (McCarthy, Cranswick, Potts, Taylor, & Wong, 2009).

College Students' Perception of ADHD Stimulants

ADHD stimulants have an effect on many students on a national scale. Most students who take these stimulants do not view them as highly addictive. The potential risks these drugs pose on abusers of these stimulants outweigh the benefits of using them. A published study in 2008 found that 25% of the 1,253 undergraduate students who studied at the University of Maryland did not perceive any harm in the use of ADHD stimulants (Workman & Eells, 2010). The results of the study conducted at the University of Maryland were typical of many studies at other universities that focused on ADHD stimulant use. As one Auburn University student stated about taking Adderall, “I’m more driven. I don’t focus on anything else. If I have a paper, that’s all I’m doing. No distractions, no socializing, just on with it” (Cooper, 2011). During the same study at Auburn University, another student stated that the drug works for him, and that he used to make a lot of C’s, but now, with the help of Adderall, he can focus, pay attention, and makes all A’s and B’s (Cooper, 2011).

The low perceived harmfulness of ADHD stimulants and high sensation-seeking were both independently associated with the increased risk of illicit use of prescription drugs across all demographics. On the contrary, high perceived harmfulness of illicit use of prescription drugs is proven to be a key factor in all groups except for high sensation-seekers, who actually maintained use despite their knowledge of the stimulants being harmful (Workman & Eells, 2010).

Students believe that by using Adderall, a popular ADHD stimulant, they will do better academically and, thus, make a better life for themselves. Also, they see drugs such as marijuana

and cocaine, differently than they do Adderall, and they believe that by using Adderall, it will help them become motivated to get academic tasks accomplished. Students do not view marijuana and cocaine as “academic” drugs, but as recreational drugs. Also, students do not see Adderall as addictive or as a dangerous Schedule II drug like they do cocaine, oxycotin, opium, or morphine. Students believe that Adderall gets them better grades in school by helping them focus and concentrate on their studies. They believe that a drug that helps them do better in school cannot be bad for them like other schedule II drugs (Desantis & Hane, 2010).

Misconceptions about Adderall, along with the ease of getting the stimulant, are some of the reasons that illicit use of the drug is both rampant and overlooked on college campuses (Harrison, Edwards, & Parker, 2007). For example, in one article, a particular student stated that she does not do drugs, and she stressed that no one can do drugs and successfully complete a bachelor’s degree such as hers. She goes on to say, however, that she takes Adderall regularly to improve her grades and prolong study time. In other words, this student does not even view Adderall as a “drug” at all and, instead, sees Adderall as a harmless study aid. This particular student also believes that using Adderall for “non-academic” purposes, such as partying, is wrong. Although taking drugs for recreational purposes is wrong in her eyes, it is totally all right to use the same stimulants if they are used for the “right” purposes, such as studying (Desantis & Hane, 2010).

Not all students are in denial about the drug. Some students abuse ADHD stimulants as “party drugs.” In their perception, the drug is similar to cocaine and heroin, but cocaine and heroin have much worse reputations among college students. ADHD stimulants have a better reputation than cocaine and heroin because, unlike cocaine and heroin, ADHD stimulants can be used for medical purposes and are known to aid students as a study tool. These drugs are all

Schedule II drugs and have the same addictive traits. All these drugs have a high risk for potential abuse and can lead to psychological and physical dependency. However, on college campuses, it is socially acceptable to use ADHD stimulants because they are known to be utilized as a study tool. Some students, however, use ADHD stimulants recreationally because the drugs are morally and socially acceptable on college campuses, unlike heroin and cocaine. Some students knowingly abuse the stimulants because they have the same effects as cocaine and are very easy to get on campus, and they can take them without the stigma of being a drug addict that other Schedule II drugs such as cocaine and heroin bear (Desantis, Webb, & Noar, 2008).

In another study, there were 987 students who participated in a survey concerning their own ADHD stimulant usage. Under the motive portion of the test, students had 12 reasons for taking ADHD stimulants to choose between. The top choice, “because it helps me concentrate,” was chosen by 249 students which is 65.2% of the 987 students who took the survey. The second choice, “because it helps me study,” was chosen by 228 students (59.8%), followed by “because it helps increase my alertness,” chosen by 181 students (47.5%). This study is significant because the top three answers chosen by students, 658 students out of the 987, justified their own ADHD stimulant use for academic reasons. The next two top answers, “because it gives me a high,” chosen by 118 students (31.0%), and “because of experimentation,” chosen by 114 students (29.9%) were chosen by those who use ADHD stimulants for recreational purposes. The next top answer, “Because it helps me lose weight,” was chosen by 37 students (9.7%) (Teter, McCabe, LaGrange, Cranford, & Boyd, 2006). These results show that academic reasons are by far the number one choice for justification of ADHD stimulant abuse, followed by using the stimulants for recreational use and as a weight loss tool.

The relationship between ADHD drug use and justification among college students, as described in the literature, has been a popular research topic in recent years. ADHD drug use has been on the rise among college students (Harrison, Edwards, & Parker, 2007). The rise in college students' illicit use of ADHD stimulants has also been well documented. The rise in college students being diagnosed and treated with ADHD has also been on the rise. There has been a dramatic increase in the number of adults and post-secondary students coming to specialists complaining of symptoms of ADHD and inquiring if they have the disorder (Harrison, Edwards, & Parker, 2007). The number of adults in America who are prescribed ADHD stimulant medication to treat the disorder has increased by 90% from the years 2002 to 2005, with adults receiving one third of all ADHD prescriptions (Desantis & Hane, 2010). In general, ADHD drug use and abuse is increasing rapidly and does not appear to be decreasing anytime soon.

Reasons College Students Abuse ADHD Stimulants

Despite the negative physiological effects and addictive nature of ADHD stimulants, there continues to be misconceptions and a general lack of knowledge and awareness about this issue. This is alarming due to the rising number of college students using these stimulants. A systematic review of the literature revealed several reasons for student ADHD stimulant abuse. One main reason is that these drugs are socially acceptable. Another is that ADHD stimulants are easily obtained. Additionally, since ADHD stimulants are known as "smart drugs" students can use them without worry of any negative stigmas. Furthermore, students use these stimulants to be more productive and fulfill their obligations in an efficient manner. Lastly, there are many students who desire to obtain an ADHD stimulant prescription to acquire the benefits associated with disability services.

There are many reasons ADHD stimulants are so prevalent on college campuses; one of the reasons is that these drugs are socially acceptable. Stigmas have been attached to people who use cocaine, heroin, lortabs, marijuana, and alcohol. For example, a student who uses cocaine or heroin may be viewed as a “junkie.” Students who abuse lortabs and other pain pills may be viewed as a “pill-head.” Students who use marijuana on a regular basis may be viewed as a “pot-head” or a “stoner,” and students who abuse alcohol may be viewed as an “alcoholic” or a “drunk” (Gray, 2011). Students who use ADHD stimulants, such as Adderall, as a “study tool” will most likely be viewed as motivated or outstanding students. Students who stand out academically are often viewed as impressive because of their excellent resume or transcript. It is well known that Adderall is used by students as a “study tool.” Adderall is also known to be socially acceptable on college campuses because it is seen to be a performance enhancer and has the reputation of helping students do better in class (Desantis & Hane, 2010). There is no stigma attached to ADHD stimulants such as “pothead,” “crack-head,” “pill-head,” “loser,” “drunk,” or just plain old “junkie.” Conversely, Adderall has the reputation attached to it as a “study drug,” a drug that makes the user smarter, or an educationally beneficial stimulant. Students do not have to worry about other students looking down on them for taking ADHD stimulants, illicitly or not. Also, ADHD stimulant use is becoming more and more accepted, and worse than that, more and more expected (Kolek, 2006). Another reason students abuse ADHD stimulants are because of their image as a “smart drug.” ADHD stimulants do not have a negative stigma attached to them like other drugs that are used recreationally. On college campuses, the main reputation attached to Adderall is being known as a “study drug” and a “smart drug.” (Cooper, 2011).

Adderall is also prevalently used by college students because it is popular and very easy to get. ADHD stimulants are “convenience” drugs for students. These stimulants are easy to

obtain for a number of reasons. According to a study at the University of Kentucky, Adderall and Ritalin are abused more than marijuana and are even easier to get. Thirty percent of all students at the University of Kentucky have illicitly used Adderall or Ritalin, the most popular ADHD stimulants on college campuses. For upperclassmen, the numbers increase, and according to the study, more than half of all juniors and seniors have used the stimulants, and as many as 80% of students in fraternities and sororities have used them (Cooper, 2011).

There is no objective testing procedure for an ADHD diagnosis, and therefore the identification of the symptoms of ADHD is subjective. In addition, the healthcare community does not have any strict, clearly defined guidelines to identify who is in actual need of an ADHD prescription. Therefore, healthcare professionals have a more lax attitude to diagnose and prescribe ADHD drugs at an alarming rate. Furthermore, the increase in prescriptions of Ritalin and Adderall has also resulted in ever-increasing opportunities for the stimulants to be diverted for illicit use on college campuses. Since there is no objective testing procedure for ADHD, the medicinal community has seen an increase in stimulant prescriptions. This increases the possibilities of diversion and illicit use, giving ADHD stimulants the reputation as “convenience drugs” within the college community as much as they are known to be “smart drugs” (Kolek, 2009).

Students also often have a lax attitude toward illicitly using ADHD stimulants and do not perceive them as harmful or addictive as other illegal drugs. Reports of ADHD stimulants making students “smarter,” and misconceptions spread by students that the stimulants are relatively safe have relaxed students into a false sense of security concerning the stimulants. Students believe that not only are the drugs safe to abuse, but had little or no moral apprehension about the legal ramifications of diversion, illicit use, and possession of illegal stimulants

(Desantis & Hane, 2010). Furthermore, students are under the impression that since ADHD stimulants are produced, regulated, and prescribed by the medical community, the drugs are not potentially addictive and harmful for their health (Kolek, 2009).

Another reason that drives students to abuse ADHD stimulants is that there never seems to be enough time in the day. ADHD stimulants can help students stay alert and awake longer, which in turn helps students be more productive by completing additional studying and homework. ADHD stimulants help students make time for everything. Students are expected to not only perform academically, but also give time to friends, family, work, and to sororities and fraternities or other school clubs and organizations. The obligations do not stop when leaving the classroom as other aspects of daily life also require energy.

Many adults have no prior history or prior diagnosis of ADHD, and may not be capable of supplying information about childhood behavior to support lifetime impairment. In such situations, a clinician not only has to make a distinction between symptoms of ADHD and those of other disorders, but must also be aware of the possibility that the individual may be exaggerating or faking the symptoms altogether (Harrison, Edwards, & Parker, 2007). The symptoms of ADHD are somewhat ubiquitous and subjective, and therefore it is a difficult job for clinicians to properly diagnose adults who have no prior history of ADHD. It is also challenging for clinicians, since ADHD symptoms are vague with no clearly defined clinical diagnosis, to differentiate individuals who are inventing these symptoms and those who are actually experiencing true symptoms of ADHD.

The symptoms of ADHD are very easy to fake or exaggerate because a clinical analysis is based upon subjective data with no way to test for verifiable accuracy. The symptoms of ADHD are more than somewhat ubiquitous, and this is especially true for inattentive symptoms

as there is no objective clinical test for the diagnosis of ADHD (Harrison, Edwards, & Parker, 2007). This means that inattentive symptoms are subjectively diagnosed by clinicians with no precise, objective measurement to accurately tell the difference between the honest truth and exaggeration. Also, because more and more ADHD stimulants are being prescribed to students, as the drug becomes more and more popular, the more it is also illicitly used on campus without a prescription. Diversion, the method of selling or giving away one's prescription or part thereof, is rampant on college campuses. ADHD stimulant abuse is on the rise among college students, and the stimulants are becoming easier to get on college campuses (Harrison, Edwards, & Parker, 2007).

Emotionally distressed students sometimes use alcohol and other recreational drugs in addition to ADHD stimulants to self-medicate their problems. ADHD stimulants can be misconceived as the quick fix to problems arising in students' social lives, academics, and sometimes even, relationships or occupational impairments. It does not help the matter that the stimulants are so easy to obtain on college campus. On many college campuses, ADHD stimulants are far easier to obtain than alcohol (Rodriguez & Span, 2008). Therefore, subjective and self-medicated distress levels of college students play a role in their decision to abuse ADHD stimulants.

College students who are abusers of ADHD stimulants may look to obtain an ADHD prescription for the purpose of disability services. A clinical diagnosis of ADHD is easily attainable since the testing for the diagnosis of ADHD is subjective. Not only are there impending motives for disability services, there are also impending motives to exaggerate symptoms to obtain disability services. Disability services are also an opportunity. There are a number of reasons why college students would choose to fake or overstate the symptoms of

ADHD. Students may be motivated to fabricate their claims of ADHD symptoms to obtain stimulant prescriptions as a study aid and also as a way to obtain access to disability status. Disabilities provide students with academic privileges or supports, including more time on assignments and projects, and extra time on tests which includes final exams. Also, disabilities provide students with handicapped parking stickers which give a student more accessible parking. People with disabilities may also be qualified for tax benefits, be approved for access to government-funded programs and services, or have their student loans waived if they are diagnosed with a permanent disability (Harrison, Edwards, & Parker, 2007).

Social Factors that Contribute to use among College Students

A review of the literature revealed a number of social factors that contribute to the use of ADHD stimulants. There are also a number of social groups that have higher incidence of ADHD abuse than the general population. This includes students in highly competitive programs, students in fraternities and sororities, and other student organizations or clubs. Many students in these competitive programs and social or academic clubs have scholarships and GPA requirements to keep. These students are under pressure of losing their scholarships or social status.

Professional and graduate schools look at a student's overall grades, school application, and letters of recommendation, but that is not all they examine. Professional and graduate schools also look at athletics, leadership qualities, organizations and club participation, volunteering activities, internships, whether a student has a job or not, relevant work and volunteer experiences, personal essays, a personal interview and sometimes even an admissions test. Students also receive recognitions and awards for outstanding academic coursework, community involvement, and campus activity. Academic awards such as Deans Lists, and

outstanding community service and campus activity awards help students stand out amongst their competition. Students are in a very competitive environment and sometimes it seems as if they are expected to be able to do everything when they can only achieve so much, and desire a life outside of academics. Some students abuse ADHD stimulants so they can be successful and at the same time have a personal life outside of their academics (Prinstein, 2012).

College fraternities and sororities are also notoriously known for drug use, and specifically ADHD stimulant usage. Fraternities and sororities have been known to use the stimulants for academic reasons as well as for party reasons. Many of these students, being in a chosen clique, and having the pressure on them to be popular and do well academically results in them using ADHD stimulants even more than other student populations. In a recent study, quantitative methods were used to investigate illicit usage of ADHD stimulants by fraternity members. 333 fraternity members at a large public southeastern research university in the United States were surveyed in classes and other campus locations. The sample size for this study was decreased to 307 when 26 students with legal prescriptions were removed from the study. Of the remaining 307 fraternity students, 55% reported that they have illicitly used ADHD stimulants. The data identified that the primary reasons for using ADHD stimulants included “staying awake to study” (74%), “to concentrate on schoolwork” (59%), “to help memorize” (30%), and the study respondents less frequently chose “to stay awake and have fun” (17%), “to make work more interesting” (9%), and “to get high” (3%). In addition, 89% of the participants also reported that ADHD stimulants were either only “slightly dangerous” or “not dangerous at all.” The results indicated that 90% of the participants reported ADHD stimulants were either “very easy” or “somewhat easy” to find on campus. Participants also reported that stimulants were most likely to be obtained from fraternity friends (33%) or from non-fraternity friends (66%), and 7%

reported obtaining them from significant others, and only 9% from strangers. The study reports that the vast majority of students obtain stimulants from friends, which is consistent with previous research (Desantis, Noar, & Webb, 2009).

Despite the many reasons that college students abuse ADHD stimulants there are many social factors that contribute to stimulant abuse. There are a number of social groups who consequently have a high incidence rate of ADHD stimulant abuse. Many of these students are in fraternities and sororities or in highly competitive programs. These students are under pressure to use ADHD stimulants for fear of losing their scholarships or social status if GPA requirements are not met.

Psychological Factors

Some students are in denial that ADHD stimulants can be dangerous and habit forming. ADHD stimulants are classified as Schedule II drugs by the Federal Drug Enforcement Agency (FDEA). The classification alone not only fails to deter college students from abusing the stimulants, but they also view the stimulants as no more harmful than consuming an energy drink. Students are not only in denial that ADHD stimulants are potentially dangerous and addictive stimulants, but they also justify their usage because they have wrongly perceived misconceptions concerning the stimulants. In a survey research study conducted by Desantis, Webb, and Noar (2008) of 1,811 students at a large public institution on the American Southeast discovered that while only 4% of the participants reported having a prescription for ADHD medication, only 34% of the participants claimed to have used ADHD medication illicitly. Of these 574 illegal users 260 were males, 273 were females, and 41 students did not report a sex. When the students in this Desantis study were asked whether their use of ADHD stimulants posed a health risk, only 2% thought they were “very dangerous.” 81% thought that the illicit use

of ADHD stimulants was either “not dangerous at all” or only “slightly dangerous” (Desantis & Hane, 2010). College students are in denial about the potential harm of abusing ADHD stimulants. Additionally, college students are in denial that ADHD stimulants are highly addictive in nature.

College students also justify abusing ADHD stimulants. Students justify using ADHD stimulants for academic reasons such as focusing and better concentration on their studies. Students argue that they are using the stimulants for the “right reasons.” This justification asserts that since the stimulants are being taken to produce a positive outcome, i.e., to get better grades and thus make a better life for themselves, and not negative outcomes such as “getting high,” that their reasons are morally justifiable. Students also justify using ADHD stimulants because the stimulants come from a medical establishment and are prescribed by doctors unlike “street drugs” or other Schedule II drugs such as cocaine or morphine. Since physicians prescribe ADHD stimulants, many students justify to themselves that ADHD stimulants are safe, harmless, and not addictive in nature (Desantis & Hane, 2010).

College students also have many misconceptions concerning ADHD stimulants. Students believe that not only are the drugs safe to use, but these same students in a Desantis study, had little or no moral apprehension about the legal ramifications of diversion, illicit use, and possession of illegal stimulants. Furthermore, another study conducted by Sarah McCabe (2005) surveyed 10,904 students at 119 nationally representative 4-year colleges in the United States. The study found that the highest illicit use of ADHD stimulants were by white fraternity members, students from the northeastern region of the United States, and students from colleges with more competitive admission standards (Desantis & Hane, 2010). These students are misinformed that ADHD stimulants do not get them “high,” and that the stimulants are solely for

focusing, concentration, and studying. Furthermore, these same students are under the misconception that ADHD stimulants are not addictive, and have no negative internal or physical side effects like street narcotics do. They also believe that the stimulants do not pose any significant health risks, and certainly not enough health risk to warrant any concern or abstention from the stimulants (Desantis & Hane, 2010). College students are in denial that ADHD stimulants are highly addictive in nature, and justify abusing them because of misconceptions within the college community that they are harmless and academically beneficial.

Regardless of the many factors that contribute to ADHD stimulant abuse, there are many psychological factors that drive students to try and continually use ADHD stimulants. Research results reveal that students are in denial about the addictive nature of ADHD stimulants. Also, students justify using ADHD stimulants for academic reasons such as better concentration and focus on their studies. Lastly, students have many misconceptions concerning ADHD stimulants. Students not only believe the drugs are safe to use, but they have misconceptions about the legal ramifications of illicitly using, diverting, and possessing illegal stimulants.

CONCLUSIONS

The purpose of this paper was to develop a better understanding as to why college students abuse ADHD stimulants. Students use these drugs as a study tool. Adderall and other ADHD stimulants are seen as socially acceptable in the college student community. Students believe Adderall is safe, harmless, and beneficial, but the Federal Drug Enforcement Agency (FDEA) classifies Adderall, along with all other ADHD stimulants, as Schedule II substances because they are highly addictive. However, among the average college student population, Adderall is not perceived as a dangerous Schedule II drug such as cocaine, oxycotin, opium, or morphine. College students rationalize that using the drug is no different than drinking coffee, using energy drinks, or taking energy tablets. College students are in denial that ADHD stimulants are dangerous, addictive, or used to “chase” a high like on any other habit-forming narcotic drug (Desantis & Hane, 2010).

Using Adderall with the “good” intentions of studying and becoming more alert and focused, and ultimately to get better grades is seen as socially acceptable behavior among college students. There are many college students who use and abuse ADHD stimulants because they want to study longer, focus better, and overall, to make better grades. In addition, the symptoms of ADHD are somewhat ubiquitous and subjective, and therefore it is a difficult job for clinicians to properly diagnose adults who have no prior history of ADHD. It is also difficult for clinicians, since ADHD symptoms are vague with no real clinical diagnosis, to differentiate between individuals who are inventing these symptoms and those who are actually experiencing objective symptoms of ADHD.

In addition, ADHD stimulants are excessively prescribed to people by healthcare practitioners, making the stimulants more popular and easier to obtain. Since the stimulants are

highly accessible, the stimulants are also being diverted by students and becoming more illicitly used on college campuses. Diversion is the method of selling or giving away ones prescription or part thereof and diversion is rampant on college campuses. ADHD stimulant abuse is on the rise among college students, and is becoming more prevalent on college campuses (Harrison, Edwards, & Parker, 2007). Since the stimulants are known as the “smart drug,” ADHD stimulants are “convenience drugs” as much as they are “smart drugs” or academic enhancers.

One of the biggest barriers to ADHD stimulant prevention efforts is the professed effectiveness of the stimulant itself. Almost all participants in the studies reviewed claim that ADHD stimulants improve their cognitive abilities, increase their attention span, focus and concentration, make work more interesting, and fight fatigue. Also, with multifaceted demands placed on students (e.g., grades, finances, social life, leadership qualities, campus involvement), some students may feel like they cannot get it all done. In addition, students face the increasingly competitive graduate and professional school expectations, along with, the increasingly competitive workforce awaiting them after graduation. Students believe that they have found the answer to their problems in a “smart drug” that is safe, harmless, and non-addictive (Desantis, Webb, & Noar, 2008). In closing, it is difficult to convince students about the dangers and addictive nature of ADHD stimulants when popular culture profoundly praises the stimulant for its effectiveness, and justifies goals being worth all the effort, time and trouble involved in achieving them.

SUGGESTIONS FOR EDUCATORS

Because of the growth in ADHD stimulant abuse on college campuses, educators have a responsibility to address this problem with students. Educators should design and implement a program that would educate students about illicit use of ADHD stimulants as part of an intervention strategy. In addition, there is a need for educators to inform prescribed users about the dangers and legal ramifications of illegally diverting their prescription medications, especially in the case of death of another student. Furthermore, prescribed users and illicit users alike need a better education regarding the psychological and physical dangers of ADHD stimulant use. Also, these stimulant users need even more education about the legal ramifications of diverting and obtaining a Schedule II substance. Many students do not even know that it is a crime, much less a mandatory five-year federal sentence for the first offense of distributing these stimulants illegally. Campus wide awareness campaigns have been proven to successfully educate students and in turn change their behaviors and attitudes toward various health concerns (Desantis, Webb, & Noar, 2008). Educators may consider mass communication awareness campaigns to educate the student population about the potential dangers and legal ramifications of illegal Schedule II drugs. Campus-wide awareness campaigns can include speaker series events, discussion in the classrooms, a known and enforced school policy against illicit stimulant use, and freshman, sophomore, junior and senior orientation programs to educate students about the potential dangers of stimulant abuse.

SUGGESTIONS FOR FUTURE RESEARCH

Researchers need to address false impressions that ADHD stimulants are relatively safe because they are produced, regulated, and prescribed by trusted healthcare practitioners within the medical community. The stimulants are illicitly used, and are regarded as safe and harmless,

and this misconception of ADHD stimulants needs to be addressed. Also, users need to understand that the chemicals used in pharmaceutically controlled substances are as potentially addictive, habit-forming, and dangerous as the uncontrolled substances on the streets are perceived to be.

Researchers need to target the misconception that diverting, using, and distributing ADHD stimulants, Schedule II amphetamines, in moderation are safe and harmless. Excessive, sporadic, or one time use of ADHD stimulants is sufficient enough to rupture someone's heart. Also, college students or people in general need to realize that diverting part or all of their prescription to other students can land them in serious legal trouble. Students who practice in the diversion and distribution of ADHD stimulants as well as students who are in possession of and illicitly using the stimulants can face serious consequences. The first time distribution of ADHD stimulants carries a mandatory five-year federal sentence (Desantis & Hane, 2010).

Researchers need to attack the false belief that ADHD stimulants are a great "study tool" that have no harmful physical, psychological, and physiological side effects. The Federal Drug Administration (FDA) and the Federal Drug Enforcement Agency (FDEA) have detailed warnings about the potential dangers of Adderall and other ADHD stimulants. These dangers include a risk of sudden death, serious cardiovascular adverse events, possible decreased growth, worsening mental illness, increased tics, headaches, and altered mood changes. The potential dangers of ADHD stimulants can be significantly increased if users have unknown heart defects, heart and blood vessel disease, an overactive thyroid, or high blood pressure (Desantis & Hane, 2010). Researchers need to attack the false beliefs that ADHD stimulants have no serious side effects, and address the known dangers of using ADHD stimulants to target misconceptions with reference to these stimulants.

SUGGESTIONS FOR MEDICAL PRACTITIONERS

Quite possibly, an efficient suggestion to the ever-increasing ADHD stimulant epidemic on college campuses is to target the student suppliers of the stimulants. Studies show that only a small segment of students on college campuses have legal prescriptions of ADHD stimulants, and are the apparent main supplier of the entire college community. Studies conclude that students with prescriptions almost never take their ADHD medication daily. Many students report only taking their medication on weekends, particular days, or when they have a heavy week or weekend of class-work. As a consequence, at the end of each month, many prescribed users have a surplus of medication that is diverted to classmates and the rest of campus (Desantis, Webb, & Noar, 2008). Therefore, as a mandatory practice, healthcare practitioners may consider random drug testing of students with ADHD stimulant prescriptions. As a result, healthcare practitioners may consider limiting the monthly allotments of medication to prescribed students who do not prove their need for daily usage through drug testing and further counseling. A mandatory limitation of monthly allotments of pills can help alleviate the problems of diversion, and the dangers associated with illicit drug use and potential drug abuse.

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