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THE USE OF PRESCRIPTION DRUGS FOR ACADEMIC PERFORMANCE ENHANCEMENT IN COLLEGE AGED STUDENTS

A project based upon an independent investigation, submitted
In partial fulfillment of the requirements for the degree of
Bachelor of Arts in Social Work

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The Use Of Prescription Drugs For Academic Performance Enhancement In College Aged Students

Abstract

100 students between the ages of 18-22 were surveyed at a small, private New England college in an effort to develop a better understanding of the use of stimulant medications by this population and to evaluate existing and potential policies surrounding such use. Finding revealed high rates of illicit use of such medications with 56% of the surveyed sample reporting to use during their college career and 94% responding that they were aware of such use on campus. A statistically significant relationship was identified between students that illicitly used the medications and students that believe the drugs were harmless. In addition, a significant relationship was also discovered between students that reported to believe the drugs were harmless and those that believed that they knew enough to safely use the medications. The results provide substantial evidence for a need for policies surrounding the illicit use of stimulant medications on college campuses. The drugs are viewed by students to be harmless but in reality they ethically, legally and most importantly physically dangerous to those that use them without a prescription. Colleges must make an effort to increase awareness of these medications and develop policies to control their use.
Outline

I. Introduction
   a. Prescription stimulant drugs are extremely effective in assisting students with ADD/ADHD to maintain focus, increase concentration, and improve memory and reading comprehension and as more students receive prescriptions each year, more college students without prescriptions are beginning to experiment with the drugs in times of academic stress. Considering the academic connotation of these medications, many students are regularly using them for both academic and recreational purposes without ever truly understanding the physical, ethical, or legal dangers that they present and awareness needs to be raised on college campuses throughout the country to make sure students understand how dangerous these “study drugs” really are.
   b. In the last 15 years, there has been a 40% increase in the production of stimulant drugs and they are therefore more readily available than ever. Students all over the country are beginning to experiment with the drugs at alarming rates, with some campus statistics showing as many as 25% of the student population using such drugs within their academic careers. Social workers have a duty to remain up to date on such trends and would likely benefit from research surrounding such drug use to work with clients to deal with possible addiction or cope with academic stress in other ways before addictions develop or to assist in the creation of policy raising awareness around dangers of stimulants or at least regulating the drug use.

II. Main Points
   a. There are more people being diagnosed with ADD/ADHD than ever before
      i. Statistics of Increased Diagnosis
         1. Rates within different age groups of the population
         2. IDEA 1991
         3. Concern of Over Diagnosis
      ii. Increase in medication Production
1. What Medications do
2. Availability of such prescriptions
b. College students are beginning to make illicit use of the drugs
   i. Statistics of ADD/ADHD diagnosis in this population
   ii. Statistics reported in previous research
   iii. Student motivation for use
       1. Effectiveness
       2. Academic-
          a. Psychological Variables
   3. Recreational
   4. Weight Loss
c. Students are unaware of the risks surrounding the use of such drugs
   i. Academic connotation in the name plus rewards associated with use
   ii. Research of students reporting little to no concerns
   iii. Risk factors of use
       1. Physical
       2. Legal and Ethical Implications
d. Lack of Policies Surrounding Stimulants Drugs
   i. Awareness Raising as well as regulatory
       1. Government Policies
       2. College Policies
e. Steady illicit use may cause this population to develop an inability to function
   without stimulants
   i. Risks of Addictions
   ii. Good grades and increased productivity reinforce habit
   iii. Statistics of drug use in older generations and in the work place

III. Opposing Points
a. It is easy to get a prescription for stimulants without a true diagnosis
   i. Doctor’s responsible for being too lenient with prescriptions
       1. Statistics of over prescribing
       2. Lack of a set standard for diagnosis
ii. Evidence of students faking symptoms for diagnosis

b. The Drugs are not even all that effective in treating ADD/ADHD
   i. Limited evidence of long term assistance
   ii. Student belief that drugs are only a quick fix

c. The drugs should be available to everyone in order to make them more fair
   i. Drugs help during exam time
   ii. Makes use more ethical
   iii. Would help to regulate use
       1. Safer when taken as directed

IV. Hypothesis
   a. Therefore, because of the assumed academic association with stimulant drugs, students are making illicit use of these medications and putting themselves in danger all in an effort to reduce stress and perform better academically. With limited understanding of risks and no policies in place to prevent their use, college students, when surveyed, will likely be unaware of the dangers associated with the use of such drugs and those that use them regularly, will likely be unable to perform well when they are unable to take them.

   b. Research Question: What is the current understanding of the risks associated with illicit use of prescription stimulant drugs on college campuses? Why are students so willingly using these drugs and for what motivations? Do they believe they could perform as well if they were to stop using them?

V. Methodology
   a. Sample: A convenience sample of Providence College Students will be used within this research project. The sample will be made up of 100 students between the ages 18-22 with equal portions of males and females as well as students representing each grade level.

   b. Data Gathering: At this time, it is thought that data will be gathered with use of surveys measuring particular variables surrounding stimulant drug use.
      i. Individual Student stimulant drug use- rates of use, motivations, how drugs are acquired.
ii. Student awareness of stimulant drug use on campus- how prevalent stimulant drugs are used and how accessible they are on campus

iii. Student perception of the drugs- thoughts on over diagnosing, awareness of dangers of the drugs, their physical, ethical, and legal implications

iv. Student perceptions of the college’s response to stimulants- are faculty aware of the use of stimulant drug use and is the college doing enough?

c. Data Analysis: With the use of several statistical tests, frequencies and significant relationships were identified. Chronbach’s alpha was used to determine the reliability of the survey instrument which was found to be .708 and therefore a reliable instrument.

d. Findings

i. Frequencies- 56% of the students surveyed reported to have illicitly used such medications during their college career. In addition, 94% reported to being aware of the use of the drugs by others on the campus. Of those illicitly using, 50% of them had used less than five times and 71.4% identified academic motivations for use. 57.1% reported to acquiring the drugs from a peer free of charge and 35% paid a peer for the drugs. Only 9 students reported to have a diagnosis of ADHD but 100% of those students reported that they distribute their prescription to peers for illicit use. The medications were found to be extremely accessible and 38% of students responded that they believed the medications to be harmless.

ii. Several statistically significant relationships were identified within this study. It was found that those that illicitly used these medications also believed them to be harmless (r=.318). Students that believed they knew enough to safely takes the drugs also reported that they believed they were harmless (r=.398). In addition, it was found that students that illicitly use the drugs did not consider them to be an unfair academic advantage and did not believe that a policy preventing such use would promote more fair academic standards.
VI. Conclusion

a. Considering the academic rewards and benefits associated with the use of stimulant drugs, college students are using the drugs illicitly and higher rates than ever without ever developing an understanding of the risks associated with them. Such problems, however, could easily be avoided if students were made aware of dangers or policies were put in place to better regulate illicit use. The rates of use are steadily increasing and efforts need to be made before rates of use go up or more students face physical, legal, or ethical dangers.

   i. What was found- This study revealed high rates of illicit stimulant medication use on this particular campus. Overall, it was found that most students did not believe the drugs to be dangerous and most reported to not considering risks before using them. A need for policy was identified considering the rates of use but it was found that many students did not believe a policy would stop the use or provide a fairer academic standard or promote student safety.

   ii. Concluding statement- As hypothesized, the illicit use of stimulant medication is a significant problem on college campuses. With so many students using without an understanding of the medications and their implications, colleges must work to try and control the use and promote student safety and fairer academic standards.

b. Implications for Social Work

   i. Social workers have a duty to remain up to date on all research and trends surrounding the populations they serve. Social workers working with college students or within the substance abuse field would benefit from a greater understanding of the recent growth in the illicit use of prescription stimulants as students attempt to cope with stress. Such information can help social workers to deal with addictions of their clients or help them to find alternative methods for dealing with academic stress and pressure.

   ii. Increased research on the illicit use of stimulant drugs will be extremely helpful in creating new policies to raise awareness of the dangers on such drugs on college campuses. In addition, with a better understanding of the
use, why it occurs, and many of the dangers associated with use, policies can be developed and better enforced on campuses to prohibit illicit use.
Introduction

In recent years, college students across the country have begun making regular illicit use of stimulant prescription drugs for academic and recreational purposes without ever thinking twice about the possible consequences. These drugs, commonly prescribed to improve the concentration and academic performance of people diagnosed with Attention Deficit/Hyper-Activity Disorder, are viewed by students to be perfectly safe when in reality the sale of these drugs and the use of them without a prescription are both illegal as well as dangerous. The drugs, often nicknamed “study drugs” or “cramming drugs,” are described with an academic connotation in their name that leads students to often feel they are perfectly safe to use (Sussman, Pentz, Metz & Miller, 2006). As more people are diagnosed with ADHD each year, these stimulant drugs are becoming more readily available and students across the country are recognizing their benefits and therefore using them more than ever (McCabe, Knight, Teter & Wechsler, 2005). Due to family and societal pressures and expectations as well as the intensity of school curriculum, college students across the country are unknowingly putting themselves at great risks in the name of better grades and awareness needs to be raised around the issue before things get worse.

Most of the students experimenting with these drugs have little understanding of what the drugs do to their bodies or even about the disorders that they are intended to treat. Attention Deficit/Hyperactivity Disorders are conditions that cause people to experience symptoms of hyperactivity and inabilities to maintain focus and attention that often result in difficulties in everyday activities, particularly in educational settings (Carroll, McLaughlin & Blake, 2006). The disorders are commonly first diagnosed in school age children but there are many people that experience problems well into their adult life. The symptoms of ADHD are commonly
treated with the use of prescriptions containing methylphenidates or amphetamines, stimulants found in Ritalin, Adderall, and Concerta—three of the most popular medications used to treat ADHD (White, Becker-Blease & Grace-Bishop, 2006). The illicit use of these drugs most commonly occurs anytime someone takes the medications without a prescription, usually in the case of students looking for academic assistance. But, in the past several years, this illicit use has expanded to include the use of these drugs with or without a prescription for other purposes such as to get high, to control appetite or to stay awake for partying and drinking (Arria, 2008).

Statistics show that there is definitely reason for concern over the misuse or abuse of these drugs within the college age population (Harris, 2009). In the past 15 years, there has been an estimated 40% increase in production of stimulant drugs in the United States, making these medications the fourth most prescribed drugs in the country and therefore quite readily available (White, Becker-Blease & Grace-Bishop, 2006). The National Center on Addiction and Substance Abuse at Columbia University estimates that stimulant abuse among college students has risen 93% between 1993 and 2005 (Harris, 2009).

Although it is the smallest state in the country, Rhode Island is home to 14 colleges and universities, providing the state with a large, vulnerable population that might likely be dealing with the temptations and risks associated with the illicit use of stimulant drugs (Diploma Guide, 2009). In a research study conducted at a small liberal arts college in New England, not far from the 14 colleges and universities of Rhode Island, it was found that an overwhelming 71.4% of students surveyed reported using stimulants without a prescription or knowing another student that had (Carroll, McLaughlin & Blake, 2006). In addition, previous research has also found that rates of illicit stimulant drug use appear to be the highest among Caucasian students especially at schools in the Northeast with more competitive admission standards. In some cases, rates of use
on these campuses reached as high as 25% of the student population surveyed (McCabe, Knight, Teter & Wechsler, 2005). These statistics all show significant cause for concern for the students of Rhode Island and the social workers working with these populations.

At this time, there are very few policies specifically addressing concerns of the illicit use of these stimulant drugs. Colleges across the country, however, are beginning to recognize this growing problem and are starting to create their own policies around the issue. For example, at the University of Arizona, students now face the same penalties for abusing stimulants as they would face if caught with illegal drugs. Likewise, the University of Pennsylvania has begun to use discussion panels to increase awareness of the physical and ethical dangers of using such drugs (National on Campus Report, 2005). Social Workers, according to the National Association of Social Workers, have a duty to remain up to date on new research surrounding all areas of practice (NASW Code of Ethics, 1999). The estimated 1,480 social workers in the state of Rhode Island working in the substance abuse and mental health fields would likely greatly benefit from new information on this topic so that they could better understand why clients are illicitly using such drugs and help them find alternative ways to cope with stress and academic difficulties (Occupation Employment Statistics, 2008). In addition, such research would also help others to work on creating policies or raising awareness surrounding the dangers of such drug use. Before any policy can be made, it must be understood why students are motivated to use such drugs, how regularly, and how much students using these drugs understand the dangers associated.
More Diagnoses than Ever Before

In recent years, there are more people receiving treatment for Attention Deficit Hyperactivity Disorder than ever before. In 2005, it was estimated that about 3 to 7% of the country’s school aged children had a diagnosis of ADHD (Hall, Irwin, Bowman, Frankenberger, Jewett, 2005). Many researchers agree that this increase was caused by changes in special education laws that occurred in 1991 with the passage of the Individuals with Disabilities Education Act which increased services to students with ADHD and consequently led to an increase in diagnoses (Chau, 2007). In the years following this new legislation, there was a 9-fold increase in the amount of ADHD stimulant medication prescriptions written (Carroll, McLaughlin & Blake, 2006). With this in mind, there is growing concern over a possible problem of over-diagnosing children and an over-prescribing of the drugs (Poulin, 2007). Many of the students that received those very prescriptions in the early 1990s are now the current college students bringing the stimulant drugs with them to campuses throughout the country today (Chau, 2007).

When taken correctly and with a valid prescription, stimulant drugs are extremely helpful in assisting students with ADHD with their academic difficulties. But, in recent years, many students without a prescription are beginning to rely on these drugs for assistance in times of stress to stay awake and to improve reading comprehension, interest, cognition and memory (DeSantis, Webb, Noar, 2008). Such an increase in the availability of such drugs comes along with an increase in their abuse or illicit use. Adults between the ages 18-25 have been found to have the highest reported prevalence of illicit prescription stimulant drug use, with collegiate students reporting even higher annual prevalence rates for stimulants than their non-collegiate peers (As McCabe, Teter, & Boyd 2006).
Increased Use Among College Populations

On average, about 5% of the college age population in the United States has a prescription for a stimulant drug (Sussman, Pentz, Spruijt-Metz & Miller, 2006). With that many students holding prescriptions for such medications, it makes sense that the illicit use of the drugs would be very high on college campuses. In research conducted throughout the United States, it has been found that illegal use of these drugs is a growing problem (McCabe, Knight, Teter & Wechsler, 2003). One of the highest rates of illicit use was uncovered in a study conducted by DeSantis, Webb, and Noar in 2008, where they found that 34% of their surveyed college age population had used ADHD medications illegally. Within this sample, it was found that rates of use were the highest among white students (94%) and among students involved in a fraternity of a sorority (61%). Interestingly, the rates of use were fairly evenly distributed for the different grade levels. One of the reasons for such wide spread use is the fact that the drugs are so easily obtained. In a study conducted by at an unnamed college in the Northeast, the availability of such stimulant drugs was clearly identified as 50% of students surveyed agreed or strongly agreed that the drugs were easily accessible for illicit use (Weyandt, et al, 2009).

One of the greatest issues with stimulant drugs is how effective they are for what they’re intended to do. The students experimenting with these stimulant drugs without a prescription tend to have varying motivations or explanations for their use but whatever the reasoning, the drugs tend work. The most common reason for use without a prescription by college students is to earn better grades with use of the stimulants to aid in concentration, help students study for longer periods of time and to increase alertness (Sussman, Pentz, Spruijt-Metz & Miller, 2006). In particular, while using such drugs, students have reported an enhanced ability to memorize and recall information as well as to focus on one task for an extended period of time without
distraction (DeSantis, Webb & Noar, 2008). As academic pressure increases in our nation’s most competitive schools, students are finding that they need extra assistance in order to succeed in the classroom. With time commitments and social obligations, students are now turning to stimulants in order to complete their academic obligations. In previous research that looked into psychological motivating factors behind such academic illicit stimulant use, it was found that students with the highest rates of use also had high ratings on scales of sensation-seeking and perfectionism (Weyandt, et al, 2009). Students want to do well but are struggling to do so because of other factors influencing their school work. Unfortunately, in several studies other studies, it was also found that the students using these drugs the most often were the ones with the lowest reported grade point averages (Chau, 2007).

Other motivations reported by illicit users typically involve students using the drugs to stay awake for longer periods of time while partying. Some claimed that the drugs were also effective in making them more outgoing within social settings or for a very cheap and easily accessible high. Finally, many students, a majority of them being female, reported that the drugs were also successful for use as an appetite suppressant. Some reported that this was simply an added bonus to the recreational or academic motivations that they had for using the drugs but several others have reported that the drugs are helpful when taken before events such as spring break or dances in which students are looking for quick weight loss (DeSantis, Webb & Noar, 2008).

Students’ Lack of Awareness of the Dangers of Such Drugs

Much of this widespread abuse, unfortunately, comes with little to no understanding of the dangers and risks associated with such illicit medication use. Considering that the drugs are
known for as well effective in assisting students with their academics, most illicit users do not think twice before using the drugs. They are well known for the academic assistance and so students take the drugs, receive high grades, and then associate the grades with the drug and use them again for their next assignments (Zacherman, 2007). Statistics of previous research have proven that students rarely think twice before such drug use. In study conducted with undergraduate students on a college campus, it was found that 79% of reported illicit users surveyed were not at all concerned about using these drugs (Sussman, Pentz, Spruijt-Metz & Miller, 2006). In another study, more than 20% of the student population surveyed reported that they agreed or strongly agreed that occasional use of these drugs without a prescription is completely harmless (Weyandt, et al, 2009). This innocent view of the drugs is likely why many students are so willing to admit to and continue with their illicit use.

Experts, however, report that the drugs are far from harmless and in reality they have several extremely serious side effects. Students need to realize that stimulant drugs can even be dangerous when used with a prescription. Considering their known side effects, in 2006, the Federal Drug Administration took action to place a black box warning on the labels of stimulant drugs used to treat ADHD. This type of warning is the most serious that the FDA can use and prints on every bottle, in non-technical language, the serious and possibly life threatening risks associated with the drugs. The particular risks the FDA warns against with such stimulants involve cardiovascular problems such as increase in blood pressure and heart rate, potential risks for chronic heart failure, stroke and possibly even death (Nissen, 2006).

When taken without a prescription, these risks typically only increase. Students with prescriptions for such drugs have obviously spoken with their physicians before beginning the use of the medications but illicit users do not have this opportunity. Therefore, they are typically
unaware of any precautions or warnings of interactions with other drugs that doctors may give to their patients before writing the prescription (McCabe, Teter & Boyd, 2006). In addition, when taken illicitly, the drugs are not necessarily taken appropriately. In many cases of both academic and recreational use, students will take the medications in large doses that could put them at risk for other unknown side effects such as headaches, tics and even serious mental illness (Harris, 2009).

Beyond the physical dangers associated with the illicit use of such medications, there are also several ethical and legal risks that students often do not take into account before using the drugs. Many people relate the use of stimulant drugs to the use of steroids by professional athletes stating that it is unfair to illicitly use drugs to outperform other students. In addition, when students no longer perform with use of their own abilities then they might quite often lose any of the personal satisfaction that comes with good grades and only experience a decrease in self-esteem as the grades are based on illicit drug use and not personal achievement (Chau, 2007).

Commonly, students also maintain such an innocent view of the drugs that they do not realize that in many cases, sharing prescription pills is looked at just the same as selling drugs. To get caught sharing, not even selling the drugs can be considered a felony offense (Medical News Today, 2007). As they do not always take it as directed, many students have extra medication at the end of their month prescription and are quite often more than willing to share with peers. Students have reported little to no concern over the dangers of sharing and believe that they are helping friends when they provide friends with the drugs (DeSantis, Webb & Noar, 2008). Although it is always illegal to use a prescription stimulant drug without a prescription, it is not typically regulated or even considered that serious of an offense. Many schools across the
country, however, are beginning to tighten policies around such drug use to make prescription
drug abuse the same type of offense as being caught using an illegal drug such as marijuana

**Lack of Policies Surrounding Such Drug Use**

Considering the dangers and misconceptions surrounding the use of stimulant drugs, it is
a significant issue that there are very few policies in existence regarding their use particularly on
college campuses where illicit use is occurring at alarming rates. The United States Drug
Enforcement Administration classifies stimulant drugs as controlled substances because of their
high potential for abuse. Federal law, therefore, mandates that doctors give these prescriptions to
their patients in person and requires a new prescription for each refill. But, once the drugs are in
the hands of the patient, there is little to no regulation of the drugs and they can be easily
dispersed to non-prescribed students (Nichols, 2004). Studies have found that over half of all
college students with a stimulant drug prescription are approached by peers to exchange their
medication through selling or sharing (Shillington, Reed, Lange, Clapp & Henry, 2006). In
addition, as previously mentioned, research studies have found that students typically use such
drugs without an awareness of the dangers associated with them. Considering this information,
declaring these stimulant drugs a controlled substance is not enough. The government needs to
intervene to make a more visible platform about such drug abuse to discourage misuse and
emphasize the consequences of unauthorized sale and distribution of such drugs (Sussman,
Pentz, Spruijt-Metz & Miller, 2006).

In addition, it is critical that colleges create their own policies and campaigns to increase
awareness of the risks of these stimulant drugs and to enforce regulation of their exchange for
illicit use. Research on such drug abuse has found that there is significant concern for policy changes on campuses across the country. They reported that it is necessary for medical personnel, university leadership, parents and students to come together to make sure that everyone is informed about the dangers of such medications. They recommended that students are also prevented from giving away or selling as well as buying or stealing such drugs from peers through stricter policies regarding the exchange of prescription drugs. In addition, they explained that it is necessary for on campus medical personnel to regularly educate students on the risks associated with stimulant drug use for both academic and recreational purposes (White, Becker-Blease & Grace-Bishop, 2006).

*Risks of Dependence on Such Drugs*

The risks of such drug use, unfortunately, do not stop on college campuses. There is currently reason for concern that as students begin to regularly use such medications without a prescription, they will form a dependency on them. Considering that methylphenidate, the drug used in 90% of the treatment of ADHD is classified as a Schedule II substance by the United States Drug Enforcement Administration there is high potential for abuse and psychological dependence on these stimulant drugs (Shillington, Reed, Lange, Clapp & Henry, 2006). To better understand the addictive rating of these drugs, it is important to note that drugs such as morphine, oxycontin, topical cocaine, and opium all have the same Schedule II classification as stimulant drugs (DeSantis, Webb & Noar, 2008).

Taking into account the availability, effectiveness, and addictiveness of these drugs, it makes sense why so many Americans are turning to these drugs in times of stress. Originally beginning illicit stimulant drug use as students puts adults at risk developing dependence on the
drug and therefore it is likely abuse of stimulants will continue over the course of their lives as the drugs are so readily available as well as highly effective (McCabe, Teter & Boyd, 2006). As younger generations are becoming more and more dependent on use of these drugs without a prescription it is possible that their rates of use for future older generations will also increase. At this time there are 1.5 million adults with a prescription for stimulants, 10% of them being over the age of 50 (Nissen, 2006). Society is clearly growing dependent on stimulant medications from school age through retirement and policies need to be put into place to improve and control their regulation.

**Prescriptions are Very Easily Obtained**

The problems surrounding illicit stimulant drug use, however, may not be effectively prevented with use of stricter policies or increased awareness of the drugs’ dangers. There is widespread support for the idea that much of the problem is caused by the tendency of many doctors to be too lenient when it comes to writing prescriptions. Students no longer even need to illicitly use the drugs because they are able to walk in to their physician and receive a prescription quickly and easily. In a study conducted in 1995, it was found that just two providers out of the 1309 surveyed in the state of Virginia had prescribed more than 25% of the entire state’s prescriptions for Ritalin. In other cases, it was found that some patients were able to receive a prescription for stimulant drugs in as little as fifteen minutes (Finley, 2007). When physicians are writing these prescriptions so frequently, there is significant reason for concern that people throughout the country are receiving medications without an appropriate diagnosis. Illegal use is no longer the only problem but there is also even greater concern for the overmedication and wrongful diagnosis of these students.
The problem, therefore, becomes an issue of regulating the prescribing process and not just of preventing illicit use. This situation exists due to a lack of a set standard when it comes to the tests used to diagnose ADHD. In many cases, diagnoses are based on information gathered from outside sources such as parents or teachers, observations of the patient, and quite commonly- patient self report. The use of self-report, especially when patients are motivated by external gains such as recreational use or academic advantages, allows patients to easily report symptoms as they see necessary for a prescription (Booksh, Pella, Singh, & Gouvier, 2009). Research has shown that there is a definite need for the better regulation of these reports should they be used in the prescribing of such serious drugs. These medications, as previously described, are controlled substances and should be prescribed with increased caution. This caution, however, is clearly not used considering that in 2004 up to 95% of students in one study were able to obtain a false diagnosis of ADHD by faking symptoms on one of the most commonly used self-reporting scales. With these statistics in mind, when doctors make use of such reports, many believe that patients should also be mandated to participate in interviews by the physician in order to better assess and validate their reported symptoms and concerns (Jachimowicz & Geiselman, 2004). In order for these drugs to be used appropriately and effectively, there needs to be more than just new policies and increased awareness of the risks surrounding their use because the problem is far greater than that. It is critical that there also be much stricter regulation of the prescriptions written by our nation’s physicians so that people cannot simply walk in, fake symptoms, and leave with a prescription for a dangerous stimulant drug.
**Lack of Evidence of Drug Effectiveness**

In recent years, there has also been increasing amounts of evidence that the abuse of such stimulant drugs should not even be viewed as a problem considering the fact that there is limited evidence about how effective the medications even are at treating the symptoms of ADHD and therefore, students may simply stop using the medications on their own. Although the drugs are widely accepted for clinical usage, there is no clear research on their lifelong effectiveness for assisting with academics or improving interpersonal relationships (Booksh, Pella, Singh, & Gouvier, 2009). Considering this information, it is understandable why only 14% of students in a 2005 study reported that they felt the use of stimulants assisted them with academics in the long run (Hall, Irwin, Bowman, Frankenberger, & Jewett, 2005). In addition, research has shown that the highest rates of illicit use on college campuses are typically associated with students with the lowest grade point averages (Weyandt, et al, 2009). The drugs provide a quick fix but will likely not be a long term aid for many students. Stimulants may help temporarily, but with little information on long-term effects, it is quite possible that students will stop the use of such drugs on their own without any need for new policies or regulations. If they’re not effective over a long period of time, their use is likely a temporary problem and schools and researchers should focus their attention on more significant issues.

**Stimulant Prescriptions for all Students**

Many others also believe that such medications should no longer be considered a problem on our nation’s college campuses. There is currently growing support for the acceptance of such drug use for that ideal quick fix during exam time. Some even believe that the drugs should be promoted on campuses and no longer discouraged for they are considered to be nothing more
than a stronger substitute to the coffee or energy drinks that students may consume in order to stay awake while studying or to increase attention during exams. At Cambridge University, for example, researchers began to use the term “cognitive enhancement” for describing the use of such stimulant medications, rather than labeling their use as “cheating” as many other colleges and universities have done (Schnuer, 2009). With such an idea in mind, colleges should possibly consider increasing the availability stimulant medications on campuses throughout the country rather than trying to regulate or prevent their use. If everyone has the option of using the medications, they can be viewed as helpful and not as an unfair or illegal aid in academics. In addition, research shows that although students may risk dependence on such stimulant drugs because of the academic rewards that they experience, the drugs are actually much less addictive when taken as directed. When students abuse such drugs for recreational purposes, they often take the drugs in excessive amounts or intranasally through snorting rather than orally as directed. In these cases, people run the risk of developing serious addictions because of the effects experience but when taken orally and as directed, the drugs have far less potential for abuse (Sussman, Pentz, Spruijt-Metz & Miller, 2006). If the drugs are used appropriately and for academic purposes and not recreational use, many believe that they should simply be allowed on college campuses. Students can benefit from the academic rewards they receive and the medications can be used fairly by everyone. By allowing the use of stimulant drugs on campuses throughout the country, college students will no longer be forced to use the drugs secretly and will therefore actually be safer in the long term while also improving their academic performance.
Hypothesis

Attention Deficit/Hyperactivity Disorder is becoming an extremely common condition for many of the school age children throughout the United States. As the rates of diagnoses increase, so does the production of the medications that treat the condition. These medications are extremely effective in the treatment of ADHD and allow students a chance to enhance their academic performance that may have previously been disrupted by the disorder. However, with such increased availability of the medications, they are beginning to fall into the hands of many students without a diagnosis of ADHD. Across the country, many college students are making illicit use of the drugs in order to increase their academic performance as well as for recreational purposes such as getting high or to lose weight. Because the students consider the drugs to be helpful academically, many of them do not consider the risks associated with the drugs when in reality, they are quite dangerous. Such drug use is physically dangerous but also provides ethical and legal implications for the students using them. Colleges around the country need to begin to recognize the drug use and start to change policies in order to control the illicit use and increase awareness of the dangers surrounding it. Unfortunately, it is all too easy for many students to obtain these drugs. With increased diagnoses, the drugs are widely available on most campuses and some believe that physicians, rather than colleges, must be held accountable for controlling their use. In a more extreme debate, some believe that the drugs should be available to the entire population or taken off the market entirely in order to insure fair academic standards for the whole student population.

Considering the research surrounding this issue, it is therefore likely that many college students perceive the use of stimulant drugs to be fairly harmless as well as innocent. It is likely that most students will report to have illicit used stimulant drugs or know other students that have
without any real understanding of such medications. In most cases, students are likely report that they do not believe the drugs to be dangerous and are therefore unaware of any physical, ethical or legal implications surrounding their use. College campuses are not providing the necessary information about the drugs or enforcing policies to control such use. With such limited information available on such issues, most college students are frequently using the drugs and not viewing their use as a problem. Colleges need to become aware of the increased rates of illicit use and work to develop formal policies in order to control the drug use.

Methodology

In order to better understand the use of illicit stimulant drug use on college campuses, a study was conducted on the campus of Providence College, a small Catholic school with approximately 4,000 students located in the state of Rhode Island. Of these students, a convenience sample of 100 students, 36 males and 64 females, was selected. The sample was made up of students between the ages 18-22 living both on and off the campus of Providence College. The sample was acquired by the researcher by going door to door to residence halls and office campus houses delivering surveys to be completed by students willing to participate. All surveys remained completely confidential.

Participants were asked to complete a two part survey (Appendix A) in order to develop a better understanding of the use of stimulant drugs on a particular college campus. The first part of this instrument consisted of six questions used to develop background information about the survey participant including some demographic information, whether or not they had ever been diagnosed with ADHD, if they have used stimulant drugs without a prescription and other information surrounding such usage. The second part included nineteen items on a five point
Likert scale (Strongly agree to strongly disagree) aimed to get a better understanding of the student’s thoughts and understanding of the use of stimulant drugs on this particular college campus. This survey was used to measure particular variables surrounding stimulant drug use and its influence on college campuses. The four variables being measured were individual stimulant drug use, awareness of student stimulant drug use on the campus, student perception of stimulant drugs and student perception of the college’s response to stimulant use.

Student use is the individual survey participants’ experience with stimulant drugs. This variable identified if the student had ever been diagnosed with ADHD and their personal experiences surrounding stimulant drugs. Through simple background questions, individual student use was easily measured and used to develop a general idea of the overall rates of student use on this campus. Awareness of student use throughout the campus is a measure of the overall use of the drugs across the campus. Where not every student may have used the drugs, this portion of the instrument looks to see how aware students are of the drugs on campus, how accessible the drugs are and also takes a look at how students perceive the use of drugs by other students. A portion of the survey also looked to identify students’ perception and understanding of the drugs and the use of them on campus. This variable was measured in questions regarding the dangers or other implications of stimulant drug use both physical and ethical as well as students’ view on the possible over diagnosis of ADHD among the college age population.

Finally, student perception of the college’s response to stimulant drugs was measured by asking students to respond to whether or not they think faculty are aware of the abuse of stimulants on this campus and whether or not they believe there to be adequate policies addressing such drug use. Overall, the study looked at individual and campus wide stimulant drug use as well as student and faculty perceptions of these academic medications.
Data Analysis

The 100 surveys completed were then analyzed with the use of statistical software in order to determine any significant relationships among variables and to get a better understanding of the use of stimulants on this particular college campus. Frequency charts were completed to get a general idea of the results for each of the variables being measured—individual student use, awareness of use on the campus, student perception and understanding of the drugs and student perception of the college’s response to such drugs. Relationships were measured with the use of different statistical tests and significant relationships were identified. In addition, tests were run controlling for specific variables such as those that reported to previously using stimulants compared to those that had not. The internal reliability of this instrument was measured with the use of Cronbach’s alpha in which it scored a .708 and was found to be a reliable measurement within this study. Different portions of the instrument measuring specific variables were also found to be extremely reliable.

Findings

Overall, this survey revealed that 56% of students within the sample reported to illicitly using stimulant medications within their college career and 94% reported to know of other students using them if they were not using themselves. Of that group of illicit users 50% of them reported to use on less than five occasions but 17% of them reported to monthly or even weekly use. Overall the main motivation for students, 71.4% of reported illicit users was to enhance academic performance but academic and weight loss motivations were also reported. Of these illicit users, 57.1% reported to acquiring the drugs from a prescribed peer free of charge and 35% purchasing the drugs from a peer. Interestingly, only nine students out of the 100 surveys reported to having a diagnosis of ADHD, much lower than previous research had found. Out of
these nine students, however, 100% reported to distributing their prescription to peers for illicit use. Three of the nine, however, reported to illicitly using stimulants prior to receiving a diagnosis and their own prescription. This is very consistent with research that describes students receiving diagnoses during their college years after possibly recognizing the academic advantage the drugs provide.

Beyond the students that reported to use themselves, an even greater portion of students within this sample reported to be aware of stimulant use across the campus. Of the surveyed students, 94% agreed or strongly agreed to an awareness of the illicit use of stimulants during finals week with another 72% aware of their regular use. Within this sample, 61% agreed or strongly agreed that they had been offered stimulants while at college, 84% reported that they knew a student to get them from, and 73% believed that they were easily accessible on this campus.

Interestingly, of the 56% that reported to illicitly using stimulant drugs, 42.9% agreed or strongly agreed that they felt they knew enough about the drugs to safely use them but only 36% of the total sample felt that they knew enough. Although only a small portion of the students felt they knew enough to safely take the medications, it was reported that only 20% of students surveyed agreed or strongly agreed that they believe students consider risks before taking them. In fact, 61% of the sample reported that they disagreed or strongly disagreed that people considered implications beforehand. Finally, 38% of the students surveyed, a significant portion, reported to agree or strongly agree that taking prescription stimulants without a prescription is harmless. There was a statistically significant relationship ($r=.318$) identified between those that used without a prescription and those that viewed the medications to be harmless. In addition, a significant relationship also existed between students that reported they knew enough to safely
take the drugs and those that responded they felt they were harmless ($r = .398$). Not knowing enough about the stimulants might have been enough to deter some of the students from illicit use but, as hypothesized, those using clearly did not consider risks prior to use and believed the medications to be much safer than they are.

As far as policy was concerned, students reported to have much more mixed opinions compared to their views on the drugs specifically. 17% of the sample reported to strongly agree or agree to the awareness of an existing policy on campus- something that is actually not clearly defined and 28% reported agreed that a policy should exist. Finally, 37% agreed or strongly agreed that such a policy would promote student safety and 36% that a policy would promote fair academic standards. Interestingly, when analyzing only the cases of students that reported to illicitly use, a significant correlation was found between those that did not believe the medications to be an unfair academic advantage and those that did not believe a policy would allow for fair academic standards on campus. Stimulant medications clearly had an innocent reputation on this campus when it comes to both safety and ethics.

Overall, students definitely agreed that ADHD was over diagnosed within the school age population. More than half of the students, 69%, reported to agree or strongly agree that ADHD was over diagnosed to children and 54% felt that it was for college age students. Previous research has identified increasing diagnoses within recent years and these finding definitely provide further evidence. It was very interesting that so many students responded in such a way considering that only a small portion of the sample reported to have a diagnosis of ADHD but it shows that within the larger population there are likely many more cases.
Limitations-

There is definitely a need for more research surrounding this topic particularly because the sample of this survey was very limited. Considering that only a convenience sample of 100 students was used and that the population of Providence College is not very diverse, there is limited external validity of this data as it would be difficult to tell whether findings apply to the larger population. Research would likely be better conducted at a larger more diverse school.

There are several other factors that may have also affected the results within this study. As it is technically illegal to share prescription drugs, it is quite possible that some participants were hesitant to report their use. In addition, the researcher was informed by participants towards the end of the study that the survey instrument was at time confusing and adjustments would definitely need to be made for future research. More research is definitely needed on this subject because it is such a growing concern for our country’s college age population. The findings from this particular study are not necessarily typical for larger schools in different parts of the country and data should be collected nationally so that effective policies can be put into place to educate and protect students. Such information is not only of particular interest to colleges or social workers involved with members of this population but it would also be helpful to the parents of students with ADHD and the physicians that are responsible for writing these prescriptions.

Conclusion-

With increasing diagnosis of ADHD throughout the country, particularly within the college age population, illicit stimulant drug use has become a growing concern for our country’s colleges and universities. More students are being diagnosed than ever before and are beginning to share prescriptions with those without the disorder. These students are typically unaware of
many of the dangers surrounding such drug use including not only physical dangers but also potential legal and ethical implications. The drugs are extremely effective when it comes to increasing concentration and keeping students awake for long nights of studying and even partying. Many students respond to positive results they get from drug use by beginning consistent use but unfortunately never develop any real understanding of these medications. Schools need to make an effort to educate students about these stimulant drugs and try to begin to regulate their use. It was hypothesized that students within this study would report high rates of illicit use on their particular college campus. In addition, it was thought that students would be unaware of any of the implications of illicit use and overall would not perceive the use of stimulants to be a problem. Finally, it was expected that students would not believe the college had taken any measures to control such drug use.

The research conducted within this study indicates that there is definite cause for concern over the illicit use of stimulant drugs within the college age population. Within this study, it was found that a reported 59.6% of surveyed students had used stimulant medications without a prescription at some point during their time in college. Even more alarming is that a 96% of students reported to agree or strongly agree that students on campus were using such drugs without a prescription. The drugs were reported to overall be very easily accessible on campus. Interestingly, 61% of the students reported that most do not consider the risks of stimulants before taking them, a number somewhat less than what had been expected. The main motivation for stimulant use was to enhance academic performance and of all of the students surveyed with a prescription for stimulants, 100% responded that they distribute the drugs to other students without a prescription.
There were significant relationships identified between those that illicitly use the medications and those that believed them to be harmless. In addition, the students that reported to believe that the drugs were harmless also felt that they knew enough to safely use them. Most of the students, overall, were not concerned with policy and did not believe that a policy, if put in place, would necessarily even increase student safety or promote fair academic standards. Those that felt troubled by the academic advantage of these medications tended to be the students that were not taking them - a very interesting finding.

Such findings definitely present a variety of implications for those in the field of social work, particularly those working with the college age population. With this many students illicitly using prescription drugs, social workers need to be prepared to address the many concerns that this may present. The main motivation for student use including academic enhancement and recreational purposes and social workers must be able to help students to handle the pressures of school without turning to prescription drugs. Understanding student usage as well as student perceptions of such drug use, social workers will be much better equipped to try and make changes for this population.

The findings of this study are of a particular interest to those who may be working to create or change policies surrounding the illicit use of stimulant drugs among the college age population. A large focus of the survey instrument focused in on student views on existing policies as well as potential policies that could be put in place on our college campuses. Overall, as hypothesized, students reported that they were unaware of any policies currently in place on their campus banning the use of such stimulants without a prescription but were unsure of how effective a policy would even be when it came to promoting student safety or providing fair academic standards for students. Social workers implementing new or changing current policies
would need to take this information into account in order to maximize the effectiveness of any policy being put into place. Stimulant use among college age students is something that is only beginning to be researched at this time. There is definitely a lot more information that needs to be collected before necessary changes can be made. Social workers interested in this particular area would likely benefit from advancing the research of this and previous studies to try and uncover different trends associated with such drug use. Deeper understanding of this growing issue would allow social workers an opportunity to educate the public about the illicit use of stimulants, better assist and understand those currently using, and help them to develop the most effective policies regulating the use of these drugs.
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APPENDIX A

Please circle or fill in the appropriate response:

Sex: ________
Age: ________
Class Year: ________

Part I:

1. Have you ever been diagnosed with ADD or ADHD*?  Yes  No

2. Are you currently prescribed a stimulant drug (ex: Adderall, Concerta, Ritalin)?  Yes  No
   If yes, have you ever distributed it to a peer without a prescription?  Yes  No
   Do you ever use the drug in an amount that exceeds the prescribed dosage?  Yes  No

3. Have you ever used ADD/ADHD medication without a prescription?  Yes  No
   (If no, go on to Part II)

4. How frequently have you used stimulant drugs without a prescription since entering college?
   a. Less than five times
   b. More than five times but less than monthly
   c. Monthly
   d. Weekly
   e. More than once a week

5. What is your motivation(s) for taking stimulant medications without a prescription?
   Select all that apply:
   a. Enhance academic performance
   b. Recreational
   c. Weight loss
   d. Other __________________________

6. Where do you typically acquire the medication?
   a. A prescribed peer on campus: free of charge
   b. A prescribed peer (with charge)
   c. Off campus source/distributor
   d. Other __________________________
Part II:

Please answer the following questions Strongly Disagree to Strongly Agree:

1. I am aware of the symptoms of ADHD
   
<table>
<thead>
<tr>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Neutral</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
</tr>
</thead>
</table>

2. I feel that too many children are diagnosed with ADHD
   
<table>
<thead>
<tr>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Neutral</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
</tr>
</thead>
</table>

3. I feel that too many college students are diagnosed with ADHD
   
<table>
<thead>
<tr>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Neutral</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
</tr>
</thead>
</table>

4. I am aware of students using stimulant drugs without a prescription
   
<table>
<thead>
<tr>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Neutral</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
</tr>
</thead>
</table>

5. I am aware of students using stimulant drugs without a prescription during finals week
   
<table>
<thead>
<tr>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Neutral</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
</tr>
</thead>
</table>

6. I am aware of students using stimulant drugs without a prescription regularly
   
<table>
<thead>
<tr>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Neutral</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
</tr>
</thead>
</table>

7. I have been offered stimulant drugs by another student
   
<table>
<thead>
<tr>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Neutral</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
</tr>
</thead>
</table>

8. I know students that I can get stimulant drugs from
   
<table>
<thead>
<tr>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Neutral</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
</tr>
</thead>
</table>

9. Stimulant drugs are easily accessible on this campus
   
<table>
<thead>
<tr>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Neutral</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
</tr>
</thead>
</table>

10. I think that it is harmless to use stimulant drugs without a prescription
    
    | Strongly Agree | Agree | Neutral | Disagree | Strongly Disagree |
    |----------------|-------|---------|----------|-------------------|

11. I think students consider the risks of using stimulant drugs before taking them
    
    | Strongly Agree | Agree | Neutral | Disagree | Strongly Disagree |
    |----------------|-------|---------|----------|-------------------|
12. I believe I know enough about stimulant drugs to safely use them
   Strongly Agree  Agree  Neutral  Disagree  Strongly Disagree

13. I think that stimulant drugs provide an unfair advantage for students compared to those that
don’t take the drugs
   Strongly Agree  Agree  Neutral  Disagree  Strongly Disagree

14. I think that it is illegal to take prescription drugs without a prescription
   Strongly Agree  Agree  Neutral  Disagree  Strongly Disagree

15. I think that faculty on the campus are aware of the use of stimulant drugs
   Strongly Agree  Agree  Neutral  Disagree  Strongly Disagree

16. I am aware of a policy on campus that bans the use of stimulant drugs without a prescription
   Strongly Agree  Agree  Neutral  Disagree  Strongly Disagree

17. A policy should exist preventing the use of stimulant drugs without a prescription on campus
   Strongly Agree  Agree  Neutral  Disagree  Strongly Disagree

18. A policy surrounding stimulants would promote student safety
   Strongly Agree  Agree  Neutral  Disagree  Strongly Disagree

19. A policy surrounding stimulants would allow a fair academic standard for students
   Strongly Agree  Agree  Neutral  Disagree  Strongly Disagree

Please Share any other additional thoughts concerning the use of stimulant drugs on this
college’s campus: