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"Steroids and College Students: Ethical Considerations"
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Abstract:

In this paper, I wanted to be able to make some conclusions from the data that has been collected over the course of six semesters. I wanted to find out if males and females responded differently to questions on steroid use. More importantly, I wanted to know students in EPSE 200 really felt about steroid use- answers with some detail and feeling. The data was run using several oneway ANOVAs, along with spreadsheets of students' detailed answers to the five questions asked in the last semester recorded (Fall 1997). From the data run, we found that there are significant differences in male and female responses to steroid use, and that college students have similar ideas on steroid use whether a freshman or senior+. The spreadsheets were used to demonstrate answers given to the questions asked, both male and female answers. Overall, the data proved to be significant, and the paper is merely used to demonstrate that.

Abstract

Anabolic-androgenic steroids are becoming more commonly used among young adults both in high school and college. A study done by Terney and McLain alone reported 94 high school students who admitted to using steroids; there could of course be many more that did not admit to use. Steroids are everywhere, and making responsible decisions takes ethical consideration. Views in what is the right and wrong decision may be strongly affected by gender. Males and females have different beliefs about the ethics that surround steroid use. These beliefs may project to where this drug problem is going. If steroid use is taken lightly, many young adults may find out that steroids are much more harmful than good.

Introduction

It's a fact, society is changing. Technology is expanding, and information is more readily available than ever. More importantly, adolescents today are exposed to all of the risks that providing such a fast paced and competitive communication industry has to offer, including the availability of drugs. Anabolic-androgenic steroids are a risk to our youth because they are not thought of like other drugs. Teens are not told of the dangers but see all that there is to gain. This is the potential drug problem that is going on unseen.

Anabolic-androgenic steroids are compounds closely related to the male hormone, testosterone. "Synthesized from testosterone, steroids produce much of the same effects as the natural hormone, including promotion of body-tissue building, development of bone, muscle, skin, and hair growth." Testosterone, in detail, stimulates the production of muscle proteins, and this in turn increases the thickness of skeletal muscle fibers. Anabolic-androgenic steroids produce the same desired effect. The anabolic part of the steroid does the actual "building" of the muscle tissue, while the androgenic part is responsible for male sex characteristics in females and the decrease of a natural production of testosterone in males." These two parts together make up body building steroids. In order to get the muscle building effect, undesired side effects of the androgenic part go along with it; they cannot be separated.

Synthetic steroids were first developed in the 1930's to treat serious medical conditions and serve as a replacement for men with inadequate amounts of natural testosterone." (When I talk of steroids from this point on, I will be talking of only anabolic-androgenic steroids used to build the body and not the more commonly prescribed steroids used to treat inflammation and minor medical conditions.) By the 1950's, the use of steroids became a controversial issue. Discovering that some athletes participating in the Olympic Games had taken large doses of

steroids caused the athletic community to take notice. Athletes from Russia and some East European countries had dominated the Olympic Games despite the fact that some male athletes had to be tubed to urinate and some female athletes had to have chromosome tests to prove they were indeed female." Seeing that anabolic steroids had been greatly abused, athletic organizations then began to start cracking down on steroid users with random testing in the 1980's. In 1983, the National Collegiate Athletic Association conducted its first survey of college football players and their usage of drugs and alcohol. Also in 1983, 15 athletes were disqualified from the Pan-American games due to their use of steroids.^{vii} The most publicly displayed use of steroids came about when Canadian sprinter, Ben Johnson, tested positive and had his gold medal taken away in the 1988 Olympics.^{viii} Although steroids gained him world-renowned fame, it was for all the wrong reasons. One must ask himself, was it really worth it?

These stories found in the news have influenced our youth. They see that college and professional athletes have image and success, and these are things that everyone wants. In a study done by Komoroski and Rickert in 1992, eleventh-grade students associated with steroid use were found to be white, male students that know others that use steroids and are concerned with body image and muscle mass, and these students made up 44% of the entire model they studied.^{ix} Steroid users were also found to be a little bit older and more knowledgeable of the benefits of steroid use. More surprisingly, they were the students that believed that steroid use is abundant throughout collegiate and professional sports. Another study, done by Terney and McLain in 1990, studied the use of steroids in high school students.^x They surveyed 2113 students, and 94 (both male and female) had admitted to using anabolic steroids. They also found that athletes had a higher use of steroids than non-athletes did. Of the 94 student users, the number of students per grade (9-12) was evenly distributed overall. But split by gender, twice as many females used

steroids in grade 9 than in grade 12, and males increased in use from grade 9 to 12. This indicates that somewhere between grades 9 and 12, gender becomes an issue in steroid usage- exactly what changes are uncertain. Overall, the majority of users in the previous two studies were males, where a much smaller number was female.

The next step for many of these high school students is college. Do their ideals and views of steroids change? Does gender remain to be an issue? How mature do these young men and women become? Our study looks at what college students (male and female) think about steroid use and the ethical considerations one must face when using a self-enhancing drug. The study also looks at differences in male and female opinions on the steroid issue.

Subjects, Materials, and Methods

This study was conducted over a course of six separate college semesters at Northern Illinois University in DeKalb, Illinois. The subjects were students of a general education course, EPSE 200 (Exceptional Persons in Society) to fulfill University requirements. Ranging in majors and in class rank (freshmen through senior, graduate students, and students-at-large), the class was offered only one time per semester, being taught by the same professor over the course of the six semesters. The course included a unit covering the dangers of steroid use where the students were asked to read two articles from the text for the class, *Exceptional Persons in Society second edition* compiled by Elliot Lessen. The articles, "Paying for Steroid Abuse" by Julie Hanna, and "I'm Sick and I'm Scared" by Lyle Alzado as told to Shelley Smith, were assigned for reading before class, and two worksheets were assigned for homework. When the students arrived at class, part of the class time was devoted to talking about steroid use, both good and bad points. The students were asked then to take out a piece of paper and answer five questions that were displayed in the front of the classroom on an overhead. The overhead looked like the following:

STEROIDS

Ethical Considerations

- Is it fair to use a drug to gain an advantage over an opponent?
- Is it fair not to use a drug when so many competitors are using?
- Is it worth the potential health risks to "win at all costs?"
- Is drug use "OK" as long as it doesn't hurt anyone else?
- Is drug use "OK" as long as no one knows?

The students were asked to answer with a yes/no and then to elaborate on any feelings or thoughts they had about each question. The students also were asked to identify themselves on their piece of paper and hand it in. Then the teacher's assistants collected the papers, and the data was collected over the course of six semesters. The compiled data was reported by semester and by gender. An ANDV A was run to compare each question to the differences in answers between male and female students, and significance was then determined. The same ANDV A was run again, but the data was broken down by semester to indicate if feelings had changed over time. Another report was run to indicate the number of males vs. females for each semester for each question. An ANDV A was also run to compare class (freshmen through senior and beyond) and question to see if there was any significant difference between freshmen's thoughts and senior's thoughts. Lastly, semester 6 (or Fall semester of 1997), the most recent semester looked at had the qualitative responses compiled on a spreadsheet looking at sex and answers in detail to each question. This gives a better look at the actual feelings on the questions asked.

Results

Looking at the differences in male and female responses to the questions asked, overall there was a significant difference between the sexes in questions 1-4 ($p < .000$ with an average of 1148.5 males and 1367 females) and not a significance in question 5. This was determined by using a oneway ANOVA. The number of total students participating for each question varied.

The results found using each semester individually had different significance for each question. For semester one, question one was significant ($n = 437$ (209 males and 228 females), $p < .000$), as well as question three ($n = 436$ (208 males and 228 females), $p < .005$) and question four ($n = 424$ (200 males and 224 females), $p < .000$). Question two and five did not have significant results between genders. Semester two had very different results. Questions three ($n = 432$ (206 males and 226 females), $p < .015$), four ($n = 421$ (199 males and 222 females), $p < .016$), and five ($n = 416$ (195 males and 221 females), $p < .000$) had significant results, whereas questions one and two did not. Semester three had results much like the overall with questions one through four having significance (question one: $n = 423$ (210 males and 213 females), $p < .001$, question two: $n = 422$ (210 males and 212 females), $p < .002$, question three: $n = 422$ (210 males and 212 females), $p < .007$, question four: $n = 418$ (207 males and 211 females), $p < .000$), and question five does not. In semester four, only questions one ($n = 335$ (133 males and 202 females), $p < .006$), three ($n = 329$ (127 males and 202 females), $p < .000$), and four ($n = 326$ (127 males and 199 females), $p < .000$) showed significance. The fifth semester had the same significant questions as the previous semester with question one having 478 (220 males and 258 females) participating and $p < .007$, three also having 478 participants (220 males and 258 females) with $p < .001$, and question four having 477 participants (219 males and 256 females) and significance of $p < .001$. The last semester, semester six, varied yet in question significance.

Questions three through five were significant with three having 424 participants (178 males and 246 females, $p < .001$), four with 423 (178 males and 245 females, $p < .009$), and five with 421 participants (179 males and 242 females, $p < .001$). The last ANOVA run compared class differences (freshmen through seniors+) and the significance of difference per question. Not one of the questions one through five produced any significant results between the classes.

Data was also collected to give qualitative responses to the questions asked. Only the most recent semester, Fall of 1997, was looked at. Some of the answers given are as follows:

For question one:

"It's only fair to work hard to gain an advantage ... "

"The drug is winning, not you."

"It's not fair...It's cheating ... "

"It's fair if it's legal..."

"Pending on the type of event-if others or the opponent is doing it as well"

"It's not fair, but you do what it takes to win I guess."

"Yes, as long as everyone else has the chance to use them."

For question two:

"Don't do it just because others do it."

"Yes, but you won't perform as well."

"Not fair, but honest."

"It's not fair to someone who chooses not to use the drug- they just have to remember why they are not."

"Life is not fair."

"It's fair because its your own choice."

"It's not a question of being fair- don't use drugs because others do."

For question three:

"Why risk your life."

"You will pay for it in the long run."

"Winning isn't everything."

"Nothing is worth that much."

"At the time yes, but afterwards no."

"Only the user can answer that."

"You will win in the end and your opponent will lose."

For question four:

"It's your choice as long as it doesn't hurt others."

"It always has the potential to hurt others."

"If they choose to."

"It's a personal choice."

"Yes, if it's legal."

"You are still hurting yourself"

"What you do affects others."

For question five:

"Drugs are wrong no matter what."

"If you hide it, it must be wrong."

"Eventually someone will find out."

"You re just fooling everyone and yourself"

"As long as you know- is all that matters ... "

"Why hide it... "

"They will find out."

These responses were given to complement the yes/no answers given earlier.

Discussion

The results found show that indeed there is a difference in how males and females view steroid issues. Overall, four of the five questions had significant differences, but at some point over the course of the six semester period, each topic caused for a significance in feelings between how each of the genders felt. There were no significant differences between the classes though. This could mean that college level students have a higher general maturity level in making educated decisions and answers. As far as the gender issue, not much has changed for male and female views from high school to college. Gender definitely plays a role in how one feels about the ethics of using a drug like steroids.

Because of the positive effects that a drug like steroids can give someone, males are more highly prone to ignore the dangers and risks that go along with it. They are more willing to try it as long as "the drug is legal" or it's "fair if both (competitors) use it." What they do ignore is the numerous side effects that using steroids can cause. There are more than 70 known psychological and physical side effects caused by the use of steroids." These side effects can range from a change in appearance to a breakdown in organ function. One of the most popularly known cases of detriment caused by prolonged steroid use is that of Lyle Alzado, a former NFL football player. His use of steroids cost him his life. In 1991, Alzado came forth blaming steroids for his inoperable brain cancer, which he later died from. From the article, "I'm Sick and I'm Scared," he states, "If I had known that I would be this sick now, I would have tried to make it in football."

on my own- naturally." ^{xiii} This is a message that Alzada would have liked to tell everyone, if he had had the chance.

But this is not the message that is getting through to the youth today. Television and movies publicize steroids as a much lighter subject, not broadcasting the extreme negative side effects use can cause. In fact, most times steroid issues that are part of the plot for broadcast only tell of the "roid rage" rather than heart attacks and cancer. Furthermore, anyone using computers to surf the internet or reading muscle magazines can come across some way of getting ahold of steroids. In fact in searching for more information on steroids, I stumbled upon several websites in which steroids were offered for sale. This greatly disturbed me, knowing that they were so readily available.

Terney and McLain found that high school students using steroids obtained them from coaches, physicians, friends, and other sources not mentioned. ^{xiv} The opportunity for youth to get ahold of steroids is greater than we think

Overall, steroid use is a danger to young adults that is taken too lightly. From the time teens are in high school until they are well into college, steroids are accessible everywhere. The issue also is taken lightly in the sense that steroids are not thought of like recreational drugs. Steroids are most commonly thought of in the positive sense. Lastly, the study done shows that this drug is gender biased. Males and females, both high school and college level, feel differently on the ethics of using steroids. This too sets steroids apart from the more common recreational drugs. Realization of these facts could be important for young adults in the future. Weighing all of the factors could be the difference between looking good, playing well, and paying for it, or working for it the old fashion way and living a natural and healthy life- a choice worth making.

 Notes

- i Rise Torney, MA, Larry G. McLain, MD, "The Use of Anabolic Steroids in High School Students," AIDC 144 (1990): 99.
- ii "Anabolic Steroids" , <http://www.nau.edu/~fronske/steroids.html>. ... Northern Arizona University, March 1996.
- iii Ibid 2.
- iv "Steroids", Northern Illinois University Health Services.
- v "Anabolic Steroids" <http://www.nau.edu>.
- vi Mishra, Raja. "On the Teen Scene: Steroids and Sports Arc a Losing Combination" <http://www.erowid.com/ehtheogenslghb/ghb-fda.shtml>. The Vaults of Erowid.
- vii Terney and McLain, 100.
- viii Terney and McLain, 103..
- ix Eva M. Komoroski, MD, Vaughn I. Rickert, PsyD, "Adolescent Body Image and Attitudes to Anabolic Steroid Use", AIDC 146 (July 1992): 826.
- x Terney and McLain, 101.
- xi Drug Free Resource Net., <http://www.drugfreeamerica.org/steroids.html>. ...
- xii USA TODAY. . <http://www.usatoday.com/life/health/drugs/general/lhdg1004.htm>
- xiii Lyle Alzado, "I'm Sick and I'm Scared", Exceptional People in Society, ed. Elliot Lessen. (Maryland: Simon & Schuster Publishing, 1994), 115-119.
- xiv Terney and McLain, 102.