

**THE MORAL REASONING OF STUDENT ATHLETES AND ATHLETIC
TRAINING STUDENTS: DESCRIBING THE RELATIONSHIP BETWEEN
ATHLETICS AND HIGHER EDUCATION**

By

PATRICIA LYNNE DAVENPORT

A thesis presented in partial fulfillment
for the requirements for the degree of

Master of Arts in Higher Education Administration

WASHINGTON STATE UNIVERSITY
College of Education

May 2007

To the Faculty of Washington State University:

The members of the Committee appointed to examine the thesis of Patricia Davenport find it satisfactory and recommend that it be accepted.

Chair

ACKNOWLEDGEMENT

Competitive, Responsible, Unselfish, Supportive, and Honorable. A more beautiful combination of passion for sport and a desire to do the right thing is seldom found than that which permeates my childhood home. It is only by God's dependable grace, the love, support and encouragement of my husband and family and the direction and motivation from my incredible mentors and teachers that I have been able to complete this project. This paper is one small step forward in a lifelong process of learning to understand our world through that for which I maintain a deep passion – the beauty of sport and the power of education.

THE MORAL REASONING OF STUDENT ATHLETES AND ATHLETIC
TRAINING STUDENTS: DESCRIBING THE RELATIONSHIP BETWEEN
ATHLETICS AND HIGHER EDUCATION

Abstract

By Patricia Lynne Davenport, M.A.
Washington State University
May 2007

Chair: Jennifer Beller

The ideal performance perspective is that through which sport is viewed as a channel of pure competition where only the best combination of natural ability, courage, determination to better oneself, and an emotional and kinesthetic intelligence will lead to victory. Unfortunately, this is the ideal, not the reality. Today, a win-at-all-costs mentality has clouded the ideal. Both higher education and the NCAA have explicitly stated ideal goals of character development. The purpose of this two part study is to: 1) conduct a pilot study for validation purposes of the Ergogenic Aids Moral Competence Inventory and 2) examine the general moral reasoning of Division I college student athletes' and athletic training students' compared with their moral reasoning about doping in sport as one measure of character development in higher education.

In this study, 195 male and female athletic training students and student athletes from a variety of sports at an institution with division I athletic programs voluntarily completed two surveys. The HBVCI (Cronbach alpha .77-.88) measures moral reasoning with relationship to scenarios common in all aspects of sport. The EAMCI, currently in its second pilot stage, was used to measure moral reasoning of individuals with specific reference to issues of doping in

sport. The results of this study were consistent with previous research and found a significant difference by gender on both instruments. $F(1,183)=11.78$, $p=.001$ (HBVCI). $F(1,173)=11.54$, $p=.001$ (EAMCI). No significant difference was found by status, $F(2,183)=.50$, $p=.61$ or with the interaction of gender by status, $F(2,183)=2.52$, $p=.08$ on the HBVCI. A small significant difference was found by status, $F(2,173)=3.03$, $p=.05$, and no significant difference was found with the interaction of gender by status, $F(2,173)=.94$, $p=.39$ on the EAMCI.

It appears that the character development mission of the NCAA and in higher education may not be supported in practice. Overall, the results showed that the moral reasoning scores of student athletes and athletic training students, were on the average low and from an ego-centered and rule based view.

TABLE OF CONTENTS

ACKNOWLEDGEMENT	iii
ABSTRACT	iv
TABLE OF CONTENTS	vi
LIST OF TABLES	viii
CHAPTER ONE	1
Introduction	1
Higher Education and Intercollegiate Athletics	3
Purpose Statement	14
Research Subproblem	14
Statistical Subproblems	14
Statistical Hypotheses	15
Assumptions	15
Delimitations	16
Terms	16
Significance of This Study	18
CHAPTER TWO	19
Literature Review	19
Cognitive Development Theory	23
Measuring Moral Development in Sport Populations	29
Moral Reasoning and Gender	32
Moral Reasoning of Athletic Training Students	33
Brief history of doping	35
Safety of the Athlete	36
Types of Doping	36
The Effects of Doping on the Moral Integrity of Sport	43
Fairness of Competition as an Argument Against Doping in Sport	44
CHAPTER THREE	47
Methodology	47
Research Method	47
Participants	47
Instruments	47
Procedures	53
Data Analysis	53
CHAPTER FOUR	55
Results	55
Results of Hahm-Beller Values Choice Inventory	56
Results of Ergogenic Aids Moral Competence Inventory	57
CHAPTER FIVE	68
Discussion	68
Hahm-Beller Values Choice Inventory (HBVCI)	69
Ergogenic Aids Moral Competence Inventory (EAMCI)	72
Conclusion	80
REFERENCES	83

APPENDIX A	95
HAHM - BELLER VALUES CHOICE INVENTORY*	95
APPENDIX B	97
EAMCI Instrument	97
APPENDIX C	103
IRB approval	103
APPENDIX D	104
Informed Consent	104

LIST OF TABLES

<i>Table 1. Correlations for respondents' decision choices on EAMCI</i>	52
<i>Table 2. Means and standard deviations for the interaction of gender by status on HBVCI</i>	57
<i>Table 3. Frequencies of decisions and reasons for decisions rated "most important" by status</i>	58
<i>Table 4. Frequencies of decision by gender on EAMCI</i>	64
<i>Table 5. Frequencies reasons for decisions rated "most important" by gender on EAMCI</i>	64
<i>Table 6. Means and standard deviations for the interaction of gender by status on EAMCI</i>	67

CHAPTER ONE

Introduction

What is it about sport that is so appealing to citizens all over the world? Is it the opportunity to engage in an entertaining form of social interaction or the desire to participate and belong to a sporting community? Is it a desire to escape from the every day life to which we have become accustomed, or is it something deeper? Perhaps, in addition to all these things, there is something inherently great about sport that continues to motivate and inspire people all over the world. Sport seems to be rooted in a determination and drive for excellence satisfied only by victory and accomplishment. The astonishing grace with which elite athletes defy natural laws and continually surpass the performances of their predecessors is an art. The intensity of competition is not only entertaining, it's addictive.

Over 2000 years ago, ancient Greek Olympians competed under the motto *Citius, Altius, Fortius* which translates to swifter, higher and stronger (Eichner, 1997). The competitions were held to determine the best athletes in the world. "Victory goes to the athletes with the best combination of natural ability, stamina, courage, willingness to undergo intense and difficult training, and strategic cunning" (Catlin & Murray, 1996, p. 237). Giamatti, former president of Yale and commissioner of baseball, argued that the beauty of competition lies in the ideal:

To toughen the body and temper the soul...

To emphasize integrity and develop courage...

To be obedient to the letter and spirit of the rules...

So winning is sweeter still (Simon, 1985).

And as Simon (1985) would argue, "Competition is a mutual quest for excellence through challenge." In other words, rather than seeing rules and opponents as objects to overcome,

athletes have a need to be challenged by the best. Only then can they know that they have beaten the best.

Unfortunately today, this ideal is no longer the reality. Today, more so than ever before, athletes train and compete under an intense pressure to win-at-all-costs. The drive for money, fame, and glory seems to overshadow the personal meanings gained and enjoyed through sport (Lumpkin, Stoll, & Beller, 2003). A thick fog of suspicion and doubt hangs over athletic competitions from the elite level and intercollegiate to high school and junior high school levels of athletics. It is the doubt cast by the suggestion that many athletes and their coaches will do anything, even cheat, to achieve victory and success. While morally questionable issues and activities exist at all levels of sport, collegiate athletics pose a multitude of challenges to the student athlete, to the college/university, and to the greater mission of intercollegiate athletics within the context of higher education (Alder & Alder, 1985; Plant, 1961; Gerdy, 2000).

Purpose of Higher Education

American colonial colleges and universities were created by a wide variety of churches, private individuals, and local and state governments (Smith, 1988). The main focus of education was to prepare individuals for the clergy and productive citizens in the community. While religion was not the entire curricular focus, it was a primary mission. As such, a relatively strict, pious regimen existed in terms of what was considered acceptable activities and behavior. Thus, the development of one's moral integrity and character in the pursuit of becoming a productive citizen were primary.

With this emphasis on moral and religious education, the development of the religious individual was considered more important than the development of the individual's intellectual ability (Smith, 1988). "College officials believed that with students rooming and boarding in the

college edifice, their paternalistic and religious leadership would help mold the character of the future learned clergy as well as private and public officials” (Smith, 1988, p.11). Higher education’s purpose and role was to morally educate citizens toward social good and democratic ideals where individuals would feel obligated and assume the role of public service (Cohen, 1998). Inherent within this public good was the development of democratic values and social good. Thus, higher education had a major role in “character building” of individuals.

Higher Education and Intercollegiate Athletics

While it is difficult to think of modern American higher education without intercollegiate athletics, early higher education was mostly devoid of sport (Smith, 1988). Some colonial colleges allowed for limited physical activity, sport itself was severely restricted. For example, authorities at Harvard in 1655 administered laws that stated that students would not be able to miss class for recreation/sport activities. Fishing, hunting, and skating were also not permitted. Yale, Dartmouth and others as well, had rules against sporting activities and fined students if caught. Religious strictness influenced sport as being viewed as “unbecoming of gentleman” (Smith, 1988, p. 10).

After the Civil War though views about sport became a little more relaxed. And, probably in efforts to escape the rigorous academic and religious requirements of college, students often fulfilled the roles of athletes, coaches and managers and gathered themselves together to compete against one another in a variety of physical activities (Reiss, 1984). The stakes were raised in 1852 with the first intercollegiate competition between Yale and Harvard boat clubs (Smith, 1988). In 1869, the first intercollegiate football competition occurred between Rutgers and Princeton which had a major impact on how institutions began to view sport within their contexts. In 1895 an historic meeting occurred in Chicago with college and university representatives that

became the Intercollegiate Conference on Faculty Representatives which later became the Big Ten. The purpose of this meeting was to better identify the role of sport and faculty governance on college campuses.

In 1905, because 18 students had been killed and 143 seriously wounded in football, President Theodore Roosevelt met with representatives of Harvard, Yale, and Princeton to challenge them to clean up football (Smith, 1988). In December of 1905, representatives of 30 different institutions met in New York, forming the Intercollegiate Athletic Association, which in 1910 became the National Collegiate Athletic Association. Their original constitution had as its very foundation the explicit purpose of developing character within these student athletes.

The next thirty years would see the introduction of more sports, the first glimpses of national media attention, issues with the dangers of some sports, particularly football, and an instigation of change in the motivation for athletes and their fans (Smith, 1988). In 1906 the National Collegiate Athletic Association (NCAA) was founded with a mission to provide, “...Regulation and supervision of college athletics throughout the United States in order that the athletic activities ... may be maintained on an ethical plane in keeping with the dignity and high purpose of education” (Hawes, 1999, 1900-1939 Article 1). Throughout the following decades, collegiate athletics would find itself increasingly at odds with institutions of higher education. In a report from the Knight Commission on Intercollegiate Athletics, the authors stated that,

“At their best, which is most of the time, intercollegiate athletics provide millions of people—athletes, undergraduates, alumni and the general public—with great pleasure, the spectacle of extraordinary effort and physical grace, the excitement of an outcome in doubt, and a shared unifying experience. Thousands of men and women in the United States

are stronger adults because of the challenges they mastered as young athletes...But at their worst, big-time college athletics appear to have lost their bearings. With increasing frequency they threaten to overwhelm the universities in whose name they were established and to undermine the integrity of one of our fundamental national institutions: higher education. (Knight Commission on Intercollegiate Athletics, 1991, Introduction para. 1-2)

While intercollegiate sport, that began as the result of students hungering for physical activity and pure competition and established by students for students has transitioned into a for-profit business where society, prestige and fame that can be equated with financial gain, the NCAA still has character central to its mission today. Its current mission "...is to govern competition in a fair, equitable, and sportsmanlike manner, and to integrate intercollegiate athletics into higher education so that the educational experience of the student athlete is paramount" and one of its core values is a commitment to "the highest levels of integrity and sportsmanship" (NCAA, 2007).

Although the ideal performance perspective is that in which sport, in its purest, natural sense can be enjoyed, appreciated and respected for the brilliant combination of natural ability, athletic and emotional intelligence and kinesthetic control and awareness as well as sportsmanship and integrity, it may be argued that this perspective is largely the minority in today's world of sport. Today, intercollegiate sport is about winning and appears to have little in common with the NCAA mission on integrity and sportsmanship.

Moreover, while one of the primary responsibilities of higher education is to help students develop into contributing members of society in terms of democratic ideals and social

responsibility (Cohen, 1998) the many cheating scandals, including the first intercollegiate crew race in 1852, raise concerns as to whether the way sport is taught, coached, and practiced is consistent with the ideal mission and goals of both higher education and the NCAA. However, measuring the development of one's character in terms of integrity, sportsmanship, and democratic ideals is difficult, however one way in which researchers have measured the relationship between the ideal of sport competition in terms of moral character and individual's beliefs towards this ideal is through moral reasoning (Lumpkin, Stoll, & Beller, 2003).

Moral reasoning is a cognitive process whereby individuals learn to think, reason, and reflect relative to a set of moral principles. It is "[t]he ability to systematically think through a moral problem, taking into consideration one's own values and beliefs while weighing them against what others value and believe" (Lumpkin, Beller, & Stoll, 2003, p. 6). Moral reasoning is not synonymous with moral character but is a necessary component of moral character. Lickona (1991) argues that good character is comprised of moral knowing, moral feeling, and moral doing. To act morally requires that an individual know and then value moral principles. However, just because one knows and values, does not mean right action as there are many competing factors influencing behavior. But at its very least, moral reasoning is a requisite.

Thus, it is the intention of this study to examine to what extent intercollegiate sport and higher education fulfill their stated missions of developing character by examining two specific student populations: student athletes and athletic training students relative to their moral reasoning, recognizing that moral reasoning is a necessary component of moral character..

The Moral Reasoning of Athletes

Most athletic departments personnel would argue that they work hard to ensure that student athletes are supported in their educational experiences so that the student can achieve the

purpose of higher education, which seems to be an intellectual growth and development of students into positive contributing members of society. While the purpose of higher education may be best discussed in another paper, it is important to recognize that higher education claims to fulfill a higher purpose. Whether or not this is the case for collegiate student athletes may be unclear.

Much research exists with moral reasoning using the Hahm-Beller Values Choice Inventory (Hahm, Beller, & Stoll, 1989). It is a general inventory that addresses commonly occurring, questionably ethical practices in sport. Other such inventories exist that examine moral reasoning in sport from a general perspective, but few, if any, instruments have been developed to examine moral reasoning specific to doping in sport. The original 21 question Hahm-Beller Values Choice Inventory (Hahm, Beller, & Stoll, 1989), is a valid and reliable tool for measuring moral reasoning in sport in general (Cronbach Alphas range .77- .88), however the revised version (Beller, Stoll, & Hahm, 2006) has 12 Likert-based questions and Cronbach alphas of .81-.88).

Currently, an instrument is being developed and validated with a specific purpose of measuring the moral reasoning of doping in sport (Stoll, Gwebu, & Beller, 2006). This instrument, the Ergogenic Aids & Moral Competence Inventory has five main questions based in deontological theory and uses moral reasoning theory (see Chapter three). Because the Hahm-Beller Values Choice Inventory is a valid and reliable measure of moral reasoning it will be used as one of the methods to establish construct validity of the Ergogenic Aids Moral Competence Inventory.

Thus, attempting to identify when athletes may choose to begin doping as well as the reasons underlying those choices may require an instrument specific to the moral reasoning of doping in sport. Additionally, knowing more about how student athletes and athletic training students reason about performance enhancing drugs may help in designing effective educational strategies to address doping in sport.

Over the past 20 years, researchers have found that athletes are significantly more affected by the competitive experience compared to those not engaged in these high levels of sport. According to these researchers, much evidence exists to suggest that athletes are generally less developed in their processes of moral reasoning than non-athletes (Beller & Stoll, 1993; Beller, 1990; Hahm, 1989; Beller & Stoll, 1995; Beller, Stoll, Burwell & Cole, 1996; Rudd & Stoll, 1998; Stoll & Beller, 1998). Moreover, it appears that the longer athletes participate in sport, the less morally reasoned they become. It has been said that individuals can become hardened to identifying moral issues and tend to reason from an egoistic perspective where their own self interests and desires drive their decision making (Beller, Stoll, & Hansen, 2004; Kretchmar, 1995). Notions about others, social rules, laws, and principles have little value or merit in decision making. They tend to see their opponents as objects rather than as people (Lumpkin, Stoll, & Beller, 2003). Unfortunately, much time is spent in sport developing athletes' bodies, physical skills and abilities and little, if any, time on their development of character.

While the HBVCI is a valid and reliable tool for measuring general moral reasoning in sport, some have argued that it would be of benefit to examine how individuals reason relative to specific issues in sport such as doping (Stoll, Gwebu, & Beller, 2006). Knowing more about the underlying reasoning behind doping may provide researchers a better insight into decisions to

dope or not dope as well as how institutions of higher education and the NCAA address their mission about the development of character.

Doping falls under the broad heading of ergogenic aids. Ergogenic aids are "...[a]ny supplement, or ingested material that is prohibited by the letter or the spirit of the rules, but is used to garner an advantage in the sport experience (Lumpkin, Stoll, & Beller, 2003, p. 126). In many cases, ergogenic aids result in physiological changes beneficial to performance. Some substances can alter an athlete's perceptions whereby they think they are competing at a higher level, but in actuality, their performance has eroded. Doping is an unfortunate reality facing sport in the United States and across the world. The increase in doping can be attributed to a variety of factors including a sport society driven by a win-at-all-costs attitude and the intense pursuit of the competitive edge (Catlin & Murray, 1996; Eichner, 1997; Honour, 2004; Howard, 2005; McCarthy, 2005; Minelli, Rapaport, & Kaiser, 1992; Noakes, 2004).

The quest for performance enhancing substances dates back to the early Olympics (Catlin & Murray, 1996; Minelli, Rapaport, & Kaiser, 1992). With advances in technology and knowledge, superstitious rituals were replaced with sophisticated substances and procedures, often for which the intended use was originally therapeutic (Pincock, 2005). Today athletes, coaches, physical trainers and physicians have learned to take advantage of substances and procedures that have been shown to improve performance (Hough, 1990). Many of the substances used for doping are found in the body naturally making detection a difficult task and use a powerful temptation.

Currently, drug testing and a somewhat limited array of drug education curricula are the two most prominent means found in the literature to combat the practices of doping. However, the problem of doping appears on the rise (Beller & Stoll, 1993; Grossman & Smiley, 1999;

Savulescu, Foddy, & Clayton, 2004). Researchers report mixed findings as to how many high school, college, elite, and professional athletes actually dope and at what point they are coerced or choose to begin doping (Bahrke & Yesalis, 2004; Catlin & Murray, 1996; Eichner, 1997; Honour, 2004; Noakes, 2004; Perry et. al., 2005). Generally, only high profile athletes suspected of drug use surface in the news, again making it difficult to determine the extent of use. For example, the BALCO, Bay Area Laboratory Co-operative, doping scandals (USA Today, 2007) have exposed numerous high profile collegiate, elite, and professional athletes. However, efforts to exactly identify the extent of doping seems to be a futile task. While a considerable number of survey studies have been conducted at all levels of sport concerning athlete doping, the validity of the data is reliant on self report measures of which athletes have a self interest in underreporting use.

The Moral Reasoning of Athletic Training Students

A second population for this study is athletic training students. These students are studying with certified athletic trainers to work with athlete populations as health care professionals. Certified athletic trainers are allied health care professionals charged with the prevention, care and rehabilitation of injuries to active populations. Often times, certified athletic trainers attend to the psychological and emotional needs of their athletes as well as their physical needs. Certified athletic trainers often serve as the first line of education with regards to all issues about which athletes are curious, particularly issues that can and do potentially affect their performances, including performance enhancing substances. Athletic training students have a relationship unique to that of the certified athletic trainers. During their clinical experiences they are expected to serve student athletes as medical professionals in training. They also have a completely separate relationship with student athletes as peers, classmates and friends outside of

the athletic training facilities. These relationships make athletic training students possibly even more accessible than certified athletic trainers to student athletes with questions about such issues as doping. During a class discussion athletic training students openly admitted that they had been approached by student athletes in the student recreation center or randomly on campus for information about new supplements that may help improve performance. The question is, does the education received by athletic training students properly equip them with the necessary tools to answer questions and inquiries in an educated and morally reasoned manner?

Certified athletic trainers are required to complete a bachelors degree in athletic training from an institution with an athletic training education program accredited by the Commission for Accreditation of Athletic Training Education (CAATE). The curriculum includes foundational coursework in anatomy and physiology of the human body, emergency response, structural and mechanical kinesiology or biomechanics, exercise physiology and nutrition. Students are encouraged to take courses outside the program related to their interests that might include other movement studies courses or sports psychology. Usually after their freshman or sophomore years students typically apply to the athletic training education program and will complete two to three years of specialized coursework including evaluation of upper and lower extremities, therapeutic modalities, rehabilitation strategies, organization and administration of athletic training and others.

During their time in the program students are required to complete a certain number of clinical experience hours as determined by each particular program. Most programs require around 1200 hours. During these hours students will have opportunities apply what they have learned in the classroom to their clinical experiences while being directly supervised by a certified athletic trainer. Most programs require students to have a variety of experiences which

include spending time at outside physical therapy clinics, urgent care clinics, high schools, general medical practices and of course in the athletic training facility of the institution in which they are enrolled. This range of experiences allows athletic training students not only to practice their skills and continue the learning process with direct interaction with medical professionals, but also to identify the settings in which they may be most interested for their future careers. Athletic training is an incredibly versatile profession. The education and expertise of certified athletic trainers as medical professionals allows many opportunities for students' futures.

Once athletic training students have completed all course work and clinical experience requirements they become eligible to take the national exam for athletic training through the Board of Certification. The format of this exam has recently changed to include a computer based exam that tests general and practical knowledge of the students. After students pass the exam they are granted certification through the National Athletic Trainers Association Board of Certification that requires annual continuing education units to maintain.

At the collegiate and elite levels, the sports medicine team typically consists of physicians, certified athletic trainers and other medical professionals. Due to financial constraints, a consistent medical team as previously described is seldom found in the high school setting, however, most high school athletic programs have some access to a certified athletic trainer on a consistent basis. Members of the sports medicine team work together to ensure the highest quality of prevention, care, and rehabilitation of athletic injuries. In some recent studies, researchers have found that certified athletic trainers and athletic training students may not be any more morally developed than their athletes (Beller, Stoll, Refrvem, Williams & Hansen, in review; Beller Stoll, Refvem, & Hansen, 2003; Beller, Stoll, Williams, Refvem, & Hansen, in review). If this is true, it may present further issues and considerations for anti-doping efforts.

Certified athletic trainers and athletic training students are subject to similar pressures to win-at-all costs as athletes and coaches. The competitive environment tends to enshroud entire athletic departments supporting the notion that something about the structure or nature of today's competitive environment may inhibit the moral reasoning process.

While CAATE requires athletic training education programs to address ethics with athletic training students, few programs have specific courses covering ethics in sport (Williams, 2006). Few if any challenge athletic trainers through a moral reasoning approach to their own personal values and beliefs relative to principles and rules. If certified athletic trainers and athletic training students have similar levels of moral reasoning, it may be difficult for these medical professionals and professionals-in-training to help athletes choose not to dope. How athletic training students and student athletes reason morally, specific to doping issues, is of interest in the fight against doping in sport and therefore, are the two populations that will be examined in this study. If change is to occur, it will require the efforts of society to be willing to acknowledge and address the root of the problem. What better place to address such an issue than that where social and athletic issues are given center stage? Beyond the walls of a moral home, institutions of higher education may be best equipped to face the challenge head on.

This study is intended to describe the moral reasoning of student athletes and athletic training students using a reliable and well validated instrument to measure the moral reasoning associated with general sports competition issues. It will also pilot a new instrument designed to measure moral reasoning using scenarios specific to issues of doping in sport. The information provided by the second instrument may be valuable in describing the reasons behind why student athletes and athletic training students decide it is acceptable to dope or not and whether their decisions are based in a moral perspective. The two instruments together may provide a better

picture of the extent to which institutions of higher education jointly with the NCAA address their ideal missions of character development.

Purpose Statement

The purpose of this two part study is to: 1) conduct a pilot study for validation purposes of the Ergogenic Aids Moral Competence Inventory and 2) examine the general moral reasoning of Division I college student athletes' and athletic training students' compared with their moral reasoning about doping in sport as one measure of character development in higher education.

Research Subproblem

1. What is the validity and reliability of the Ergogenic Aids Moral Competence Inventory?

Statistical Subproblems

1. What are the differences between the moral reasoning of athletic training students and student-athletes based on scores from the Hahm-Beller Values Choice Inventory (*HBVCI*)?
2. What are the differences between the moral reasoning of athletic training students and student-athletes by gender on scores from the Hahm-Beller Values Choice Inventory (*HBVCI*)?
3. What are the differences between the moral reasoning of athletic training students and student-athletes on the interaction of gender by status on scores from the Hahm-Beller Values Choice Inventory (*HBVCI*)?
4. What are the differences between the moral reasoning of athletic training students and student-athletes based on scores from the Ergogenic Aids Moral Competence Inventory (*EAMCI*)?

5. What are the differences between the moral reasoning of athletic training students and student-athletes by gender on scores from the Ergogenic Aids Moral Competence Inventory (*EAMCI*)?
6. What are the differences between the moral reasoning of athletic training students and student-athletes on the interaction of gender by status on scores from the Ergogenic Aids Moral Competence Inventory (*EAMCI*)?

Statistical Hypotheses

1. No difference exists by status in general sport moral reasoning using the HBVCI.
2. No difference exists by gender of athletic training students and student athletes in general sport moral reasoning using the HBVCI.
3. No difference exists in the interaction of gender by status in general sport moral reasoning using the HBVCI.
4. No difference exists by status in the moral reasoning of doping in sport using the EAMCI.
5. No difference exists by gender of athletic training students and student athletes in the moral reasoning of doping in sport using the EAMCI.
6. No difference exists in the interaction of gender by status in the moral reasoning of doping in sport using the EAMCI.

Assumptions

1. The HBVCI is a valid and reliable instrument for measuring moral reasoning in sport.
2. The Ergogenic Aids Moral Competence Inventory is a valid and reliable instrument for measuring levels of social and moral reasoning.

3. Division I student athletes and athletic training students have the reading level adequate to answer both the HBVCI and the EAMCI.
4. Division I student athletes and athletic training students will put forth an honest effort in answering both the HBVCI and the EAMCI.
5. Division I student athletes and athletic training students will take the time to complete two inventories.

Delimitations

1. This study is delimited to Division I student athletes and athletic training students at a research intensive university in the Northwest.
2. This study will be delimited to student athletes and athletic training students only. Other students, professors or administrators will not be involved.
3. This study will have a relatively small sample of about 60 students.

Terms

1. *Athletic training students* – students enrolled in an Athletic Training Education Program (ATEP) accredited by the Commission of Accreditation for Athletic Training Education.
2. *Cognitive moral developmental perspective* – “Seeks to identify general, cross-culture trends in moral development that span a lifetime culminating in an end-state or moral maturity.” (Gibbs, 1993)
3. *Commission on Accreditation of Athletic Training Education (CAATE)* – The organization responsible for the accreditation of athletic training education programs.

4. *Designer Drugs* – A drug produced by the minor modification of an existing drug resulting in a new substance with similar pharmacological effects. Often created to achieve the same effect as a controlled or illegal drug.
5. *Doping* – The illegal use of drugs or methods of physiological manipulation to improve athletic performance.
6. *Ergogenic Aids Moral Competence Inventory* – An inventory type instrument used to measure levels of moral reasoning using deontological moral theory by presenting dilemmas specifically related to the practice of doping in sport.
7. *Hahm-Beller Values Choice Inventory* – An instrument designed in deontological moral theory to examine moral reasoning in sport using commonly occurring sport moral issues.
8. *Moral Reasoning* – “The ability to think systematically through a moral problem taking into consideration ones’ own values and beliefs while weighing them against what others and society values and believes.” (Lumpkin, Stoll, and Beller, 1999, p.1)
9. *Moral Values* – “Values informed by criteria of prescriptivity, impersonality, and universality.” (Shields and Bredemeier, 1995, p. 18) For this study the moral values will be defined as universal values such as justice, honesty, responsibility, respect and fairness.
10. *Social Values* – Values put forth by the American society as important. Examples include cooperation, loyalty, commitment, dedication, and sacrifice. (Rudd, 1998)
11. *Student athletes* – students currently participating in a Division I varsity sport at a member institution of the National Collegiate Athletics Association.

Significance of This Study

First, if there is a correlation between the athletes' scores on the Hahm-Beller Values Choice Inventory and the Ergogenic Aids Moral Competence Inventory it would help establish construct and convergent validity of the Ergogenic Aids Moral Competence Inventory. Along with other construct measures it would help in establishing that the Ergogenic Aids Moral Competence Inventory validly measures the moral reasoning of doping in sport.

Second, while researchers have found that athletic training students morally reason similar to student athletes in general sport, this study could help in identifying how athletic training students may be similar or dissimilar to student athletes in their moral reasoning relative to doping in sport. If their reasoning is at similarly low levels identified in general sport moral reasoning, then researchers, administrators and educators may have a basis to include moral reasoning intervention programs specific to anti-doping in athletic training education programs.

Third, this study may provide insight into the extent to which institutions of higher education and the NCAA meet their ideal stated purposes of developing character. In the current assessment focus of higher education, information from this study may help higher education and their athletic administrations better identify the extent of their character education goals, as well as help provide possible educational directions.

CHAPTER TWO

Literature Review

The purpose of this two part study is to: 1) conduct a pilot study for validation purposes of the Ergogenic Aids Moral Competence Inventory and 2) examine the general moral reasoning of Division I college student athletes' and athletic training students' compared with their moral reasoning about doping in sport as one measure of character development in higher education. The review of literature will provide a: 1) brief history of sport within the mission of higher education, 2) background into moral reasoning of athlete and athletic trainers, and 3) a brief history about doping in sport and why studying about moral reasoning and doping may be an important indicator of one component of character. Discussion about validity and reliability of the Ergogenic Aids Moral Competence Inventory will occur in chapter 3 under instrumentation.

Brief History of Sport within the Mission of Higher Education

It is beyond the scope of this study to examine in detail the social, cultural, political, and economic factors that drove the development of higher education in America. Therefore the purpose of this review is to examine the development of intercollegiate sport within the context of one of the stated missions of higher education, in particular the common mission between sport and higher education in terms of character development.

In Colonial America, colleges were formed by churches, private individuals, and local as well as state governments. The colonial colleges were for the most part followed the European institutions that had been in existence for over 500 years (Cohen, 1998). One European model involved a classical liberal arts form and study of the natural sciences where students hired the faculty, set the curriculum and determined the standards for graduation. A second European model was developed within the church. For the most part, the mission of these institutions was

to prepare individuals for the clergy (Smith, 1988; Cohen, 1998). The curriculum followed church doctrine, theological principles, and teachings of theological authorities. Both models were evident in Colonial colleges, however the influence of the church and clergy was most prominent with curriculum following Christian doctrines and classical texts. Unlike some European models though, students and faculty had little say in college governance as authority for what to teach as well as daily regimens came directly from the centralized church which was run by the board of governors and president (Cohen, 1998). The major mission was to pass on wisdom from the ages through classical study and acculturation to church doctrine with goals of developing church clergy and public servants. At this time, few people attended colleges as the curriculum do not match most individuals interests (Cohen, 1988). Moreover, few occupations required any kind of advanced educational study as most jobs could be learned through apprenticeships and imitation. Families that did send their child to school expected the institution to take charge of their son's life and govern his activities. Strong control was exerted over students with little to no support of recreational or sport type of activities. Rules existed whereby students were actually fined for engaging in sporting activities (Smith, 1988). "College life was designed as a system for controlling the often exuberant youth and for inculcating within them discipline, morals, and character" (Cohen, 1998, p. 23).

Between 1790 and 1869, America went from a population of almost 4 million to one of over 38.5 million (Cohen, 1998). In the 75 years after the revolutionary war, hundreds of institutions were formed mainly due to the geographic and population expansiveness. However, the religious hold on institutions was still quite strong, with colleges following their own particular religious doctrines. By the 1850s, however more American students were studying at German institutions and returning home to become professors. Thus, these institutions took on

more of a look like German institutions (Cohen, 1988) with curriculums following more of the natural sciences and research model, with an expectation that faculty would conduct research and bring their research into their teaching.

Thus, after the Civil War, rules on campuses were more relaxed (Smith, 1998). Yet, even though rules became a bit more relaxed, colleges and universities still held a view that a major purpose of higher education was the development of one's morals and religious direction with a view for service to the public good. This study in the natural sciences and focus towards research impacted student life in general and some recreational pursuits were allowed as long as they were minimal and did not interfere with studies and church requirements (Cohen, 1988).

By 1844, students on some colleges were engaged in sport activities such as crew (Smith, 1988). By 1852, the first intercollegiate sport competition occurred between Harvard and Yale. By 1869, the first football contest occurred between Rutgers and Princeton and baseball dominated college sport activities, which had a profound effect on the number of participants in sport as well as the number of sport activities in which students were engaged. For the most part, these activities were run by students, with little input or sanction by faculty or college administrations. Gate receipts started being collected and faculty then began exerting some control over the activities (Smith, 1988). By 1895 an historic meeting occurred in Chicago that was the beginning of the Intercollegiate Conference on Faculty Representatives.

Questions about fairness surfaced in baseball between issues about pay for summer play and students versus professional players on collegiate teams (Smith, 1988). These issues were hotly debated and seen as raising questions about sport within the context of the purpose and values of a college education. Additionally issues surfaced concerning the brutality of football as in one year there were 18 deaths and over 143 individuals seriously wounded. By 1905 the issue

about football brutality was so great that President Theodore Roosevelt met with representatives of Harvard, Yale, and Princeton asking them do something about cleaning up the sport.

December 1905 in New York, representatives from 30 institutions met and formed the Intercollegiate Athletic Association which later in 1910 became the national Collegiate Athletic Association. Its original constitution held at its very basis the notion that sport participation should keep with the dignity and high purpose of education and most specifically help promote one's character . "Its object shall be the regulation and supervision of college athletics throughout the United States, in order that the athletic activities in the colleges and universities of the United States may be maintained on an ethical plane in keeping with the dignity and high purpose of education" (Hawes, 1999, 1900-1939 Article 1).

From 1910 on, a continual discussion has occurred about the purpose of sport within higher education. However, even though the original constitution held that sport should be conducted on a high ethical plane, the very first intercollegiate crew contest was fraught with cheating, and cheating and issues about fairness have plagued sport throughout its tenuous history with higher education. The Carnegie Commission met in 1932 (Smith, 1988) and the Knight Commission in the early 1990s (Knight Commission, 1991) to address purposes and missions of intercollegiate sport as well as governance issues. Goals continually surface about how to conduct intercollegiate sport again in keeping with the high and noble purposes of higher education. Still today, even though questions surface as to whether athletes are truly students and whether the NCAA is truly concerned about the athlete as student, the NCAA's core purpose is about conducting intercollegiate sport "...competition in a fair, safe, equitable and sportsmanlike manner, and to integrate intercollegiate athletics into higher education so that the educational experience of the student athlete is paramount" and "the Association – through its member

institutions, conferences, and national offices staff – shares a belief in and commitment to: the highest levels of integrity and sportsmanship” (NCAA, 2007, Our Mission). And, while higher education researchers continually debate the mission and purpose of higher education, threads about honor and integrity are present within most college and university missions and goals (Cohen, 1998). Because of the expressed purpose of developing individuals’ moral character prominent in colleges and universities and the NCAA mission and the continual moral issues and problems that surface in intercollegiate sport today, it is of interest to examine to what extent colleges/universities and their athletic departments develop character.

Lickona (1991) states that moral character is comprised of moral knowing, moral feeling, and moral action. He states that these are not distinctly different categories, but rather they work together to help individuals learn to identify moral issues, perspective take, know moral values, gain moral reasoning skills, and gain self knowledge (all components of moral knowing), understand empathy and gain self esteem, self control, humility, and learn to love the good (moral feeling), and therefore gain the will, competence, and habits or positive moral action. Measuring character in its entirety as explained by Lickona would be difficult if not impossible, therefore many researchers have examined different aspects of character and then made inferences about what this might mean relative to one’s moral character. One aspect that has received much attention is cognitive moral reasoning, an aspect within Lickona’s model under moral knowing.

Cognitive Development Theory

Gibbs, (1993) describes the cognitive development perspective as an attempt to, “...[I]dentify general cross-culture trends in moral development that span a lifetime culminating in an end-state of moral maturity” (Gibbs, 1993, p. 3). Of this moral maturity, moral reasoning is

only a small part. When an individual is faced with a moral decision he or she will progress through a reasoning process in determining the course of action. This cognitive process is when the moral reasoning, determining what is right, why it is right and the socio-moral principles that underlie what is right and why it is right (Kohlberg, 1981). This thinking process is not automatic and, according to researchers in the field of cognitive moral development, can be altered.

Gibbs (1993) emphasizes cognition, described by Rest (1994) as the thinking process and the representations by which people construct reality and meaning as the source of moral motivation. Gibbs states that cognitive development theory began with the research of Jean Piaget. According to Piaget (1932), the essence of mature morality is fairness and justice based on interaction with others such as cooperating, sharing and competing (Gibbs, 1993). According to Gibbs, Piaget acknowledges that early stages of justice are obviously less mature. For example, such justifications as, “He hit me first,” and “Eye for an eye” are considered crude equality (Gibbs, 1993, p. 28). Piaget acknowledges the trend from superficial (physical) to intentions in the process to justice. (Gibbs, 1993; Piaget, 1932) Piaget was the first to establish a pattern of moral development from non-moral to heteronomous and finally to autonomous. He argued that “The rule of justice is a sort of immanent condition of social relationships or a law governing their equilibrium” (Piaget, 1932, p. 32). According to Gibbs, “Heteronomous declarations may be readily abandoned in the absence of adults, where egocentric impulses or desire are more salient than adult constraints.” (Gibbs, 1993, p. 30) Autonomous is a developmental moral level of cooperation and rational rules (Piaget, 1932).

Rest (1994) gives much background information into the theory and research of moral development in a book called *Moral Development in the Professions*. According to Rest, in the early 1950’s most people held a socialization view of moral development that used conformity to

the cultural norms as a measure of moral development (Rest, 1994). Being “well adjusted” generally meant that an individual had good moral behavior. Kohlberg (1981) deviated from this way of thinking and engaged in research with the presumption that the individual interprets and derives psychological and moral meaning from social events to make moral judgments (Rest, 1994). According to Rest, Kohlberg’s theories were similar to those of Piaget (1932) in that they both focused on the necessary cognitive component of moral development. From the results of his longitudinal research, Kohlberg was able to show that individuals undergo a process of development in moral reasoning similar to the process of physical development (Kohlberg, 1981). With this understanding, Kohlberg offered six stages of moral development. These stages were sequenced from simple to more complex problem solving strategies. The argument is that similar to arithmetic, an individual must understand the process of addition before he will be able to understand a complex algebraic equation (Kohlberg, 1981). The stages also described a sequence of cooperation in which individuals built up into working with more individuals in more situations (Kohlberg, 1981). As presented in Rest’s chapter (1994), the six stages are: (1) The morality of obedience: do what you’re told; (2) The morality of instrumental egoism and simple exchange: let’s make a deal; (3) The morality of interpersonal concordance: be considerate, nice, and kind; you’ll make friends; (4) The morality of law and duty to the social order: everyone in society is obligated to and protected by the law; (5) The morality of consensus-building procedures: you are obligated by the arrangements that are agreed to by due process procedures; (6) The morality of non-arbitrary social cooperation: morality is defined by how rational and impartial people would ideally organize cooperation (Rest, 1994, p. 5).

These stages fall under three overall levels: preconventional (stages 1 and 2), which includes concrete, individual perspectives; conventional, (stages 3 and 4) which takes the

perspective as a member of society; and postconventional (stages 5 and 6) which takes a prior to society perspective (Gibbs, 1993). Few people ever reach stage 5 and even fewer reach stage 6 in which an individual engages universal principles of justice in their behavior (Gibbs, 1993) A study by Snarey (1985) found Kohlberg's stages one through four to be true across cultures in 27 different countries. Essentially, cognitive moral development is based on an understanding and examination of: 1) What is right, 2) Why it is right, and 3) What are the underlying socio-moral principles that guide what is right and why it is right (Fox & DeMarco, 1990).

This developmental theory was confirmed by a study by Colby et al (1983). Rest (1994) also found a similar process of development in moral reasoning, but added that education showed much more powerful corollaries than chronological age alone. Rest further differentiated between moral judgment, which is only part of the psychology and sociology of moral development, and moral behavior, which requires moral sensitivity, moral judgment, moral motivation and moral character (Rest, 1994).

Moral sensitivity is an awareness of how actions affect other people. Moral judgment is the process of deciding which moral action is more morally justifiable. Moral motivation is the importance given to moral values in competition with other values such as protecting the self or one's organization, and moral character includes the strength of the ego, perseverance, toughness, strength of conviction and courage to do the right thing (Rest, 1994). When an athlete is faced with a decision to engage or not engage in the practice of doping, the question is whether or not he or she is at a level of moral development sufficient to make the right choices. The two instruments for this study will focus specifically on moral reasoning and moral motivation. Do the athletes choose to act according to their moral values or their social values in the pursuit of the many successes offered by athletics?

“Moral reasoning, a systematic, logical, and rational process whereby we identify issues, examine opposing views, and attempt solutions, is predicated on our abilities to be impartial, consistent, and reflective” (Lumpkin, Stoll, & Beller, 2003, p. 255-256). While one right answer may not exist, moral reasoning helps us to minimize our own prejudices, remove false beliefs, and help us to better understand opposing views. Moral reasoning in this case is a pedagogical process based in the deontological moral philosophies of Rawls (1971), Kant (1785 cited in Frankena, 1973), and Frankena (1973). Deontological moral theory holds that there is an inherent right apart from the consequences that guide our moral action (Frankena, 1973). Thus moral reasoning teaches us how to come to terms with the moral principles that guide our lives and then learn to consistently, impartially, and reflectively apply them to the moral issues we face in our lives.

Because sport involves participation between individuals, moral issues such as doping, surface and persist. Moral reasoning is the constant in the moral equation that helps us to examine what we believe and why we believe it in relation to what is right in a universal sense, why it is right in a universal sense, and then the underlying socio-moral principles that guide what is right and why it is right.

Bredemeier and Shields (1984a; 1984b; 1986; 1994; 1998) have conducted much research in the area of moral reasoning in sport especially as it relates to children (Bredemeier, 1985, 1994; Bredemeier, Weiss, Shields, & Cooper, 1986, 1987; Bredemeier, Weiss, Shields, & Shewcuck, 1986) . Bredemeier and Shields (1994) described how the nature and structure of sport affect the levels of reasoning athletes use on and off the field. According to Bredemeier and Shields, “What has moral significance in sport is the configuration of social relationships and interactions that characterize particular sport experiences” (1994, p. 176). The fact that sport is

generally rule- governed represents an inherent heteronomous structure of morality, one where the athletes are told what they can or can not do and the rules are generally black and white. However, research has shown that moral behavior is not simple or black and white. Bredemeier and Shields argue that the stages presented by Kohlberg are abstract and the relationship between levels of moral reasoning and moral behavior are vague. They also argue that Rests' four component model requires a second dimension to make it more applicable. Bredemeier and Shields attempt to more fully describe the intricate relationships between influences on moral behavior by using Rests' four concepts of moral sensitivity, moral judgment, moral motivation and moral courage as four necessary processes. To these four processes they add three main sources of influence that impact each of the processes including the nature of the context, personal competencies and characteristic and situationally evoked ego processes (Bredemeier & Shields, 1994, p. 177).

As part of the contextual influence, Shields and Bredemeier include considerations about the environment, the goal structures and ambitions. The competitive nature of sport tends to discourage cooperation and encourage anti-social behavior. This can interfere with moral behavior because the focus is on individual or team goals at the expense of all others. As cited by Bredemeier and Shields (1994) a study by Power, Higgins and Kohlberg, (1989) showed that athletes tend to operate according to the moral norms of the sport rather than individual moral behavior. Under personal competency, Bredemeier and Shields (1994) describe the influences of the stage of moral reasoning, self-structure which includes motivational orientation and specific moral qualities that one uses to define the self. The third influence describes the impact of ego processing. This describes an athlete's potential for actual performance and the propensity toward coping and defending. When all taken together, this model could theoretically help

describe the reasons for particular moral behavior. However, Bredemeier and Shields have conducted little research with high school or collegiate populations. And while their research may explain a cognitive moral reasoning process in children, it has yet to be tested to a great extent on these older populations.

Measuring Moral Development in Sport Populations

Generally, moral theorists agree that moral character is a learned process that occurs by observing and modeling others, the influence of the environment, as well as moral reasoning (Beller & Stoll, 1995; Lickona, 1991). According to Beller and Stoll (1995), "...if morality can be defined as fair dealing, honesty and respectful behavior, and if this behavior is learned, then it can be measured" (Beller & Stoll, 1995, p. 353). The importance of measuring this is to learn more about the environment and processes that shape the development. Assuming that an individual knows the difference between honest and dishonest, fair and unfair, and respectful and disrespectful, moral reasoning scores represent the level of understanding of the values of honesty, fairness and respect (Beller & Stoll, 1995, p. 354). "Moral judgment scores represent the basic interpretive framework that people naturally and spontaneously bring to moral problem solving" (Rest & Narvaez, 1994, p. 214). With the understanding that moral reasoning can be measured, some researchers have examined moral reasoning in sport populations.

Measuring moral reasoning specific to sport has been a challenge because until 1987, few if any valid and reliable instruments based in sport existed (Beller, Stoll, & Hahm, 2006). A few sport studies had been conducted using the using Rest's (1984) Defining Issues Test (DIT) (Beller, 1990; Hahm, 1989; Hall, 1986). Yet, while the DIT is a highly valid and reliable instrument for measuring moral development based on Kohlberg's (1981) stage theory, it is

comprised of 6 hypothetical moral issues unrelated to sport and as many as 30% of a sample can be lost due to consistency check violations.

Hahm, Beller, & Stoll (1989) developed and validated the Hahm-Beller Values Choice Inventory (HBVCI) (Cronbach Alphas .77 - .88) an instrument based in deontological moral theory (Frankena, 1973), Rawl's Theory of Justice (1972), and Kohlberg's (1981) philosophy of cognitive moral development. The 21 scenarios (and in its revised form 12 scenarios) address commonly occurring sport moral dilemmas and challenge athletes to reason based on an ideal philosophy of sport. To date the instrument has been used with over 80,000 individuals within and outside all levels of sport from high school, college, Olympic, to professional sport (Beller, Stoll, & Hahm, 2006). To date, the majority of studies conducted with high school, collegiate, Olympic, and professional athletes have used the HBVCI.

Hall (1986) found that college athletes scored below the norms of their college aged peers (Bredemeier & Shields, 1994). Bredemeier & Shields (1984b) found similar results with intercollegiate male basketball players, but also found no difference with intercollegiate swimmers.

Other studies have found that athletes generally score significantly lower on moral reasoning tests than non-athlete peers including (Beller & Stoll, 1993; Beller & Stoll, 1995; Beller & Stoll, 1996; Beller, Stoll, Burwell, & Cole, 1996; Bredemeier & Shields, 1994; Hansen, Beller, & Stoll, 1998; Rudd, Stoll, & Beller, 1997). "Moral reasoning plays a critical role in the production of moral behavior. In fact, even if other factors influence moral choices to a similar (or even greater) degree, moral reasoning is critical because it produces the moral meaning that an intended action has for an individual." (Bredemeier & Shields, 1994, p. 175). These studies give evidence that moral action could be related to the development of moral reasoning, however

it must be noted that only a low positive relationship exists between that of moral knowing (involving the moral reasoning process) and that of moral action (Kohlberg, 1981; Lumpkin, Stoll, & Beller, 2003). In other words, just because one might know what the right thing is to do, why it is the right thing to do, and the underlying socio-moral principles that guide what is right, an individual can choose to do wrong for a variety of competing reasons. However, in order for the chance of any consistent moral action to occur one must first know what is right and why it is right – the underlying moral development and moral reasoning process.

According to Beller and Stoll (1995), differences between athletes and non-athletes may be explained in a few different ways. The first is that the, "...characterization of athletics with competition, contention of interest, physical skill and prowess" (Beller & Stoll, 1995, p. 358) can lead to athletes prioritizing "instrumental values" such as winning, fame and prestige over simply competing to their best abilities. Along the same lines, the possibility of great successes in the forms of money and celebrity status may make it difficult for athletes to distance themselves enough to make rational, moral judgments (Beller & Stoll, 1995). Other possibilities include a win-at-all-costs mentality in the athletic world, a tendency to objectify opponents and place the burden of responsibility for moral reasoning on coaches and officials, specialization at early ages, time spent on sport activity such as video, weights, rehab or practices, and a lack of outside social relationships (Beller & Stoll, 1995).

Bredemeier (1985) has examined character development in sport, moral reasoning in sport and how levels of moral reasoning are correlated with such issues in sport as aggression. The purpose of this study is to find a correlation between levels of moral reasoning with respect to issues of doping. Rest and Narvaez (1994) stated that, "[F]or low scoring students, discussions of intermediate level concepts do not find lodging in bedrock of basic cognitive structure, but

rather seem like superfluous solutions for problems neither foreseen nor recognized” (Rest & Narvaez, 1994, p. 214). If athletes are not at a level of moral reasoning to understand or internalize the rules set by athletic governing bodies they will have no motivation to choose a moral action rather than one based on social or personal desires.

Moral Reasoning and Gender

Questions have surfaced concerning the measurement of moral reasoning and moral development relative to gender (Gilligan, 1977; Rest & Narvaez, 1994). These researchers have argued that females score significantly lower compared to males on cognitive “justice defined” instruments such as Rest’s (1973) Defining Issues Test. Gilligan argued against Kohlberg’s (1981) moral development theory because Kohlberg based his theory on a large study of men with little to no examination of women. In her work “In a Different Voice” (Gilligan, 1977) she argued that women come from a very different perspective of caregiving and nurturing as opposed to a Kohlberg’s justice perspective. However, her argument may be criticized as she only studied a small sample of women who were contemplating a highly emotional issue of abortion (Beller, 1990).

While some researchers have found that women score significantly lower than men in moral reasoning (Gilligan, 1977; Rest, 1984; Rest & Narvaez, 1994), studies with interscholastic and intercollegiate athletes have not found the same. In studies using the Hahm-Beller Values Choice Inventory (Hahm, Beller, & Stoll, 1989) female athletes and non athletes as well have scored significantly higher than males (Beller, 1990; Beller & Stoll, 1995; Beller, Stoll, Burwell, & Cole, 1996; Beller, Stoll, & Hansen, 2004). Moreover, in preliminary studies of athletic trainers and athletic training students, females have scored significantly higher compared to males (Beller, Stoll, Refvem, Williams, & Taylor-Hanson, in review; Beller, Stoll, Williams, &

Taylor-Hanson, in review). However, although a significant differences exist with females scoring higher than males in these studies, females still do not use a very high level of reasoning in making decisions. Thus it is of interest to examine underlying reasons concerning decision-making and whether males and females use the same underlying structures to make moral decisions.

Moral Reasoning of Athletic Training Students

Because intercollegiate sport has become so institutionalized over the past 150 years, a large number of coaches, administrators, and medical personnel such as athletic trainers are engaged in the daily practice of sport administration. While much research on moral reasoning has occurred with athlete populations little is known about the moral reasoning of these other athletic-related populations. Yet, because these individuals help set the environment and standards of how sport participation should be carried out it becomes important to know more about how they think and reason relative to how higher education institutions and the NCAA say sport should be conducted.

Moreover, because one of the first lines of defense against doping at the collegiate, Olympic, and professional levels should be the certified athletic trainer, it becomes important to understand how athletic trainers and athletic training students reason about commonly occurring and doping specific issues. While the responsibility athletic trainers includes the prevention and care of athletic injuries, they are often called upon to deliver information and recommendations about a variety of substances to curious, driven athletes. Additionally as the result of their relationships with athletes, certified athletic trainers may be in the best position to provide counsel and may be one of the first to suspect if an athlete is doping. However, recently researchers have raised concerns about the ability of certified athletic trainers to reason from a

consistent set of moral principles when faced with a dilemma. (Beller & Stoll, 2003; Beller, Stoll, Refvem, Williams, Hanson-Taylor, in review; Beller, Stoll, Williams, Taylor-Hanson, in review). In these studies athletic training students in several Division I universities have scored no differently when compared to their student athlete peers on instruments used to measure moral reasoning. In these studies, both student athletes and athletic training students have scored at a level consistent with an ego-centered approach. In other words, they reason from a perspective that is mostly concerned with themselves and their own personal needs and desires. Social rules and norms have little influence, while norms in sport are used as moral justifications when faced with a dilemma. Although these are small studies, they appear to be some of the first that examine the general sport moral reasoning of athletic training students.

Of concern to researchers is that if athletic training students reason from a similar perspective as student athletes, then it may be difficult, if not impossible, for athletic training students to affect athletes' reasoning about moral issues, specifically issues surrounding doping in sport.

In Kohlberg's *Just Community* (1975 cited in Rest & Narvaez 1994) he argues that when we discuss and debate with others, we challenge each other, our views are questioned, and we must come up with new, more sound positions taking into account others, their view, and societal laws. The more we are challenged by people at a higher moral level, the more our viewpoints shape and change thus leading to a new, higher stage of thinking. However, if we are surrounded by like thinking, we are not challenged and we do not grow and think beyond ourselves. A concern exists that if individuals engaged in the practice of intercollegiate sport (whether they be medical professionals, coaches, administrators or players) reason similarly about general moral

issues in sport or specific issues such as doping, little will change about morally questionable behavior in sport.

Because doping in sport today has received much media, congressional, and presidential attention and because so many athletes choose to dope and individuals at all levels attempt to either justify doping practices or stand out against doping practices, it is an important issue worth studying further. Moreover, an assumption exists that individuals involved in what Kohlberg calls the helping professions reason at a higher level because of the nature of thinking of others and their needs before themselves. And, because researchers have found in preliminary research studies that athletic trainers (while allied health professionals) reason morally similar to athletes, it becomes of interest to examine how athletic trainers reason relative to doping in sport. Thus, knowing more about arguments for and against doping in sport and athletes' and athletic personnel's reasoning about doping in sport can help in understanding to what extent higher education and intercollegiate athletics fulfill part of their character education purpose.

Brief history of doping

As early as the Mayan civilization ergogenic aids have played a performance enhancing role in competition. Early Mayan champions were said to have been sacrificed so their hearts, and a piece of their athletic abilities, could be shared with those who were competitively inferior and ultimately improve performance (Eichner, 1997; Lumpkin, Stoll & Beller, 2003). Early Olympians consumed deer liver and lion heart to produce bravery, speed and strength (Applegate & Grivetti, 1997) and they are reported to have eaten mushrooms and taken such drugs as strychnine, heroine, morphine and cocaine (Noakes, 2004). In the 1800s, European cyclists used such drugs as heroine, cocaine and sugar tablets soaked in ether to gain a competitive advantage upon their opponents (Eichner, 1997), and by the middle of the 20th century evidence of steroid

abuse in the Olympic Games by teams in the Soviet Union became public (Eichner, 1997). These bizarre rituals and many others have been documented throughout the history of sport. Current methods include the use of stimulants, narcotics, anabolic agents, beta blockers, diuretics and hormones. Some athletes continue to use these substances as well as blood doping and even gene doping in an effort to gain a competitive edge (Pincock, 2005; Catlin & Murray, 1996).

Collectively, the illegal use of substances or methods with the intention of gaining a competitive edge is called doping. Doping is a concern for all national and international sport governing bodies, as well as entities such as the United States Congress, for a number of reasons, including the compromised safety of the athlete, the moral integrity of the sport, and the issue of fairness of competition.

Safety of the Athlete

Most anti-doping researchers have argued that sport governing bodies should ban the use of performance enhancing drugs in sport because of the real, potentially life threatening and non-life threatening negative health effects (Stoll, Gwebu, & Beller, 2006). They argue that because each individual who uses these drugs will experience many of these negative side effects performance enhancing substances should be banned. To better understand this argument we must understand: 1) the different types of drugs and performance enhancing measures being used, 2) who is using the different types of drugs, and 3) the negative health effects of these drugs.

Types of Doping

Anabolic Steroids

Steroids are probably the most well-known form of all illegal and abused substances in sport today. Drugs simply known as steroids are generally synthetic reproductions of the

naturally occurring male sex hormone, testosterone. Since the 1950s, many different types of synthetic steroids have been developed in the United States (Noakes, 2004). Steroids can cause physiological changes such as increases in muscle mass, strength, and speed. These changes are particularly desirable for athletes that require a lot of power and explosive energy. Steroids can also alter athletes' mental states and may help to speed recovery rates allowing athletes to train and compete harder and for longer periods of time (Noakes, 2004). Sports commonly associated with the use of anabolic steroids include football, baseball or softball, hockey, track and field events, and weightlifting to name a few.

Researchers have found that anabolic steroids can negatively affect most of the physiological systems of the body including the reproductive systems of males and females, the cardiovascular, respiratory, integumentary, musculoskeletal and endocrine systems. Side effects can range in severity from acne to severe liver damage as well as dangerous psychological addictions and disturbances (Landry & Primos, 1990; Minelli, Rapaport & Kaiser, 1992). Despite the plentiful research athletes blinded by the drive for the competitive edge often overlook these harmful side effects.

Stimulants

Stimulants are another popular type of performance enhancing drug. They speed up metabolism, increase heart rate and blood pressure which, in turn, leads to increased blood flow and oxygen delivery thereby allegedly minimizing sensations of fatigue and improving performance (Noakes, 2004). Stimulants seem to be most commonly used by athletes that require shorter, more explosive performances. Stimulants increase heart rate and blood pressure, placing extra stress on the systems of the body that regulate temperature. A decrease in efficiency of the thermoregulatory systems can have devastating consequences including those associated with

various forms of heat illness, including heat stroke. The first fatal case of heat illness reportedly caused by the stimulant amphetamine use was that of British cyclist, Tom Simpson who suffered a severe case of heat stroke during the 1967 Tour de France (Noakes, 2004).

Blood Doping

Blood doping refers to the illegal practices of increasing the mass of red blood cells in the body for the purposes of enhancing athletic performance. red blood cells are responsible for transporting oxygen from the lungs to muscle and other tissues in the body, therefore, an increase in red blood cell concentration increases maximal power output and average power output over a duration and may delay the onset of fatigue (Sawka et al., 1996). The potential performance enhancing effects of an increase in concentrations of red blood cells make blood doping most prevalent in long distance events such as cycling, rowing, swimming and long distance running or skiing events. The two most common methods of blood doping include direct injection of the hormone erythropoietin, also known as EPO, and a procedure involving the infusion of red blood cells. Erythropoietin is a hormone secreted by the kidneys that stimulates the bone marrow to produce more red blood cells. This process occurs naturally in response to hypoxia, or a lack of oxygen, as is the state of the body during exercise. Since red blood cells are responsible for delivering oxygen to various tissues, increased levels of erythropoietin directly increases the amount of oxygen that can be delivered to the body. Recently, erythropoietin has been used in the sporting world to elevate oxygen carrying potential above the body's natural levels thereby potentially improving performance.

The second method for blood doping is by directly infusing red blood cells into the body. This procedure requires that several blood units are removed from either the athlete (autologous infusion) or a separate donor (homologous infusion) and the red blood cells are harvested and

stored. After a few weeks, normal levels of red blood cells are reestablished in the athlete's body (Sawka et al., 1996). When the red blood cells are infused back into the blood stream, the effect is a dramatic increase in the mass of red blood cells thus increasing the capacity for oxygen delivery.

While blood doping has some positive ergogenic effects, those engaged in the practice of blood doping either fail to understand or choose to ignore the serious and potentially life threatening side effects. An increase in red blood cell mass is directly associated with increased blood viscosity which can potentially clog the blood vessels causing such conditions as stroke, heart attack, deep vein thromboses and pulmonary embolism (Sawka et al., 1996). Other inherent risks are associated with any infusion or transfusion. According to the American College of Sports Medicine position statement, "The risks from a homologous transfusion include ...reactions to blood type incompatibility on the basis of clerical error, minor transfusion reactions including fever and body aches, transfusion-related acute lung injury, and bacterial infection" (Sawka et al., 1996 p. 130). Furthermore, there is also the risk that a recipient could contract any of a multitude of dangerous blood borne diseases transmitted through a homologous transfusion.

Other Forms of Doping

Other forms of doping include the use of depressants such as beta-blockers, therapeutically used as treatment for respiratory conditions such as asthma, narcotics, hormones, and diuretics. Depressants have been used in events that require concentration such as archery, or sharp shooting. Narcotics and diuretics are often used by wrestlers, gymnasts, figure skaters, jockeys and sometimes cross country runners to lose weight.

The newest form of ergogenic aid is gene doping (Pincock, 2005). As with many of the doping methods, the technology used for gene doping was developed as new therapeutic treatments in legitimate gene therapy, "...in which carefully selected fragments of genes are delivered to specific tissues or cells ... to fix genetic problems" (Pincock, 2005 p. S18) or in the case of doping, create genetic advantages. Goldspink, a researcher for the World Anti-Doping Agency (WADA) from University College London in the United Kingdom, has said that researchers have been successful in their efforts to increase muscle mass and function in patients with diseases that cause severe muscular atrophy. While it would be reasonable to assume that some athletes would be, or are willing, to try this new method of doping, the recentness of its discovery leaves the questions of safety and side effects dangerously unanswered.

Supplements

Nutritional supplements are any substances intended to add a nutritional, or performance enhancing ingredient for the user. Supplements include vitamins, minerals, herbs, amino acids, enzymes and any other substances that might have an additive affect on the user. While supplements can serve to fill voids for individuals who are deficient they are often legally used in sport as an ergogenic aid. Some common examples of supplements used by athletes include creatine, various amino acids, protein powders and more. Supplements come in many forms including pills, powders and drinks. Most nutritional substances are not banned by sport governing bodies. The issue with nutritional supplements is that they are not regulated by the Food and Drug Administration. As a result, there are few if any measures of accountability for developers of nutritional supplements. There are no disclosure requirements or , consequences for mislabeled products or unidentified ingredients which may be found in any given container of supplement. Too often, ingredients become tainted with other ingredients and the user is unaware

of what the supplement actually contains. For example, an athlete takes a powder form of creatine to help enhance his performance. Creatine is not a banned substance. However, sometime during the manufacturing process this batch of creatine has been contaminated with small amounts of anabolic steroid which is a dangerous banned substance. Because of the lack of regulation and accountability there is no way to determine which supplements are pure and which have been contaminated and naivety is not an acceptable defense after a positive drug test. According to one source, an anti-doping laboratory that tested 640 non-hormonal supplements, found low levels of anabolic steroids in 94 of the products (Honour, 2004). Educational programs continue to lecture to the potential dangers of doping and there is no doubt that many have heard the warnings. But, despite the words, athletes are still willing to take the risk, to try anything for the competitive edge.

Drug Testing

Most major sporting events and governing bodies in sport now have some sort of drug testing policy for all athletes although some policies are more effective than others. Because health concerns underlie many of the anti-doping rules and legislation, policies have been put into place to test athletes for these banned substances. After the formation of WADA, The United States established the US Anti-Doping Agency (USADA) which has helped establish drug testing policies and procedures for most professional leagues as well as the National Collegiate Athletics Association (NCAA). Specific NCAA policies indicate that student athletes at every institution within its three divisions (DI, DII and DIII) are subject to drug testing and can be randomly selected by the NCAA. Since 1968, the number of drugs for which organizations are compelled to test has increased from 20 to 150, (Honour, 2004 p. 143) and testing is getting more difficult with the innovative designer drugs.

The amount of time, effort and money that goes into the cat-and-mouse game that is drug testing is incredible. The USADA recently awarded \$1.68 million in research grants to improve drug testing methods in an effort to “eradicate doping from sport.” (United States Anti-Doping Agency, News Release, para.1) According to some sources, the annual USADA budget for drug testing exceeds \$26 million per year. WADA has established that drug testing can take place in or out of season in an effort to prevent doping during training as well as during the off season (World Anti-Doping Agency, 2003, Article 5). Currently the consequences for an Olympic athlete that has been found guilty of doping include a two-year suspension from the sport for the first offense and a life-time ban for the second. NCAA legislation for collegiate athletes that have been found guilty of doping or using any kind of banned substances requires a one-year, 365 day, suspension and loss of eligibility. In 2005, the United States Congress established The Drug Free Sports Act and the Clean Sports Act in an effort to bring the drug testing of professional athletes under the control of the federal government and require the same sanctions for professional athletes as United States Olympic athletes found guilty of doping (Schnirring, 2005).

Despite an increase in funding and tougher sanctions, drug testing, the biggest piece of the anti-doping effort, has been largely unsuccessful. Due to the great amount of celebrity status and its large accompanying paychecks, the “lure of success” is relatively huge when compared to the penalties for cheating (Savulescu, Foddy, & Clayton, 2004). There are also some reports that suggest that the actual rate of testing is very low giving athletes hope that even if they are doping, they may never be tested and never caught. Drug testing as form of negative reinforcement is only somewhat effective and minimally efficient at best in the growing battle against doping.

Despite the research and the warnings, athletes continue to dope. Problems exist with the argument that educating athletes about the negative effects of doping is an effective deterrent (Stoll, Gwebu, & Beller, 2006). Researchers have found that if athletes were given a drug that would enhance performance and in five years potentially result in major medical problems such as cancer, as many as 95% of athletes reported that they would still be willing to use the drug (Bamberger & Yaeger, 1997; Goldman, 1992). Such a response indicates how 1) athletes have little regard for their personal health and understanding of their own mortality, 2) the drive to win exceeds competing on one's own merits, and 3) information centered anti-doping education programs may be ineffective in addressing doping in sport.

The Effects of Doping on the Moral Integrity of Sport

Another argument used for banning performance enhancing drugs in sport is that doping compromises the moral integrity of sport as a whole. In response to the growing epidemic of doping in sport, the International Olympic Committee established the World Anti-Doping Agency (WADA), an organization charged with the task of standardizing regulations and testing for all international competitions. The WADA mission statement defines doping as illegal if it is a health risk, or if it violates the "spirit of sport." They define the "spirit of sport" as an intrinsic "celebration of the human spirit, body, and mind" that is characterized by the following values: ethics, fair play and honesty, health, excellence in performance, character and education, fun and joy, teamwork, dedication and commitment, respect for rules and laws, respect or self and other participants, courage and community, and solidarity (World Anti-Doping Agency, 2003, Introduction: The Code). The necessary formation of WADA's, explicit definition of the spirit of sport and the continually increasing need for change in the world of sport have come as a consequence of the assault on the purity and moral integrity of sport.

Catlin and Murray (1996, p. 231) commented on this state of sport by writing, “Increasingly sophisticated pharmacological methods have been created to enhance athletic performance in ways that threaten the integrity and meaning of Olympic competition.” Self reflection by former Australian world discus champion, Reiterer discussed his doping practices and the thoughts that made him retire before the 2000 Sydney Olympics. “There was something pathetically wrong with the fact that a packed home arena – an entire country – would urge me on without any concept of the truth behind my ultimate athletic achievement, or of the sham of which they were unwittingly a part” (Noakes, 2004, p. 849).

Doping is illegal, violates both the letter and spirit of the rules and impacts the integrity of the sport. Unfortunately, Olympic and international competitions are not the only levels of sport threatened. The professional and collegiate levels are also impacted with the trickle down theory in effect to even lower levels including high school and middle school (Stoll, Gwebu, & Beller, 2006). Current and future efforts to prohibit doping in sport need to continue to press the issues and get to the heart of the problem in order to preserve that which is so beautiful about sport.

Fairness of Competition as an Argument Against Doping in Sport

Questions about whether doping should be allowed or whether athletes should be given a choice are continually raised concerning fairness of competition. Some, like Savulescu, Foddy, & Clayton (2004) argue that performance enhancing drugs should be allowed in sport. According to these authors, sport discriminates against the genetically unfit. “Sport is the province of the genetic elite (or freak)” (Savulescu, Foddy & Clayton, 2004, p. 667). They describe cases where such things as extraordinarily large feet have proven to be an unfair advantage to some swimmers. Therefore, in order to provide a truly fair playing field, athletes should be allowed to

use their judgment in discriminating between which methods of doping they will or will not use. If all athletes are unrestricted by regulations, then everyone will have an equal opportunity and sport will be fair again (Savulescu, Foddy, & Clayton, 2004). This argument raises many moral questions. Consider the following scenario: an elite athlete has trained hard for many years, made sacrifices in his or her personal, social and educational careers. This athlete has found the optimal combination of natural ability, intense discipline, training and commitment. Suddenly this athlete recognizes that his or her competitors have an added advantage in their willingness to practice doping. The athlete now has two options: (1) face the competition with a potentially significant disadvantage given to other competitors in the form of doping or (2) choose to engage in the practice as well in an effort to remain competitive (Catlin & Murray, 1996).

“One athlete’s decision to use performance-enhancing drugs exerts a powerful effect on the other athletes in the competition. The athlete remains free to choose whether or not to violate the rules of the sport as their competitors are doing, but is not free to pursue his or her great dream with confidence that the best athlete will win.” Catlin & Murray (1996, p. 237)

Thus, in order to remain competitive the athlete may be placed in an unfair position where he or she feels coerced to take performance enhancing drugs.

Because few studies have been conducted with athletic training students, this study has the potential to add to the body of knowledge not only about the moral reasoning of athletes and athletic training students but the relationship of moral reasoning relative to higher education and intercollegiate sports character development mission. Thus, the goal of this study is to examine the general moral reasoning of student athletes and athletic training students when faced with

issues of doping in sport and discuss the finding relative to what higher education and the NCAA state are important values about the development of college students' and intercollegiate student athletes' development of character. Knowing the extent to which a part of moral character is being developed (that of moral reasoning) can help individuals engaged in teaching in higher education and the practice of sport better help individuals grow and mature in their moral character.

CHAPTER THREE

Methodology

Research Method

This will be a descriptive study with two parts that will: 1) pilot the Ergogenic Aids Moral Competence Inventory for validation purposes and 2) examine the general moral reasoning of Division I college student athletes' and athletic training students' compared with their moral reasoning about doping in sport as one measure of character development in higher education. This study will identify what, if any correlations exist between measured levels of moral reasoning and attitudes toward doping in athletes and athletic training students. The Institutional Review Board approval was granted for this study on March 1, 2007. The IRB file number is 9596-a. (See appendix A).

Participants

Participants will include volunteer student athletes from the women's crew, men's and women's track and football teams of a division I athletic institution. It will also include students currently enrolled in an athletic training education program. Each participant will be given a brief background to the study, and opportunity to ask questions and then asked to sign an informed consent. Athletic training students will be given the opportunity to volunteer for this study during a class time for a course in which they are all enrolled.

Instruments

Hahm-Beller Values Choice Inventory (HBVCI)

The Hahm-Beller Values Choice Inventory (see Appendix B) is an instrument that measures moral reasoning in sport. The instrument is based in deontological moral theory (Frankena, 1973) Rawls Theory of Justice (1971), Kohlberg's Philosophy of moral development

(1981), Rest's theory of moral development (1984) and Piaget's (1932) theory of moral development. The instrument uses 10 commonly occurring issues in sport and asks respondents to answer whether they strongly agree, agree, are neutral, disagree or strongly disagree to the scenario. The instrument has been used in studies with over 80,000 participants both within and outside of sport (Beller, Stoll, & Hahm, 2006) and is considered the Gold Standard for general moral reasoning in sport competition. The inventory has a 9th grade reading level as identified by the Flesch-Kinkaid Grade Level (Microsoft Word). Cronbach alphas range between .77 and .88. The range of scores for the instrument is 10 – 50. The higher the score the more an individual tends towards principles in making moral decisions. Scores in the teens and low twenties reflect a ego-centered view, scores in the 30s reflect an understanding of social rules and laws, score in the 40 reflect an understanding of principles as they guide moral decision making.

Ergogenic Aids Moral Competence Inventory (EAMCI)

The Ergogenic Aids Moral Competence Inventory (see Appendix B) has five main questions based in deontological moral reasoning and moral philosophy (Frankena, 1973; Kohlberg 1981; Piaget, 1932; Rawls, 1971; Rest, 1984). The purpose of the EAMCI is to help examine other domain specific measures of morality – in this case doping. The five main scenarios (questions/dilemmas) were designed to create a moral character index. These scenarios attempt to create a cognitive dissonance in the respondent, a prerequisite that Piaget and Kohlberg argue must be present to affect the degree to which moral principles become necessary knowledge for the individual (Lickona, 1991). The nine sub-questions purport to measure how respondents reason morally about common doping issues in sport.

Ergogenic Aids and Moral Competence Inventory (EAMCI) Validity and Reliability

One goal of this study was to pilot the Ergogenic Aids and Moral Competence Inventory (EAMCI) and conduct preliminary validity and reliability measures. Although validity and reliability are interrelated, for purposes of clarification, validity and reliability will be discussed separately and then in their totality to the instrument's purpose.

General Theoretical Construct

The EAMCI was developed with deontological moral theory and cognitive moral development as its theoretical foundation. Deontological theory holds that there is an inherent right and wrong apart from the consequences in making moral decisions (Frankena, 1973). Cognitive moral development theory as defined within this study is based on Piaget (1932) and Kohlberg (1981). Cognitive moral developmentalists are concerned with examining an individual's ability to examine "what is right", "why it is right" and the "underlying sociomoral perspectives that underlie what is right and why it is right." The EAMCI's underlying construct is based on the Hahm-Beller Values Choice Inventory (HBVCI) (Hahm, Beller, & Stoll, 1989; Beller, Stoll, & Hahm, 2006). In this study respondents took both the HBVCI and the EAMCI. A correlation was run on the total scores for the HBVCI and the EAMCI. A significant correlation of $r = .39$ was found ($p = .001$). While the underlying construct for both instruments is purported to be the same, the HBVCI (Cronbach Alphas of .77 - .89) measures moral reasoning relative to general sport moral issues, while the EAMCI was developed specific to doping in sport. Respondents on the HBVCI are asked to respond to 12 questions using a Likert scale of strongly agree to strongly disagree. The higher the score, the more an individual purports to use principles in making moral decisions. On the other hand, the EAMCI asks respondents to read a scenario involving doping in sport, and then respond as to whether the individual should take the drug, not

take the drug or can't decide. Once a decision is made the respondent is asked to rank the three corresponding statements as to how they made their decisions to dope, not dope, or can't decide. For the EAMCI, data is analyzed in two parts. The first analysis involves the decision choice. Choosing not to dope involves principled thinking. Choosing to dope or can't decide do not involved principled reasoning. The five decisions are totaled to gain a possible range of scores from 5 -10. The higher the score, the more principled reasoning used in making moral decisions. The second analysis involves frequency distributions relative to each of the ranked decision responses. The goal of the second analysis is to examine the particular perspectives that respondents use to make their respective decisions.

Validity

Face validity, the weakest form of validity, asks whether “on the face” the instrument seems to be a good translation of the construct being measured, in this case moral reasoning relative to doping practices in competitive sport. Deontological reasoning (an inherent right and wrong apart from the consequences, Frankena, 1973) was the underlying construct to the EAMCI. Content validity refers to whether the instrument questions are reflective of the specific content domain for the construct. While similar to face validity, content validity generally requires a detailed explanation of the underlying construct. Usually included is a detailed description of the theoretical underpinnings, an explanation of the target group(s), and criteria for what constitutes a high level versus and low level of the construct. For this instrument, both face validity and content validity were assessed by two leading authorities in sport moral reasoning. Independently first and then jointly, these two authorities reviewed the EAMCI theoretical construct relative to the five scenarios. The authorities examined the questions relative to relevant issues that athletes in high school, collegiate, Olympic, and professional sport face daily

and then evaluated each of the three specific statements of reasoning relative to the decision choice, category of reasoning, and underlying theoretical construct. Where appropriate, choices were discussed and reworded to better match the underlying theory.

Convergent validity is a method of measuring constructs that theoretically should be related to each other. It is a way to show a correspondence or convergence between a similar construct. In this case, because the HBVCI, a valid tool and the standard for measuring moral reasoning in sport competition, uses the same theoretical construct, the HBVCI was used to help establish convergent validity. High correlations with the HBVCI would be evidence of convergent validity. A bivariate analysis was run with each of the decision responses (see table 5). Decision 1 is significantly correlated with Decision 2 ($r = .23, p = .002$), Decision 3 ($r = .17, p = .02$), Decision 4 ($r = .23, p = .002$), and Decision 5 ($r = .29, p = .001$). Decision 2 is significantly correlated with Decision 3 ($r = .255, p = .001$) and Decision 5 ($r = .31, p = .001$), but not Decision 4 ($r = .14, p = .06$). Decision 3 is significantly correlated with Decision 5 ($r = .29, p = .001$) but not Decision 4 ($r = .12, p = .13$). Decision 4 is significantly correlated with Decision 5 ($r = .23, p = .002$). At this point, Scenario 4 appears to have some questions of correlation in relation to the other four scenarios. This may have occurred because the original scoring for this question was reverse scored. The original purpose of the reverse scoring was to examine to see if respondents were actually reading and paying attention to the inventory. However, oftentimes respondents have difficulty with reverse scored items even though they are paying attention to the instrument. In the next pilot, it may be of value to remove the reverse scoring to see whether the Decision 4 scenario responses are better correlated with the other Decisions. Perhaps a Structural Equation Modeling (SEM) analysis might reveal that scenario 4 is a measure of discriminant validity, something that is also required of convergent validity.

Discriminant validity the degree to which the what we are measuring is diverges from what we think it should be theoretically similar to. This is typically measured with a correlation. A low correlation may mean the Decision is a discriminant to the other questions.

Table 1. Correlations for respondents' decision choices on EAMCI

		Decision 1	Decision 2	Decision 3	Decision 4a	Decision 5
Decision 1	Pearson Correlation	1	.230(**)	.166(*)	.229(**)	.289(**)
	Sig. (2-tailed)		.002	.028	.002	.000
	N	174	174	174	174	174
Decision 2	Pearson Correlation	.230(**)	1	.255(**)	.142	.310(**)
	Sig. (2-tailed)	.002		.001	.062	.000
	N	174	174	174	174	174
Decision 3	Pearson Correlation	.166(*)	.255(**)	1	.116	.292(**)
	Sig. (2-tailed)	.028	.001		.127	.000
	N	174	174	174	174	174
Decision 4a	Pearson Correlation	.229(**)	.142	.116	1	.231(**)
	Sig. (2-tailed)	.002	.062	.127		.002
	N	174	174	174	174	174
Decision 5	Pearson Correlation	.289(**)	.310(**)	.292(**)	.231(**)	1
	Sig. (2-tailed)	.000	.000	.000	.002	
	N	174	174	174	174	174

** Correlation is significant at the 0.01 level (2-tailed).

* Correlation is significant at the 0.05 level (2-tailed).

Reliability

Reliability refers to the consistency of scores. We would expect a respondent to attain the same score regardless of where the respondent completed the EAMCI, when it was scored, and who scored the response. For this instrument internal consistency was measured using Cronbach alpha. For this pilot study a Cronbach alpha of .60 was found.

Procedures

Arrangements were made with help from the coaches of the participants involved to allow participants to complete each of the two instruments at a convenient time. Some teams had weekly meetings where the surveys were passed out, explained and completed. One team arranged to take the surveys before boarding the bus for an away competition. Many athletes completed the surveys while training in the athletic training facilities before practice, and some coaches preferred to hand out and collect the surveys themselves.

Student athletic trainers were asked to complete the instruments during one of the courses required for athletic training. All participants were given a brief introduction to the study. Each participant was then given the Hahm-Beller Values Choice Inventory and the Ergogenic Aids and Moral Competency Inventory, detailed instructions, an opportunity to ask questions and then asked to sign an informed consent. Participants were asked to complete both inventories without discussion.

Data Analysis

The independent variables in this study include gender and status. Status is defined by the role of the student as a Division I athlete or athletic training student. The dependent variables include levels of moral reasoning as determined by scores on the Hahm-Beller Values Choice Inventory and Ergogenic Aids and Moral Competency Inventory. Internal consistency will be examined using Cronbach Alpha procedures. To help determine construct validity, correlations will be run between scores on the HBVCI and the EAMCI.

ANOVA procedures will be employed to examine difference between the main effects and interactions of gender and status. Effect size will be reported as partial eta squared. A significant F and where appropriate Tukey's post hoc procedures will be run.

CHAPTER FOUR

Results

The purpose of this two part study is to: 1) conduct a pilot study for validation purposes of the Ergogenic Aids Moral Competence Inventory and 2) examine the general moral reasoning of Division I college student athletes' and athletic training students' compared with their moral reasoning about doping in sport as one measure of character development in higher education.

Data Collection

One hundred and ninety-five (195) student athletes and athletic training students from one Division I athletic program were selected to participate in this study. Of the 195 surveys given out, 189 were usable for data analysis of the HBVCI scores (97% return rate) and 179 were usable for data analysis of EAMCI scores (92% return rate). All participants completed each of the two instruments, the HBVCI and the EAMCI. On average it took approximately 15 minutes to complete for surveys. Internal consistency was examined for the HBVCI using Cronbach alpha procedures. A Cronbach alpha of 0.88 was found which was well within the .77-.89 range of the instrument.

For purposes of clarity, an in depth discussion of validity and reliability for this pilot study of the EAMCI is reported in chapter 3. A Cronbach alpha of .60 was found on this first pilot study of the EAMCI.

General sport moral reasoning was examined using HBVCI scores and reasoning about doping in sport was examined using the EAMCI. Main effects (gender and status) and interactions (gender X status) were examined with two separate ANOVAs for the HBVCI and EAMCI scores. A secondary analysis was then run on EAMCI decision statements examining reasoning about decisions using ratings and frequency of response.

Results of Hahm-Beller Values Choice Inventory

Hypothesis One

No difference exists by status in general sport moral reasoning using the HBVCI.

- No significant difference was found ($p < .05$) by status on HBVCI scores for moral reasoning. $F(2,183) = .50$, $p = .61$. Athletic training students scored slightly higher ($M = 31.46 \pm 5.20$) than both individual ($M = 29.46 \pm 8.88$) and team sport athletes ($M = 29.01 \pm 9.43$), although not significantly.

Hypothesis Two

No difference exists by gender of athletic training students and student athletes in general sport moral reasoning using the HBVCI.

- A significant difference was found ($p < .05$) by gender on HBVCI scores for moral reasoning. $F(1,183) = 11.78$, $p = .001$. Females, regardless of status, ($M = 32.93 \pm 8.11$) scored significantly higher on moral reasoning compared to males ($M = 25.92 \pm 8.20$).

Hypothesis Three

No difference exists in the interaction of gender by status in general sport moral reasoning using the HBVCI.

- No significant difference was found ($p < .05$) with the interaction of gender by status on HBVCI scores for moral reasoning. $F(2,183) = 2.52$, $p = .08$ (see Table 2).

Table 2. Means and standard deviations for the interaction of gender by status on HBVCI

	Males			Females		
	N	Mean	Sd	N	Mean	Sd
Team Sport	69	25.06	8.05	55	33.96	8.73
Individual Sport	15	27.47	10.48	24	30.71	7.71
Athletic Training Students	10	29.50	3.24	16	32.69	5.89

Results of Ergogenic Aids Moral Competence Inventory

Hypothesis Four

No difference exists by status in the moral reasoning of doping in sport using the EAMCI.

- A significant difference was found ($p < .05$) by status on EAMCI scores for the moral reasoning of doping in sport. $F(2,173) = 3.03, p = .05$. Athletic training students scored slightly higher ($M = 8.73 \pm 1.28$) than individual sport athletes ($M = 8.15 \pm 1.50$) and team sport athletes ($M = 7.93 \pm 1.46$) (see Table 3 for descriptive data).

The EAMCI required participants to make a choice about what the subject of the scenario should do. After making the decision participants were required to rank the three reasons provided that correspond to the decision they chose in order of most important to least important in making their decisions. For example, if a participant decided to select take the drug then he or she was asked to rank the reasons such as it's not illegal, everybody's doing it, and it's not technically cheating.

Table 3. Frequencies of decisions and reasons for decisions rated “most important” by status

Decision #1 – Arnold is married with two small children. He is the sole provider for his family through a lucrative sports endorsement deal. However, this past year he suffered a severe knee injury and underwent reconstructive surgery. Arnold is in rehab and expected to be back on the field this season. Unfortunately rehab is slow, and it looks as if Arnold will miss the entire season. Arnold’s sponsors have threatened they will withdraw financial support should he not perform this season. He learns about a prohibited substance that can speed up his recovery, for which there is no chance of being discovered during a drug test.

	Take the drug		Can't decide		Don't take the drug	
	Freq.	%	Freq.	%	Freq.	%
Team sport athletes	18	15.8	19	16.7	77	67.5
Individual sport athletes	5	12.8	3	7.7	31	79.5
Athletic training students	3	11.5	1	3.8	22	84.6

	Team		Indiv.		ATS	
	F	%	F	%	F	%
Most common reasons to take the drug						
Arnold must take the drugs to support his family, regardless of sport rules prohibiting performance enhancing drugs.	17	94.4	4	80.0	2	66.7
The drug will be out of Arnold’s system before the competition starts. Technically it’s not cheating.	1	5	0	0	1	33.3
Arnold will not be caught so there is no chance of Arnold be suspended or banned from the sport.	0	0	1	20	0	0.0
Most common reasons why participants couldn't decide						
Both options are plausible in such a complicated situation. These are two balanced options; Arnold is not at fault whatever choice he makes.	6	31.6	0	0	0	0.0

I do not care whether Arnold chooses to dope or not. As long as it does no impact me, I do not care.	2	10.5	0	0	0	0.0
Arnold should do whatever he thinks will produce the most positive outcome.	10	52.6	3	100	0	0.0
Most common reasons not to take the drug						
Testing positive would bring a lot of embarrassment and humiliation to Arnold's family.	15	19.5	6	19.4	2	9.1
Arnold should not take the drugs because doping is against the rules. There are no exceptions to this rule.	37	48.1	10	32.3	16	72.7
Arnold must not take the drugs because his opponents have a right to drug free competition and equal opportunity to succeed.	22	28.6	13	41.9	4	18.2

Decision #2 – George learns of a new supplement that is not on WADA's list of banned substances. George learns that his competition is already using it and since they beat him last year he's tempted to try it. What should George do?

	Take the drug		Can't decide		Don't take the drug	
	Freq.	%	Freq.	%	Freq.	%
Team sport athletes	36	31.6	27	23.7	51	44.7
Individual sport athletes	13	33.3	8	20.5	18	46.2
Athletic training students	9	34.6	5	19.2	12	46.2

	Team		Indiv.		ATS	
	F	%	F	%	F	%
Most common reasons to take Supplement X						
Supplement X is not on the United States Anti-Doping Agencies list of banned substances; George is not violating any rules.	19	52.8	3	23.1	2	22.2
Society would forgive George for taking Supplement X. Competition is about getting and edge. It is about doing whatever it takes win.	9	25.0	2	15.4	5	55.6
Other athletes are already taking supplement S, George is justified in taking supplement X to level the playing field.	8	22.2	8	61.5	1	11.1
Most common reasons why participants couldn't decide						
I don't care what supplements athletes take. It's George's body, if he wants to do it, go for it.	7	25.9	2	25.0	2	40.0
If they are all doped, does it really matter?	12	44.4	3	37.5	3	60.0

George should do whatever he feels is right or comfortable.	6	22.2	2	25.0	3	60.0
Most common reasons not to take Supplement X						
George should not use supplement X if he wants to be consistent with his moral beliefs that stress honesty and justice.	12	23.5	5	27.8	1	8.3
George should first ask the athletic trainer or team physician before using supplement X.	19	37.3	5	27.8	9	75.0
If other athletes learn about George and supplement X they will be forced to take it too, even though they do not want to.	18	35.5	7	38.9	3	25.0

Decision #3 – Danny has enrolled into Coach Great’s javelin camp. Coach Great is considered the best coach of the century and Danny’s parents paid big bucks for him to attend. Each day the athletes are to take a prescribed cocktail of supplements. Danny feels pressured to take the drug because anyone who questions Coach Great’s methods has to leave camp. What should Danny do?

	Take the drug		Can’t decide		Don’t take the drug	
	Freq.	%	Freq.	%	Freq.	%
Team sport athletes	15	13.2	27	23.7	72	63.2
Individual sport athletes	5	12.8	4	10.3	30	76.9
Athletic training students	2	7.7	4	15.4	20	76.9

	Team		Indiv.		ATS	
	F	%	F	%	F	%
Most common reasons to take the cocktail						
If Danny is caught, he will not be punished, Coach Great will take the blame for giving Danny an illegal supplement.	5	33.3	2	40.0	1	50.0
Danny is in no position to question Coach Great’s methods and tactics, he should just do what Coach Great says.	7	46.7	0	0.0	0	0.0
Taking the supplements is just a natural progression in Danny’s career. Danny is justified in advancing his athletic career.	3	20.0	3	60.0	1	50.0
Most common reasons why participants couldn’t decide						

Danny should do whatever will make the most people happy or create the least conflict.	12	44.4	0	0.0	2	50.0
All options are equally valid.	6	22.2	1	25.0	2	50.0
This does not impact me. I do not care whether Danny dopes or not.	8	29.6	3	75.0	0	0.0
Most common reasons not to take the cocktail						
Other coaches and athletes would not approve of Coach Great's giving supplement to his athletes.	21	29.2	8	26.7	1	5.0
If taking supplements is not consistent with Danny's moral beliefs, then he should not take the supplements offered by Coach Great.	27	37.5	9	30.0	15	75.0
Coach Great's secret supplements and performance boosters are the key ingredients of success in Coach Great's training program.	21	29.2	11	36.7	3	15.0

Decision #4 – Tony, a certified athletic trainer, has built a strong, respectful working relationship with one of his athletes, Andrew. During a random, in-house drug test for marijuana Andrew tests positive. He has never failed a drug test before. The governing body requires that all positive tests be reported to the ethics committee. Andrew pleads with Tony not to report the test since marijuana does not enhance performance or cheat fellow athletes. What should Tony do?

	Don't report the test		Can't decide		Report the test	
	Freq.	%	Freq.	%	Freq.	%
Team sport athletes	15	13.2	25	21.9	74	64.9
Individual sport athletes	11	28.2	7	17.9	21	53.8
Athletic training students	0	0	2	7.7	24	92.3

	Team		Indiv.		ATS	
	F	%	F	%	F	%
Most common reasons not to report the test						
Reporting the positive test will ruin Andrew's career and reputation. Marijuana is not a performance enhancer anyway.	8	53.3	2	18.2	0	0.0
Maintaining Tony's relationship with Andrew is more important than sports rules.	1	6.7	3	27.3	0	0.0

Other athletic trainers do not report in house tests, anyway nobody would ever know if Tony does no report the test.	5	33.3	6	54.5	0	0.0
Most common reasons why participants couldn't decide						
Everybody has different views about what Tony should do so it is just a mater of opinion. It's up to Tony to decide.	11	44.4	3	42.9	1	50.0
As long as it does no impact me I do not care.	10	40	2	28.6	1	50.0
There is no clear cut solution to Andrew and Tony's situation. It is hopeless to try to arrive at a final answer to this situation.	4	16	2	28.6	0	0.0
Most common reasons to report test results						
If the positive test is discovered somehow, Tony would lose his job, and be reprimanded by the Certified Athletic Trainers Board.	19	25.7	5	23.8	3	12.5
If athletic trainers stop reporting in house tests, the sport will be full of druggies.	29	39.2	5	23.8	16	66.7
If Andrew wants to participate in sport he should comply with the rules of the sport.	23	31.1	9	42.9	4	16.7

Decision #5 – Ian and William are teammates on a highly successful and competitive track team, whose high-powered and often negative coach expects unrealistic success. Ian is in a slump and his current times are not up to the coaches' competitive standards. Coach has informed Ian that either he will improve or he will be cut. William has overheard the conversation and decided to contact Dr. Smith who has a history of help athletes get back their competitive edge. Dr. Smith gives William a prescription for Ian guaranteed to help improve Ian's performance. What should Ian do?

	Take the drug		Can't decide		Don't take the drug	
	Freq.	%	Freq.	%	Freq.	%
Team sport athletes	29	25.4	25	21.9	60	52.6
Individual sport athletes	7	17.9	9	23.1	23	59.0
Athletic training students	2	7.7	5	19.2	19	73.1

	Team		Indiv.		ATS	
	F	%	F	%	F	%
Most common reasons to take the prescription						
Ian is Being a team player; his teammates would do the same if they were in a similar situation.	8	26.7	1	14.3	2	100
Ian has no alternative but to take his destiny and the law into his own hands.	11	37.9	2	28.6	0	0.0
If Ian is caught he will not be punished because Ian's case qualifies as therapeutic use because a physician signed the prescription.	11	37.9	4	57.1	0	0.0
Most common reasons why participants couldn't decide						
As long as it does not impact me I do not care.	10	40.0	3	33.3	1	20.0
No one has the right to judge what is right or wrong for Ian and William	6	24.0	2	22.2	2	40.0
This is a complicated situation and making the right decision is not clear-cut or simple.	7	28.0	4	44.4	1	20.0
Most common reasons Ian should not take the prescription medication						
Ian and William may be fined and kicked off the team.	20	33.3	6	26.1	1	5.3
If Ian considers himself an honest and decent man he would not take the prescription medication to enhance his performance.	23	38.3	6	26.1	15	78.9
Ian's coach is putting sport above human dignity or consideration of fellow man.	14	23.3	9	39.1	3	15.8

Hypothesis Five

No difference exists by gender of athletic training students and student athletes in the moral reasoning of doping in sport using the EAMCI.

- A significant difference was found ($p < .05$) by gender on EAMCI scores for the moral reasoning of doping in sport. $F(1,173) = 11.54$, $p = .001$. Females, regardless of status, ($M = 8.53 \pm 1.12$) scored significantly higher on moral reasoning compared to males ($M = 7.60 \pm 1.65$) (see Table 4 for descriptive data).

Table 4. Frequencies of decision by gender on EAMCI

	Males		Females	
	Freq.	%	Freq.	%
Decision 1 -				
Take the drug	21	25.3	5	5.2
Can't decide	11	13.3	12	12.5
Don't take the drug	51	61.4	79	82.3
Decision 2 -				
Take the drug	31	37.3	27	28.1
Can't decide	19	22.9	21	21.9
Don't take the drug	33	39.8	48	50.0
Decision 3 -				
Take the drug	14	16.9	8	8.3
Can't decide	26	31.3	9	9.4
Don't take the drug	43	51.8	79	82.3
Decision 4 -				
Take the drug	16	19.3	10	10.4
Can't decide	19	22.9	15	15.6
Don't take the drug	48	57.8	71	74.0
Decision 5 -				
Take the drug	23	27.7	15	15.6
Can't decide	20	24.1	19	19.8
Don't take the drug	40	48.2	62	64.6

Some interesting descriptive data emerged from the results in the reasoning behind the decisions made by males and females. (See table 5 for descriptive data).

Table 5. Frequencies reasons for decisions rated “most important” by gender on EAMCI

Decision 1				
	Male		Female	
	Freq.	%	Freq.	%
Most common reason to take the drug				
Arnold must take the drugs to support his family, regardless of sport rules prohibiting performance enhancing substance	19	91	4	80
Most common reason participants couldn't decide				
Arnold should do whatever he thinks will produce the most positive outcome.	7	70	6	50

Most common reason not to take the drug				
Arnold should not take the drug because doping is against the rules. There are no exceptions to the rule.	20	44	43	54
Decision 2				
	Male		Female	
	Freq.	%	Freq.	%
Most common reason to take the drug				
Supplement X is not on the United States Anti-Doping Agency's list of banned substances	26	87	26	96
Most common reason participants couldn't decide				
George should do whatever he feels is right or comfortable	11	73	13	62
Most common reason not to take the drug				
George should first ask the athletic trainer or team physician before taking supplement X.	17	59	25	52
Decision 3				
	Male		Female	
	Freq.	%	Freq.	%
Most common reasons to take the drug				
If Danny is caught he will not be punished, Coach Great will take the blame for giving Danny an illegal supplement.	7	50	4	50
Taking the supplement is just a natural progression in Danny's career. Danny is justified in advancing his athletic career.	6	43	-	-
Most common reason participants couldn't decide				
This does no impact me. I don't care whether Danny dopes or not.	10	44	-	-
All options are equally valid.	-	-	7	88
Most common reason not to take the drug				

If taking supplements is not consistent with Danny's moral beliefs then he should not take the supplements offered by Coach Great.	29	76	59	75
Decision 4				
	Male		Female	
	Freq.	%	Freq.	%
Most common reasons not to report the test				
Reporting the test will ruin Andrew's career and reputation. Marijuana is not a performance enhancer anyway.	7	47	8	80
Maintaining Tony's relationship with Andrew is more important the sports rules.	6	40	-	-
Most common reason participants couldn't decide				
Everybody has difference views about what Tony should do; so it is just a matter of opinion. It's up to Tony to decide.	10	59	12	80
Most common reason to report the test				
If Andrew wants to participate in sport, he should comply with the rules of the sport.	24	57	43	61
Decision 5				
	Male		Female	
	Freq.	%	Freq.	%
Most common reason to take the drug				
If Ian is caught he will not be punished because, Ian's case qualifies as therapeutic use because a physician signed his prescription.	12	52	15	100
Most common reason participants couldn't decide				
This is a complicated situation and making the right decision is not clear-cut or simple.	13	72	15	83
Most common reason not to take the drug				
If Ian considers himself an honest and decent man he would not take the prescription medication to enhance his performance.	21	62	31	50

Hypothesis Six

No difference exists in the interaction of gender by status in the moral reasoning of doping in sport using the EAMCI.

- No significant difference was found ($p < .05$) with the interaction of gender by status on EAMCI scores for the moral reasoning of doping in sport. $F(2,173) = .94, p = .39$ (see Table 6).

Table 6. Means and standard deviations for the interaction of gender by status on EAMCI

	Males			Females		
	N	Mean	Sd	N	Mean	Sd
Team Sport	59	7.51	1.58	55	8.38	1.18
Individual Sport	14	7.29	1.90	25	8.64	.95
Athletic Training Students	10	8.50	1.51	16	8.88	1.15

CHAPTER FIVE

Discussion

From the ideal perspective of performance, sport is amazingly beautiful. In its purest form athletes are driven to compete for the satisfaction of competition and the exhilarating sensation of adrenaline and sweat running through their bodies often drawing awe from spectators with extraordinary physical feats. “Citius, Altius, Fortius.” The historic Olympic motto describes the purpose of sport, victory goes to the best. This is the ideal, however, not a reality. Today, sport is about winning. At the college level it is too often about institutional prestige and tuition dollars and at the elite levels it is about fame, glory and significant increases in financial status. Today, people seem willing to try anything to win. The practice of doping is increasing in all levels of sport and efforts to reverse the trend seem to be falling far short.

According to this study, student athletes tend to reason from an ego-centered and relativistic approach citing the rules or legality of the issue when presented with a scenario specific to doping in sport. In this study, athletic training students reasoned similarly to their student athlete peers suggesting that they may not be able to assist curious student athletes in making decisions about doping from a consistent set of moral principles. These results are similar to the preliminary research findings of Beller, Stoll, Refvem, Williams, & Taylor-Hanson (in review) and Beller, Stoll, Williams, & Taylor-Hanson (in review) in that athletic trainers and athletic training students reason similarly to athletes from a very ego-centered approach.

“Moral reasoning plays a critical role in the production of moral behavior. In fact, even if other factors influence moral choices to a similar (or even greater) degree, moral reasoning is critical because it produces the moral meaning that an intended action has for an individual” (Bredemeier & Shields, 1994, p. 175). If the results of this study are supported by future studies

and find that low levels of moral reasoning and the prevalence of making decisions from a rule based perspective underlie the issues of doping seen in sport then the first step in reversing the trend has been taken. Furthermore, according to Lickona (1991), in order for consistent moral action to occur, there must first be a moral awareness and moral reasoning, coupled with moral feeling in terms of empathy, valuing the good and positive self esteem.

Hahm-Beller Values Choice Inventory (HBVCI)

For the HBVCI, scores can range between 12-60. It has been established that a score of 20-30 on the HBVCI represents a level of moral reasoning similar to that of a junior high school student (Beller, Stoll, & Hahm, 2006). Individuals in this range tend to reason from an ego-centered and relativistic perspective. They make decisions based on immediate benefits or consequences. Individuals scoring between 30-40 on the HBVCI more often tend to take into account societal norms and laws that underlie what is the right thing to do and why. Scores that fall in the range of 40-50 on the HBVCI reflect a reasoning process whereby the individual consistently uses a set of principles to determine whether an action or decision is inherently right or wrong apart from consequences to the person or persons involved.

In terms of general moral reasoning the results from this study were consistent with previous research concerning gender (Beller, 1990; Beller & Stoll, 1995; Beller, Stoll, Burwell, & Cole, 1996; Beller, Stoll, & Hansen, 2004). In this study females scored seven points higher on the HBVCI than males. While the interaction of gender by status was not significant, it was approaching significance with a p value of 0.08. This difference appears to be due to the eight point difference between team sport males and team sport females. However, results from this study do not support Gilligan (1977) and Rest & Narvaez's (1994) findings about gender.

No significant difference was found by status. However, the frequencies and ranges of the scores from participants in each category of status raise some concerns. For status, 44% percent of HBVCI scores from team sport student athletes were lower than the team sport mean of 26, with scores ranging from 12-60 representing a platykurtic curve of distribution. The frequency of scores from the individual sport student athletes represents a mesokurtic curve, or a more normal distribution when compared to scores from team sport student athletes. The range of scores for individual sport athletes was 13-50 with approximately 47% of athletes falling below the individual sport mean of 29.6. These results suggest that a large portion of student athletes may be unable or unwilling to make reasoned decisions based on a consistent set of moral principles.

The frequencies of scores on the HBVCI for athletic training students presented a trimodal distribution with a small range of 20-41. This could be due to the smaller number of athletic training student participants, however the standard deviation was also significantly smaller for the scores of athletic training students. The results showed little dispersion with no scores at the extreme low or high ends. According to these results the athletic training students that participated in this study essentially answered the questions in a very similar manner to each other, which may suggest that something about their educations and/or clinical experiences have taught or socialized these students to reason from a particular perspective. And, these findings may also be supportive of what Kohlberg (1975) described occurs when individuals function in groups with little outside influence. Unfortunately, according to these scores, it appears that 33% of the athletic training students who participated in this study, as well as approximately half of the team and individual sport athletes surveyed, reason from an ego-centered and relativistic perspective which can both be directly tied to the concept of compartmentalization. The fact that

athletic training students did not score significantly higher than individual and team sport athletes supports the argument that there is something about the competitive environment that negatively influences the moral reasoning processes of individuals involved. By the nature of their clinical experiences, most athletic training students are encouraged to take ownership of the teams with which they work. They are encouraged to work with the athletes and coaches on a professional level and as a result are directly injected into the daily and seasonal activities of their teams. They attend most practices and competitions often serving long hours alongside the certified athletic trainer to meet the physical and sometimes psychological needs of their athletes. As a result, most athletic training students, like certified athletic trainers, are not immune to the emotional montage inherent in athletics. After serving 1200 hours in an athletic training education program there is nothing like sweat, blood and tears of “game day.” The results of this study, as well as previous research (Beller, 1990; Beller & Stoll, 1995; Beller, Stoll, Burwell, & Cole, 1996; Beller, Stoll, & Hansen, 2004) suggest that athletic training students may be as driven as coaches and athletes to try anything to gain a competitive edge. Comments such as, “Soccer is a dirty sport,” and, “It’s just part of the game” reflecting an internal process of moral justification. In its fundamental form, the attitude is that while certain behaviors may not be acceptable outside the game, they are acceptable in sport as “part of the game.”

Due to the consistent results of research on the topic of moral reasoning in sport the United States Anti-Doping Agency argues that moral reasoning specific to issues of doping in sport may prove valuable in the fight against doping. Although only in its pilot stage, results and frequencies from the EAMCI were particularly interesting and may provide insight to the specific reasoning process of decisions made regarding doping in sport. If the reasoning process that takes place prior to a decision or action can be identified and altered, perhaps the fight

against doping can become more effective and efficient in the future. Thus, the importance of the EAMCI.

Ergogenic Aids Moral Competence Inventory (EAMCI)

The possible range of scores for the EAMCI is 5-10. Responses of take the drug or can't decide suggest a reasoning process based on something other than a consistent set of moral principles and were, therefore, given a score of 1. Responses of don't take the drug were given a score of 2. In addition to the analysis of variance for the main effects of the EAMCI, frequencies were run on both the decisions made for each scenario as well as the reasons respondents ranked from most important to least important for each decision made.

Differences by gender on EAMCI scores

As is consistent with the results of most studies using the HBVCI, a significant difference was found by gender on EAMCI (Beller, 1990; Beller & Stoll, 1995; Beller, Stoll, Burwell, & Cole, 1996; Beller, Stoll, & Hansen, 2004). Of 415 decisions total made by male respondents only 215 were don't take the drug. This 52% can be compared to the 71% of total decisions made by female respondents not to take the drug. The frequency of decisions to take the drug or can't decide were particularly high for scenarios two and five for all respondents.

One possible explanation for why females consistently score higher than males may be consistent with a theory put forth by Gilligan (1977) suggesting that females have an innate care-giving nature. Moral reasoning and behavior are directly related to making decisions about interactions with people outside one's self. Perhaps the nature of a care-giver to consider the welfare of others has a positive impact on moral reasoning and behavior. While the differences between males and females and the ability of each to reason morally may be best discussed in

another paper, the notions of care-giving and giving consideration to the welfare of others may also pertain to the certified athletic trainer and athletic training students.

Although the rates at which females chose don't take the drug were higher than males and the rates at which males chose take the drug were higher than females the most commonly cited reasons for every decision to take the drug, can't decide or don't take the drug were very similar. For example, on decision one 25% of males said take the drug compared to only 5% of females and only 61% of males said don't take the drug compared to 82% of females. However, the most commonly cited reason for males and females who decided to take the drug was to support his family. The most commonly cited reason for both males and females who decided not to take the drug was that doping is against the rules and there are no exceptions. So while the decisions made were different from males to females, the reasons for the decisions were not. It appears that females reason from a similar rule based perspective as males.

Differences by status on EAMCI scores

A small significant difference was found by status with $p = 0.51$ with athletic training students scoring the highest approximately 0.7 points above both team and individual sport student athletes. However, these results combined with the results on the HBVCI where there was no significant difference by status raises some concerning issues for the future of the athletic training profession especially as related to their role as what Kohlberg (1975) calls a helping profession.

Athletic training is an allied health care profession. Certified athletic trainers charge themselves with a responsibility to serve individuals in a variety of medically related capacities and serve in a position of authority with a power derived from their expertise. Therefore, certified athletic trainers should also be charged with a responsibility to act in a moral and ethical

manner making decisions based upon a consistent set of principles in their service to individuals with an active lifestyle. According to the results of this study, however, on three of the five scenarios at least 25% of the sample of athletic training students chose take the drug or can't decide.

Scenario two presents a situation that takes place in a local gym in which an individual is faced with the dilemma whether or not to try the new Supplement X. Supplement X is clearly not banned by the World Anti-Doping Agency and the individual is confident that his competition is already taking it. For athletic training students, this scenario is all too real except that they are faced with responding to curious athletes who turn to them as experts, or at least future experts in the field. In a class discussion on this topic with athletic training students from this sample, many students reported that they, in fact, have been approached by athletes who are curious about performance enhancing substances. It would be reasonable to expect athletic training students to have no problem recommending the athlete to proceed with caution and not take the drug when faced with a temptation to try a new drug if only from a purely medical perspective.

Unfortunately, 9 out of 26, nearly 1/3 of the sample of athletic training students for this study chose take the drug.

If for no other reason than the inherent health risks potentially associated with doping, athletic training students should have been expected to make the decision not to take the drug in every single scenario. It would be reasonable to expect such a response if one could be certain that the educational experiences of athletic training students provided them with opportunities to develop, utilize and test their abilities to reason and act in a moral and ethical manner. The fact that in this study at least one quarter of the sample of athletic training students chose take the drug or can't decide for three of the five scenarios, and on a consistent basis throughout the

research scored relatively low when compared to their non-athletic training student and non-student athlete peers suggests that something may be missing from their educational experiences. Again, the theory that something about the competitive nature of sport negatively influences the moral reasoning of athletic training students seems valid. The inherent immersion of athletic training students into the culture of sport allows athletic training students to compartmentalize in a manner similar to athletes. According to Kohlberg (1975), the more one is challenged by others at a higher moral level, the more one's viewpoints are shaped and changed to reflect a higher stage of thinking. However, if one is surrounded by like thinking, then he or she is not challenged and will tend not to grow beyond oneself. The results of this study, in combination with previous research seem to suggest that it may be valuable to make an intentional effort to focus educational resources on moral and ethical decision making as it pertains to athletic training students' program of higher education.

The samples of team and individual sport athletes were much larger than the sample of athletic training students. However, the percentages of individuals who chose take the drug or can't decide was just as high, or higher, than for athletic training students. The notion and practice of gamesmanship, pushing rules to the limit by dubious means without getting caught is reflected by the process of rule principled reasoning.

Rule Principled Reasoning

According to the results of this study, it appears that Division I student athletes and athletic training students do not reason or make decisions from a consistent set of moral principles. The question is raised then, how do they reason through the decision making process when presented with a moral dilemma? This discussion will examine the reasons indicated by respondents as to why they chose take the drug, do not take the drug or can't decide.

While analyzing the results of this particular study, scenarios two and five produced interesting sets of frequencies that may provide valuable insight as to the reasoning processes of division I student athletes and athletic training students. The following is scenario two:

George, while hanging out at the local gym, learns of a new supplement, Supplement X, which is supposed to improve performance significantly and is rumored to be a precursor for testosterone, which is not presently on the World Anti-Doping Agency's (WADA) list. George recently learned that his competition is taking Supplement X and beat George last season.

What should George do?

When analyzed by gender, 50% percent of female and 60% percent of male respondents chose either take the drug, or can't decide. By status, between 54-55% of each group, including team sport athletes, individual sport athletes and athletic training students chose take the drug or can't decide. Respondents who selected take the drug were most likely to reason that "Supplement X is not on the United States Anti-Doping Agency's list of banned substances; George is not violating any rules." It appears that the reasoning process used by these respondents may have more to do with the rules and legality of a particular decision. Since this scenario clearly states that the drug is currently not on WADA's list of banned substances it is legal and, therefore, acceptable to use. Respondents who chose can't decide were most likely to reason that, "If they are all doped, does it really matter?" An interesting comment made by a respondent during data collection was, "Morals, morals, morals. I don't want to think about those today." This apathetic attitude seems reflective of the reason most often chosen by respondents as to why they couldn't make a decision about the right thing to do.

Scenario five presented a similar scenario, but the illegality of the decision to be made was not clearly given. According to the results, 52% of male respondents decided take the drug or can't decide compared to only 35% of female respondents. Only 27% of athletic training students chose take the drug or can't decide compared to 47% and 41% of team sport and individual sport athletes respectively. The following is scenario five:

Ian and William are teammates on a highly successful and competitive track team, whose high-powered and often negative coach expects unrealistic success. Ian is in a slump and his current times are not up to the coaches' competitive standards. Coach has informed Ian that either he will improve or he will be cut. William has overheard the conversation and decided to contact Dr. Smith who has a history of helping athletes get back their competitive edges. Dr. Smith gives William a prescription for Ian guaranteed to help improve Ian's performance.

The differences in the frequencies between athletic training students and student athletes for this scenario may represent an increased ability of student athletes to personally identify with the characters in the scenario. Unfortunately, scenarios such as this are all too real in the world of sport. While athletes are ultimately responsible for the substances they consume, often times it is by the coercion and manipulation of an individual in a position of authority over the athletes that they take part in the practice of doping. Athletes have told stories about the process which includes a period of isolation and intense individual training periods. The individuals in authority provide information and recommendations associated with all aspects of the athletes' lives during this period, including nutritional recommendations and sometimes "supplemental" substances. Although scenario five does not necessarily tell such a story, it does include an

individual of higher ranking authority over an athlete providing an unknown substance with a “guarantee to improve performance.” This, combined with the pressure to perform no matter what it takes, while not an excuse, is an incredible amount of pressure for athletes as young as sixteen years old. It would be interesting to know how many athletes who dope do so with welcomed ignorance for fear that the truth about what they are being told to take may be to difficult to accept.

Over half of all male respondents chose take the drug or can’t decide overall on the EAMCI. This represents a significant number of athletes suggesting that they would be willing to dope in their efforts to be successful. During the data collection process multiple participants asked of scenario five, “Is the prescription legal or illegal?” As in the case of scenario two, the reasoning process seems to be based in the rules and legality rather than a consistent set of moral principles.

In a recent conversation with a coach of one of the athletic programs that participated in this study, a discussion of the role and sheer number of rules put forth by the National Collegiate Athletic Association (NCAA) came about. According to this coach, the general mentality among participants in the NCAA is that they are given complex and explicit rules and guidelines by which they are required to operate their programs. Therefore, if something is not illegal as expressed in the rules, it is acceptable and “fair game” as everybody has the same opportunity. She freely admitted that the compliance structure of the NCAA allows coaches and athletic programs to operate without ever making a moral judgment or decision and the decision making process has already been done for them. While a more complete discussion on the role of compliance offices at NCAA institutions has been remarkably addressed in another work by Stoll, Beller, and Durrant (1994) and is not intended to be the discussion of this paper, this

conversation and attitude speaks to many issues that affect the process of moral reasoning in our student athletes and athletic training students.

According to the results of this study, the use of a reasoning process dominated by the rules and legality of a scenario appears to permeate athletic departments and their student athletes. The ideal reasoned perspective includes a reasoning process by which individuals utilize a set of moral principles that take into account individual social norms and laws while maintaining a higher standard of morality. Student athletes, as well as athletic training students, are taught to make decisions with a policy and rule based approach. Both are encouraged, sometimes mandated to read policy and procedures manuals. They are asked to abide by the rules because they are told to do so. But the coach that said, “They (the NCAA) make all the decisions for us. There isn’t room for moral reasoning,” has pinpointed the issue exactly. There seems to be no discussion of what it means to be a honorable person, or a contributing member of an athletic department with a high quality of character. The issue with a reasoning process based in a rule principled foundation is that rules don’t teach honor. Rest and Narvaez (1994) argued that low scoring students are unable to understand discussions about “intermediate level concepts” essentially because they do not have the cognitive foundation to even recognize the issues. They don’t demand individuals to practice moral reasoning and if something isn’t used, we know it will progressively fade away.

Athletic departments provide ample opportunity for their student athletes to develop their physical and “life” skills. Athletic training students abide by strict rules and progress through rigorous training in their quests to becoming certified athletic trainers. Kohlberg (1975) argued that the discussion, debate and challenging of our views causes us to consider more sound positions, that consider the perspectives of others and social law. In the lives of these college

students, where are they challenged or encouraged to discuss character and honor as is a stated goal of higher education and the NCAA? When are they required to utilize and practice moral reasoning?

Conclusion

From the ideal sport perspective, the essential balance of commitment, determination, courage, dedication and incredible physical skill and ability could be used as the perfect training grounds for character development. In fact, since its inception, the NCAA has specifically described this development of character as one of the primary mechanisms by which the role of athletics supports the overall mission of higher education (Applin, 1979). The mission of higher education lies within the continual search for truth and development of positively contributing members of society and these objectives are achieved by the development of character (Cohen, 1998). While the purpose of this paper was not to argue the role of athletics in higher education, the two are obviously intertwined through mission and the institution of higher education has allowed the world of athletics to continue performing in support of its mission. One question addressed in this paper was, “Are intercollegiate athletics truly supporting this mission?” And, “To what extent is higher education supporting their mission of character development?” This study sought to describe the moral reasoning of student athletes and athletic training students related to general scenarios and doping specific scenarios in sport as one measure of character development.

According to the results of this study and consistent with previous studies (Beller, Stoll, Burwell, & Cole, 1996; Priest, Krause, & Beach, 1999), it appears that the mission of athletics in higher education may not be supported in practice. Overall, the results showed that the moral reasoning scores of student athletes, reflective of the ability of individuals to reason from a

consistent set of moral principles, were on the average fairly low. Moreover, since athletic training students are immersed into the education of a medical profession and considered a helping profession, and not as closely tied to the competitive experience of student athletes, it could be expected that athletic training students should score higher compared to student athletes. Yet, consistent with previous studies (Williams, 2006) this study found only a slight difference between the groups on one of the surveys, and no difference on the other.

Often times it seems that the focus of purpose for institutions of higher education tends to lie in the production of educated, productive citizens (Cohen, 1998). It could be argued that this focus draws attention away from the foundation of such a purpose which is character development. Perhaps an assumption exists that such development will naturally take place over the course of any given curriculum. According to the results of this and other studies that have examined the moral reasoning of collegiate students (Priest, Krause, & Beach, 1999; Williams, 2006; Beller, Stoll, Burwell, & Cole, 1996; Bredemeier & Shields, 1986), this assumption seems to be inaccurate. Research in the area of moral education suggests that the development of character requires intentional effort and it has been established that a curriculum specifically designed and implemented in moral education may be effective in addressing moral reasoning (Beller & Stoll, 1995; Bredemeier & Shields, 1995; Lickona, 1991; Stoll & Beller, 1995; Stoll, Beller, Cole, & Burwell, 1995).

While previous researchers have suggested that there is something specific about the competitive environment that negatively influences moral reasoning (Beller & Stoll, 1995; Beller, Stoll, Burwell, & Cole, 1996), low levels of moral reasoning may be a society wide issue and affecting change may seem to be a daunting task. However, the institution of higher education as whole may be positioned to begin affecting at least on the level of its students. The

Commission for Accreditation of Athletic Training Education Programs (CAATE) is responsible for establishing the curriculum of athletic training students at accredited programs. Therefore, perhaps CAATE can have a role in encouraging or requiring programs to address moral or ethical education. Outside of accrediting authorities, however, educators can play a significant role in affecting change by incorporating elements of cognitive dissonance and a challenging and discussing students' personal points of view with relationship moral principles and subject matter. The responsibility lies with all members of society, but the institution of higher education seems optimally equipped with opportunity and mission to affect change in moral reasoning, one small step to changing behavior.

Student athletes and athletic training students have one very important commonality and that is the fact that both are students in a system of higher education. For the most part, these students are willing to do what they are told. They usually attend classes, take exams, complete assignments and earn degrees. The question is, during these four to five years, could the system of higher education take more responsibility to intentionally challenge its students to develop a strategy to utilize and practice moral reasoning? What better place exists to pose such a challenge to developing character and members of society than the institution of higher education?

REFERENCES

- Alder, P., & Alder, P.A. (1985) From Idealism to Pragmatic Detachment: The Academic Performance of College Athletes. *Sociology of Education*, 58(October), 241-250.
- Applegate, E.A., & Grivetti, L.E. (1997). Search for the competitive edge: A history of dietary fads and supplements. *The Journal of Nutrition*, 127 (5S). 869-974.
- Applin, A.C. (1979). *The recent historical development of the NCAA*. Paper presented at the annual meeting of the North American Society for Sport History, Austin. In J. Davenport (1985). From crew to commercialism – The paradox of sport in higher education. In D. Chu, J.O. Segrave, & B.J. Becker (Eds.) (1979) *Sport and Higher Education* (5-17). Champaign, IL: Human Kinetics Publishers, Inc.
- Atkinson, E. (1991). Education & rehabilitation, solutions for drug Abuse. *Scholastic Coach*, 61(3), 38-40.
- Bamberger, M., & Yeager, D. (1997). Over the edge [Electronic version]. *Sports Illustrated* 86(15).
- Bahrke, M.S. & Yesalis, C.E. (2004). Abuse of anabolic androgenic steroids and related substances in sport and exercise. *Current Opinion in Pharmacology*, 4, 614-620.
- Beller, J.M. (1990). A moral reasoning intervention program of Division I athletes: Can athletes learn not to cheat? Unpublished doctoral dissertation. University of Idaho.
- Beller, J.M., & Stoll, S.K. (March, 2003). Moral reasoning of athletic training students. *Research*

Quarterly for Exercise and Sport (Suppl.), 74(1), A-91 .

Beller, J.M., & Stoll, S.K. (1995). Moral reasoning of high school student athletes and general students: An empirical study versus personal testimony. *Pediatric Exercise Science*, 7, 352-363.

Beller, J.M., & Stoll, S.K. (1993). Sportsmanship: An antiquated concept? *Journal of Physical Education, Recreation & Dance*. 64(6), 74-79.

Beller, J.M., Stoll, S.K., Burwell, B., & Cole, J. (1996). The relationship of competition and a Christian liberal arts education on moral reasoning of college student athletes. *Research on Christian Education*, 3, 99-114.

Beller, J.M., Stoll, S.K., & Hahm, C.H. (2006). The HBVCI Manual and Literature Review (2nd Ed). The University of Idaho Center for ETHICS*, Moscow, ID 83844.

Beller, J.M., Stoll, S.K., & Hansen, D. (March, 2004). Four-year longitudinal study of character development in high school sport. *Research Quarterly for Exercise and Sport*, 75(1), A-96-97.

Beller, J.M., Stoll, S.K., Refvem, N., & Hanson, D. (2003). Moral and Social Reasoning of Certified and Student Athletic Trainers: A Question of Care. Abstract, Research Consortium, *Research Quarterly*.

Beller, J.M., Stoll, S.K., Refvem, N., Williams, J., & Taylor-Hanson (in review). Moral reasoning of certified athletic trainers.

Beller, J.M., Stoll, S.K., Williams, J., & Taylor-Hanson (in review). Moral reasoning: A tension between athlete and athletic trainer.

Bredemeier, B.J., & Shields, D.L. (1995). *Character Development and Physical Activity*. Champaign, IL: Human Kinetics.

Bredemeier, B.J., & Shields, D.L. (1994). Applied ethics and moral reasoning in sport. In J.R. Rest, & D. Narvaez, (Ed.) *Moral Development in the Professions*. 173-188. New Jersey: Lawrence Erlbaum Associates, Inc.

Bredemeier, B.J. (1985). Moral reasoning and the perceived legitimacy of intentionally injurious sport acts. *Journal of Sport Psychology*, 7, 110-124. In B.J. Bredemeier, & D.L. Shields, (1995). *Character Development and Physical Activity*. Champaign, IL: Human Kinetics.

Bredemeier, B.J., & Shields, D. (1984a). Divergence in moral reasoning about sport and life. *Sociology of Sport Journal*, 1, 348-357. In B.J. Bredemeier, D.L. Shields (1995). *Character Development and Physical Activity*. Champaign, IL: Human Kinetics.

Bredemeier, B.J., & Shields, D. (1984b). The utility of moral stage analysis in the investigation of athletic aggression. *Sociology of Sport Journal*, 1, 138-149. In B.J. Bredemeier, & D.L. Shields (1995). *Character Development and Physical Activity*. Champaign, IL: Human Kinetics.

Bredemeier, B.J., & Shields, D. (1986). Moral growth among athletes and nonathletes: A comparative analysis. *Journal of Genetic Psychology*, 147, 7-18. In B.J. Bredemeier, &

- D.L. Shields (1995). *Character Development and Physical Activity*. Champaign, IL: Human Kinetics.
- Bredemeier, B.J., Weiss, M., Shields, D., & Cooper, B. (1986). The relationship of sport involvement with children's moral reasoning and aggression tendencies. *Journal of Sport Psychology*, 8, 304-318. In B.J. Bredemeier, & D.L. Shields (1995). *Character Development and Physical Activity*. Champaign, IL: Human Kinetics.
- Bredemeier, B.J., Weiss, M., Shields, D., & Shewchuk, R. (1986). Promoting moral growth in a summer sport camp: The implementation of theoretically grounded instructional strategies. *Journal of Moral Education*, 15, 212-220. In B.J. Bredemeier, & D.L. Shields (1995). *Character Development and Physical Activity*. Champaign, IL: Human Kinetics.
- Bredemeier, B.J., Weiss, M., Shields, D., & Cooper, B. (1987). The relationship between children's legitimacy judgments and their moral reasoning, aggression tendencies, and sport involvement. *Sociology of Sport Journal*, 4, 48-60. In B.J. Bredemeier, & D.L. Shields (1995). *Character Development and Physical Activity*. Champaign, IL: Human Kinetics.
- Catlin, D.H., & Murray, T.H. (1996). Performance – enhancing drugs, fair competition, and Olympic sport. *Journal of American Medical Association*, 276 (3), 231-237.
- Cohen, A.M. (1998). *The shaping of American higher education: Emergence and growth of the contemporary system*. San Francisco: Josey-Bass Publishers.

- Colby, A., Kohlberg, L., Gibbs, J., & Lieberman, M. (1983). A longitudinal study of moral judgment. *Monograph of the Society for Research in Child Development*, 48. 1-2, Serial no. 200. In J.R. Rest & D. Narvaez (Ed.) *Moral Development in the Professions*. 1-26. New Jersey: Lawrence Erlbaum Associates, Inc.
- Eichner, E.R. (1997). What athletes are using – and why. *The Physician and Sports Medicine*, 25 (4). 70.
- Fox, R.M., & DeMarco, J.P. (1990). *Moral Reasoning: A philosophic Approach to Applied Ethics*. New York: Harcourt Brace.
- Frankena, W.F. (1973). *Ethics* (2nd Ed). New York: Prentice Hall.
- Gerdy, J.R. (2000). *Want value for education dollars? Try music!* In J.R. Gerdy (Ed.) (2000). *Sports in School* (128-138). New York, NY: Teachers College Press.
- Gibbs, J.C. (1993) The cognitive developmental perspective. In W.M. Kurtines, & J.L. Gewurtz, (1995) *Moral Development: An Introduction*. 27-48 Florida International University: Chestnut Hill Enterprises, Inc.
- Gilligan, C. (1977). In a different voice: Women's conception of the self and of morality. *Harvard Educational Review*, 47, 481-517. In J. Beller (1990). A moral reasoning intervention program of Division I athletes: Can athletes learn not to cheat? Unpublished doctoral dissertation. University of Idaho.
- Goldman, B. (1992). *Death in the locker room II: Drugs & sports*. Chicago: Elite Sports Medicine Publications, Inc.

- Grossman, S.J., & Smiley, E.B. (1999). APPLE: Description and evaluation of a substance abuse education and prevention program for collegiate athletics. *The Journal of Primary Prevention*. 20 (1). 50-59.
- Hahm, C.H. (1989). Moral reasoning and development among general students, physical education majors and student athletes. Unpublished doctoral dissertation. University of Idaho.
- Hall, E. (1981). Moral development levels of athletes in sport specific and general social situations. Unpublished doctoral dissertation. Texas Women's University.
- Hahm, C.H., Beller, J.M., & Stoll, S.K. (1989). The Hahm-Beller Values Choice Inventory. Copywrited. (Available from the authors: PEB, University of Idaho, Moscow, Idaho, 83843).
- Hansen, D., Stoll, S.K., & Beller, J.M. (March, 2000). Fair play everyday: A sportsmanship training program for coaches. *Research Quarterly for Exercise and Sport (Suppl.)*.
- Hansen, D., Beller, J.M., & Stoll, S.K. (1998). A comparison of Moral reasoning scores between ninth grade student athletes and non-athletes. *Research Quarterly for Exercise and Sport (suppl.)*, 69(1), 122.
- Hawes, K. (1999). 'Its object shall be regulation and supervision': NCAA born from need to bridge football and higher education. *The History of the NCAA: The NCAA Century Series*. Retrieved October-November 2005, from <http://www.ncaa.org/about/ncaacenturyseries.html>.

- Honour, J.W. (2004). The fight for fair play: Can athletes be held responsible for every substance they take? *Nature*, 430 (6996). 143-144.
- Hough, D.O. (1990). Anabolic steroids and ergogenic aids. *American Family Physician*, 41. (1157-1164). In American Academy of Pediatrics: Committee on Sports Medicine and Fitness. (1997) Adolescents and anabolic steroids: a subject review. *Pediatrics*, 99 (6). Health Module 904.
- Howard, J. (2005). Olympic education program launched. *USOC Media Services*. Retrieved March 17, 2006 from the U.S. Olympic Team Website:
http://www.usolympicteam.com/117_38994.htm.
- Kant, I. (1785). Fundamental principles of the metaphysics of morals. In W.F. Frankena. (1973). *Ethics* (2nd ed). New York: Prentice Hall.
- Knight Commission on Intercollegiate Athletics. (1991). *Keeping the faith with the student athlete: A new model for intercollegiate athletics*. (Report). Retrieved March 31, 2007 from http://www.knightcommission.org/about/keeping_faith_introduction.
- Kohlberg, L. (1975). *Just Community*. Rest, J.R., & Narvaez, D. (Ed.) (1994) *Moral Development in the Professions*. 1-26. New Jersey: Lawrence Erlbaum Associates, Inc.
- Kohlberg, L. (1981). *Essays on moral Development: Vol. 1. The Philosophy of Moral Development*. San Francisco: Harper & Row. In Shields, D.L. & Bredemeier, B.J. (1995). *Character Development and Physical Activity*. Champaign, IL: Human Kinetics.

- Landry G.L., & Primos W.A. (1990). Anabolic steroid abuse. *Advanced Pediatric*, 37. (185-205).
In American Academy of Pediatrics: Committee on Sports Medicine and Fitness. (1997)
Adolescents and anabolic steroids: a subject review. *Pediatrics*, 99 (6). Health Module
904.
- Lickona, T. (1991). *Educating for Character*. New York: Bantam.
- Lumpkin, A., Stoll, S.K., & Beller, J.M. (1999). *Sport Ethics: Application for Fair Play*, 2nd
Edition. Boston: McGraw-Hill.
- McCarthy, M. (2005). Profile: Richard W Pound, QC – Chairman of WADA. *The Lancet*, 366.
366-367.
- Minelli, M.J., Rapaport, R.J., & Kaiser, D.A. (1992). Preventing steroid use – The role of the
health/physical educator. *Journal of Physical Education, Recreation & Dance*. 63 (8). 68.
- National Collegiate Athletics Association (2005). NCAA drug testing programs site coordinator
manual 2005-2006. Retrieved on 4/25/06 from
http://www.ncaa.org/library/sports_sciences/drug-testing_manual.pdf.
- National Collegiate Athletics Association (2007). Mission statement and core values. Retrieved
on 4/29/07 from http://www2.ncaa.org/portal/about_ncaa/overview/mission.html.
- Noakes, T.D. (2004). Tainted glory – doping and athletic performance. *The New England
Journal of Medicine*, 351 (9). 847-850.

- Perry, P.J., Lund, B.C., Deninger, M.J., Kutscher, E.C., & Schneider, J. (2005). Anabolic steroid use in weightlifters and bodybuilders: An internet survey of drug utilization. *Clin J Sports Med. 15* (5), 326-330.
- Piaget, J.P. (1932). *The Moral Judgment of the Child*. New York: Free Press. In Kurtines, W.M. & Gewirtz, J.L. (1995). *Moral Development: An Introduction*. Needham Heights, MA: Allyn & Bacon.
- Pincock, S. (2005). Feature gene doping. *The Lancet*, 366. (S18-19).
- Plant, M.L. (1961). The Place of Intercollegiate Athletics in Higher Education: Faculty Control. *The Journal of Higher Education*, 32(1), 1-8.
- Power, F. C., Higgins, A., & Kohlberg, L. (1989). Lawrence Kohlberg's Approach to Moral Education. New York: Columbia University Press.
- Priest R.G., Krause, J.V., & Beach, J. (1999). Four-year changes in college athletes ethical value choices in sports situations. *Research Quarterly for Exercise and Sport*, 70, 170-178.
- Rawls, J. (1971). *A Theory of Justice*. Cambridge, MA: Harvard University Press. In B.J. Bredemeier, & D.L. Shields (1995). *Character Development and Physical Activity*. Champaign, IL: Human Kinetics.
- Rest, J.R., & Narvaez, D. (Ed.) (1994) *Moral Development in the Professions*. 1-26. New Jersey: Lawrence Erlbaum Associates, Inc.

- Rest, J.R. (1994). Background: Theory and research. In J.R. Rest & D. Narvaez (Ed.) *Moral Development in the Professions*. 1-26. New Jersey: Lawrence Erlbaum Associates, Inc.
- Rest, J.R. & Narvaez, D. (1994). Summary: What's possible? In J.R. Rest & D. Narvaez (Ed.) *Moral Development in the Professions*. 213-224. New Jersey: Lawrence Erlbaum Associates.
- Rudd, A. (1998). Sport's perceived ability to build character. *Unpublished doctoral dissertation*. University of Idaho.
- Rudd, A., & Stoll, S.K. (1998). Understanding sportsmanship. *Journal of Physical Education, Recreation and Dance*. 69 (9), 38-43.
- Rudd, A., Stoll, S.K., & Beller, J.M. (1997). Expressed coaching behavior and its effect on athlete moral development, *Research Quarterly for Exercise and Sport (Suppl.)*.
- Savulescu, J., Foddy, B., & Clayton, M. (2004). Why we should allow performance enhancing drugs in sport. *British Journal of Sports Medicine*, 38. 666-670.
- Sawka, M.N., Joyner, M.J., Miles, D.S., Robertson, R.J., Spriet, L.L., Young, A.J. (1996). ACSM position stand: The use of blood doping as an ergogenic aid. *Medicine & Science in Sports & Exercise*. 28 (10). 127-134.
- Shields, D.L. & Bredemeier, B.J. (1995). *Character Development and Physical Activity*. Champaign, IL: Human Kinetics.
- Simon, R. (1985). *Sports and Social Values*. New Jersey: Prentice Hall.

- Smith, R.A. (1988). *Sports and Freedom: The Role of Big-Time College Athletics*. New York: Oxford University Press.
- Snarey, J. (1985). The cross-cultural universality of social-moral development: A critical review of Kohlbergian research. *Psychological Bulletin*, 97. 202-232.
- Stoll, S.K., Gwebu, A., & Beller, J.M. (2006). *A review of sport anti-doping education in the United States*. (A white paper). Moscow, ID: Center for ETHICS*, University of Idaho.
- Stoll, S.K., & Beller, J.M. (2006). *Ethical Dilemmas in College Sport*. In R.E. Lapchick (eds). *New Game Plans for Sport*. American College of Education Series on Higher Education, Greenwood Press.
- Stoll, S.K., & Beller, J.M. (1997). Performance enhancing drugs and the nature of character: Assessing higher order reasoning stimulated through computer generated multi-media programs, *Research Quarterly for Exercise and Sport (Suppl.)*.
- Stoll, S.K. & Beller, J.M. (1998). Can character be measured? *Journal of Physical Education, Recreation and Dance*. 69 (1). 19-25.
- Stoll, S.K., Beller, J.M., & Durrant, S. (1994). Compliance....impossible task? *The National Review of Athletics*, 1, (1). 16-27.
- Thoma, S. (1994). Moral judgments and moral action. In J.R. Rest & D. Narvaez (Ed.) *Moral Development in the Professions*. 199-212. New Jersey: Lawrence Erlbaum Associates, Inc.

USA Today (2007). BALCO investigation timeline. Retrieved January 20, 2007

<http://www.usatoday.com/sports/balcotimeline.htm>.

U.S. Anti-Doping Agency awards \$1.68 million in research grants. (2006) Retrieved April 25, 2006 from

http://www.usantidoping.org/files/active/resources/press_releases/USADA%20Press%20Release-%202005%20Grants_February%202006.pdf.

Williams, J. (2006). Principled thinking and ethics education of clinical athletic trainers.

Unpublished doctoral dissertation. University of Idaho.

World Anti-Doping Agency. (2003). World Anti-Doping Code. Retrieved April 25, 2006 from

http://www.wada-ama.org/rtecontent/document/code_v3.pdf.

APPENDIX A

*HAHM - BELLER VALUES CHOICE INVENTORY**

In The Sport Milieu

The following questionnaire describes incidents that have occurred in sport settings. Each question addresses moral values. Because there are no right or wrong answers, please circle the answer that best describes your feelings. SA = Strongly Agree; A = Agree, N = Neutral; D = Disagree; SD = Strongly Disagree

<p>1. Two rival basketball teams in a well-known conference played a basketball game on team A's court. During the game, team B's star player was consistently heckled whenever she missed a basket, pass, or rebound. In the return game on team B's home court, the home crowd took revenge by heckling team A's players. Such action is fair because both crowds have equal opportunity to heckle players.</p>	SA A N D SD
<p>2. During the double play in baseball, players must tag second base before throwing to first. However, some players deliberately fake the tag, thus delivering a quicker throw to first base. Pretending to tag second base is justified because it is a good strategy. Besides, the umpire's job is to call an illegal play.</p>	SA A N D SD
<p>3. Swimmers are taught to stand completely still just before the gun shot that starts the race. Some coaches teach their swimmers to move their head and upper body slightly which possibly forces an opponent to false start. If swimmer B false starts he will probably stay in the blocks a fraction longer when the race starts. Consequently, swimmer A may have an advantage during the race. Because all competitors have equal opportunity for this strategy, this is an acceptable means for swimmers to increase their advantage.</p>	SA A N D SD
<p>4. Male Soccer players are allowed to play the ball with any part of their body except the hands or outstretched arms. A soccer player receives a chest high pass and taps the ball to the ground with his hand. The referee does not see this action and the play continues. Because it is the referee's job to see these actions, the player is not obligated to report the foul.</p>	SA A N D SD
<p>5. Basketball player A skillfully dribbled the ball around her opponents to the basket. Just as she moved toward the basket, she was tripped by player B, causing the basket to be missed. If player A had not been tripped, two points probably would have been made. Player B is charged with a foul and player A must shoot two free throws. Player A missed the two shots from the free throw line. Player B is demonstrating good strategy by forcing player A to shoot two foul shots instead of an easy lay-up.</p>	SA A N D SD
<p>6. Certain basketball teams are coached to run plays that cause the opponents to foul. Players and coaches believe this is clever strategy because the opponents may foul out of the game, giving their team an advantage. Because the coach orders this type of play, the players should follow his directions.</p>	SA A N D SD

<p>7. Player A, who is the center on an ice hockey team, skated the puck down the ice around several opponents. He had a clear shot at the net as he passed player B. Player B, while pretending to go for the puck, decided to turn at the last second to trip Player A with his stick. Consequently, Player A missed the goal. Because Player A must now attempt a penalty shot instead of an easy goal, this is demonstrating good strategy.</p>	<p>SA A N D SD</p>
<p>8. During a volleyball game player A hit the ball over the net. The ball barely grazed off player B's fingers and landed out of bounds. However the referee did not see player B touch the ball. Because the referee is responsible for calling rule violations, player B is not obligated to report the violation.</p>	<p>SA A N D SD</p>
<p>9. Football players are not allowed to move beyond the line of scrimmage until the ball is snapped. Some coaches encourage their players to charge across the line of scrimmage a fraction of a second before the ball is snapped. The officials have difficulty seeing the early movement; therefore, the team has an advantage compared to their opponents. Because the strategy is beneficial and the officials must call the infraction, the team's actions are fair.</p>	<p>SA A N D SD</p>
<p>10. During an intramural basketball game, a student official awarded one free throw shot instead of two to team A. Team B knew the call was wrong, however chose to remain silent, knowing the call was to their advantage. Because the official's job is to make the proper calls, and it is not a formal game, team B's action was acceptable.</p>	<p>SA A N D SD</p>
<p>11. During a youth sport football game, an ineligible pass receiver catches a long touchdown pass and scores. The officials fail to determine that the player was ineligible. Because it is the referee's job to detect the ineligible receiver, the player or the coach does not have to declare an ineligible receiver</p>	<p>SA A N D SD</p>
<p>12. Ice hockey is often a violent game. Even though players are often hurt, hitting hard and smashing players into the boards is normal. Player A and B are opponents playing in a championship game. While trying to control the puck, player A smashed player B into the boards. Even though the puck is on the opposite side of the arena, player B, a few minutes later, retaliated by smashing player A into the boards. Because "hitting hard" and "smashing players into the boards" are an inherent part of the game, player B's action was acceptable.</p>	<p>SA A N D SD</p>

APPENDIX B

EAMCI Instrument

Please complete the following information:

1. Year of birth: _____
2. Gender: Male Female
3. Class: Freshman Sophomore Junior Senior
4. Status: Non-athlete Team Sport Athlete Individual Sport Athlete Athletic Training Student
5. Years participating in intercollegiate sport or in ATEP program: _____
6. Sources of information on performance enhancing drugs:
 Coach Athletic Trainer Physician Parents Other
 If your source is other please explain in space provided _____

DIRECTIONS

This questionnaire contains stories that have occurred in an athletic setting. Please read each scenario. Place an **X** in the blank next to the number with your choice of what should be done. Then go to the correspondingly numbered shaded box and rate each of the three justifications by filling in the circle under **1st, 2nd, or 3rd** based on what helped you make your choice. There are no “right” or “wrong” answers.

EXAMPLE

Julian, a highly recruited sprinter from Zimbabwe attends every practice, works diligently, and is highly respected by his peers and coaches. He is a good student, sits in front of every class, and is an active participant. He is an NCAA finalist and must miss three days of class for the championships. As per university policy, he contacts all of his professors and receives permission to take his final exams at a different time and place.

What should Julian do?

- 1** Julian should skip. (Go to box 1)
- 2** I can't decide. (Go to box 2)
- 3** Julian should not. Skip (Go to box 3)

If you choose decision 1, **rank** as your 1st, 2nd, and 3rd choice **only** those statements associated with the decision you selected.

1	a. Julian should skip because.....	1 st ○	2 nd ●	3 rd ○
	b. Julian should skip because.....	1 st ●	2 nd ○	3 rd ○
	c. Julian should skip because.....	1 st ○	2 nd ○	3 rd ●
2	d. Julian should.....	1 st ○	2 nd ○	3 rd ○
	e. Julian should.....	1 st ○	2 nd ○	3 rd ○
	f. Julian should.....	1 st ○	2 nd ○	3 rd ○
3	g. Julian should not skip.....	1 st ○	2 nd ○	3 rd ○
	h. Julian should not skip.....	1 st ○	2 nd ○	3 rd ○
	i. Julian should skip because.....	1 st ○	2 nd ○	3 rd ○

1. Arnold is married with two small children. He is the sole provider for his family through a lucrative sports endorsement deal. However, this past year he suffered a severe knee injury and underwent reconstructive surgery. Arnold is in rehab and expected to be back on the field this season. Unfortunately rehab is slow, and it looks as if Arnold will miss the entire season. Arnold's sponsors have threatened they will withdraw financial support should he not perform this season. He learns about a prohibited substance that can speed up his recovery, for which there is no chance of it being discovered during a test.

What should Arnold do?

- ① ___ Arnold should take the drug. (Go to box 1)
 ② ___ I can't decide. (Go to box 2)
 ③ ___ Arnold should not take the drug. (Go to box 3)

1

j. Arnold must take the drugs to support his family, regardless of sport rules prohibiting performance enhancing drugs.	1 st <input type="radio"/>	2 nd <input type="radio"/>	3 rd <input type="radio"/>
k. The drug will be out of Arnold's system before competition starts, technically it's not cheating.	1 st <input type="radio"/>	2 nd <input type="radio"/>	3 rd <input type="radio"/>
l. Arnold will not be caught, so there is no chance of Arnold being suspended or banned from the sport.	1 st <input type="radio"/>	2 nd <input type="radio"/>	3 rd <input type="radio"/>

2

m. Both options are plausible in such a complicated situation. These are two balanced options; Arnold is not at fault whatever choice he makes.	1 st <input type="radio"/>	2 nd <input type="radio"/>	3 rd <input type="radio"/>
n. I do not care whether Arnold chooses dope or not. As long as it does not impact me, I do not care	1 st <input type="radio"/>	2 nd <input type="radio"/>	3 rd <input type="radio"/>
o. Arnold should do whatever he thinks will produce the most positive outcome.	1 st <input type="radio"/>	2 nd <input type="radio"/>	3 rd <input type="radio"/>

3

p. Testing positive would bring a lot of embarrassment and humiliation to Arnold's family.	1 st <input type="radio"/>	2 nd <input type="radio"/>	3 rd <input type="radio"/>
q. Arnold should not take the drugs because doping is against the rules. There are no exceptions to this rule.	1 st <input type="radio"/>	2 nd <input type="radio"/>	3 rd <input type="radio"/>
r. Arnolds must not take the drugs because; his opponents have a right to drug free competition and equal opportunity to succeed.	1 st <input type="radio"/>	2 nd <input type="radio"/>	3 rd <input type="radio"/>

2. George, while hanging out at the local gym, learns of a new supplement, Supplement X, which is supposed to improve performance significantly and is rumored to be a precursor for testosterone, which is not presently on World Anti Doping Agency's (WADA) list. George recently learned that his competition is taking Supplement X and beat George last season. Supplement X is not on WADA's list, in addition, George learned most of his competition is already using supplement X.

What should George Do?

- 1 ____ George should take supplement X (Go to box 1)
 2 ____ I can't decide. (Go to box 2)
 3 ____ George should not take supplement X. (Go to box 3)

1	a. Supplement X is not on the United States Anti-Doping Agencies list of banned substances; George is not violating any rules.	1 st <input type="radio"/>	2 nd <input type="radio"/>	3 rd <input type="radio"/>
	b. Society would forgive George for taking supplement X, competition is about getting an edge. It all about doing whatever it takes to get the "W".	1 st <input type="radio"/>	2 nd <input type="radio"/>	3 rd <input type="radio"/>
	c. Other athletes are already taking supplement X, George is justified in taking supplement X to level the playing field.	1 st <input type="radio"/>	2 nd <input type="radio"/>	3 rd <input type="radio"/>

2	d. I don't care what supplements athletes take. Its George's body, if he wants to do it, go for it.	1 st <input type="radio"/>	2 nd <input type="radio"/>	3 rd <input type="radio"/>
	e. If they are all doped, does it really matter?	1 st <input type="radio"/>	2 nd <input type="radio"/>	3 rd <input type="radio"/>
	f. George should do whatever he feels right or comfortable.	1 st <input type="radio"/>	2 nd <input type="radio"/>	3 rd <input type="radio"/>

3	g. George should not use supplement X if he wants to be consistent with his moral beliefs that stress honesty and justice.	1 st <input type="radio"/>	2 nd <input type="radio"/>	3 rd <input type="radio"/>
	h. George should first ask the athletic trainer or team physician before using supplement X.	1 st <input type="radio"/>	2 nd <input type="radio"/>	3 rd <input type="radio"/>
	i. If other athletes learn about George and supplement X, they will be forced to take it too, even though they do not want to.	1 st <input type="radio"/>	2 nd <input type="radio"/>	3 rd <input type="radio"/>

3. Coach Great is a javelin guru and is considered the best coach of the century. His athletes always win. Coach Great has been known to push the rules to the limit in preparing athletes. Rumors exist that he uses a secret supplement formula to help athletes enhance performance. Danny enlists in Coach Great's training camp and his parents pay a hefty fee. Each day the athletes are to take a prescribed cocktail of supplements. Danny feels pressured, because anyone who questions Coach Great's methods has to leave camp.

What should Danny do?

① ___ Take Coach Great's cocktail. (Go to box 1)

② ___ I can't decide. (Go to box 2)

③ ___ Leave Coach Great camp. (Go to box 3)

1

a. If Danny is caught, he will not be punished, Coach Great will take the blame for giving Danny an illegal supplement.	1 st <input type="radio"/>	2 nd <input type="radio"/>	3 rd <input type="radio"/>
b. Danny is in no position to question Coach Great's methods and tactics, he should just do what Coach Great says.	1 st <input type="radio"/>	2 nd <input type="radio"/>	3 rd <input type="radio"/>
c. Taking the supplements is just a natural progression in Danny's career. Danny is justified in advancing his athletic career.	1 st <input type="radio"/>	2 nd <input type="radio"/>	3 rd <input type="radio"/>

2

d. Danny should do whatever will make the most people happy or create the least conflict.	1 st <input type="radio"/>	2 nd <input type="radio"/>	3 rd <input type="radio"/>
e. All options are equally valid.	1 st <input type="radio"/>	2 nd <input type="radio"/>	3 rd <input type="radio"/>
f. This does not impact me. I do not care whether Danny dopes or not.	1 st <input type="radio"/>	2 nd <input type="radio"/>	3 rd <input type="radio"/>

3

g. Other coaches and athletes would not approve of Coach Great giving supplements to his athletes.	1 st <input type="radio"/>	2 nd <input type="radio"/>	3 rd <input type="radio"/>
h. If taking supplements is not consistent with Danny moral beliefs, then he should not take the supplements offered by Coach Great.	1 st <input type="radio"/>	2 nd <input type="radio"/>	3 rd <input type="radio"/>
i. Coach Great's secret supplements and performance boosters are the key ingredients of success in Coach Great's training program.	1 st <input type="radio"/>	2 nd <input type="radio"/>	3 rd <input type="radio"/>

4. Tony is the kind of athletic trainer whom every athlete is comfortable with discussing any problem. Tony and Andrew have worked together for several years. During that time, Tony has developed a respect for Andrew as a person and his work ethic. They also have a close working relationship. Tony feels extremely fortunate to be friends with an athlete like Andrew. Andrew has been in the sport for four years and has never failed a drug test. During an in-house random test Andrew tests positive for marijuana. The governing body requires that all positives be reported to the ethics committee. Andrew pleads with Tony not to report the test since marijuana does not enhance performance or cheat fellow athletes.

What should Tony do?

❶ ___ Tony should report test results. (Go to box 1)

❷ ___ I can't decide. (Go to box 2)

❸ ___ Tony should not report test result. (Go to box 3)

1

a. If the positive test is discovered somehow, Tony would lose his job, and reprimanded by the Certified Athletic Trainers Board.	1 st <input type="radio"/>	2 nd <input type="radio"/>	3 rd <input type="radio"/>
b. If athletic trainers stop reporting in house tests, the sport will be full of druggies.	1 st <input type="radio"/>	2 nd <input type="radio"/>	3 rd <input type="radio"/>
c. If Andrew wants to participate in sport, he should comply with the rules of the sport.	1 st <input type="radio"/>	2 nd <input type="radio"/>	3 rd <input type="radio"/>

2

d. Everybody has different views about what Tony should do; so it is just a matter of opinion. It's up to the Tony to decide.	1 st <input type="radio"/>	2 nd <input type="radio"/>	3 rd <input type="radio"/>
e. As long as it does not impact me I do not care.	1 st <input type="radio"/>	2 nd <input type="radio"/>	3 rd <input type="radio"/>
f. There is no clear cut solution to Andrew and Tony's situation. It is hopeless to try to arrive at a final answer to this situation.	1 st <input type="radio"/>	2 nd <input type="radio"/>	3 rd <input type="radio"/>

3

g. Reporting the positive test will ruin Andrew's career and reputation. Marijuana is not a performance enhancer anyway.	1 st <input type="radio"/>	2 nd <input type="radio"/>	3 rd <input type="radio"/>
h. Maintaining Tony's relationship with Andrew is more important than sports rules.	1 st <input type="radio"/>	2 nd <input type="radio"/>	3 rd <input type="radio"/>
i. Other athletic trainers do not report in house tests, anyway nobody would ever know if Tony does not report the test.	1 st <input type="radio"/>	2 nd <input type="radio"/>	3 rd <input type="radio"/>

5. Ian and William are teammates on a highly successful and competitive track team, whose high-powered and often negative coach expects unrealistic success. Ian is in a slump and his current times are not up to the coaches' competitive standards. Coach has informed Ian that either he will improve or he will be cut. William has overheard the conversation and decided to contact Dr. Smith who has a history of helping athletes get back their competitive edge. Dr. Smith gives William a prescription for Ian guaranteed to help improve Ian's performance.

What should Ian do?

- 1 ____ Ian should take the prescription medication. (Go to box 1)
- 2 ____ I can't decide. (Go to box 2)
- 3 ____ Ian should not take the prescription medication. (Go to box 3)

1

a. Ian is being a team player; his teammates would do the same if they were in a similar situation.	1 st	2 nd	3 rd
	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
b. Ian has no alternative but to take his destiny and the law into his own hands.	1 st	2 nd	3 rd
	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
c. If Ian is caught he will not be punished because, Ian's case qualifies as therapeutic use, because a physician signed his prescription.	1 st	2 nd	3 rd
	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

2

d. As long as it does not impact me I do not care.	1 st	2 nd	3 rd
	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
e. No one has the right to judge what is right or wrong for Ian and William.	1 st	2 nd	3 rd
	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
f. This is a complicated situation and making the right decision is not clear-cut or simple.	1 st	2 nd	3 rd
	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

3

g. Ian and William may be fined and kicked off the team.	1 st	2 nd	3 rd
	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
h. If Ian considers himself an honest and decent man he would not take the prescription medication to enhance his performance.	1 st	2 nd	3 rd
	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
i. Ian's coach is putting sport above human dignity or consideration of fellow man.	1 st	2 nd	3 rd
	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

APPENDIX C

IRB approval

APPENDIX D

Informed Consent

WASHINGTON STATE UNIVERSITY *Student Informed Consent Form*

Researchers: Patti Davenport (Athletics 432-9845) & Jennifer Beller, Ph.D. (College of Education – 509-335-4907)

Researchers' statement

We are asking you to participate in a research study. The purpose of this consent form is to give you the information you will need to help you decide whether to be in the study or not. Please read the form carefully. You may ask questions about the purpose of the research, what we would ask you to do, the possible risks and benefits, your rights as a participant, and anything else about the research or this form that is not clear. When we have answered all your questions, you can decide if you want to give permission to participate in the study or not. This process is called 'informed consent.' We will give you a copy of this form for your records.

PURPOSE AND BENEFITS

This project is a study about college student athletes' and athletic training students' perceptions about why doping occurs in sport and the ethical issues surrounding doping in sport.

PROCEDURES

All volunteers will be asked to complete two different inventories. One will measure level of moral reasoning using scenarios related to general ethical issues that commonly occur and the other will measure moral reasoning using scenarios related specifically to issues surrounding doping. The data collection will be a one-time process. Completion of the surveys should take no more than 15 minutes.

RISKS, STRESS, OR DISCOMFORT

The research in which you will be participating does not involve more than the foreseeable risks involved in the day to day interactions in a sport and competitive venue.

OTHER INFORMATION

Data from your participation will remain confidential in a locked cabinet at the WSU Assessment and Evaluation Center. The PI and Co-PIs will have access to this information for research purposes and that data may be published without any identifiers to you.

There is no compensation associated with this study.

Printed name of researcher

Signature of researcher

Date

This study has been reviewed and approved by the WSU Institutional Review Board for human subject participation. If you have questions about the study please contact the researcher listed below. If you have questions about your rights as a participant please contact the WSU IRB at 509-335-9661 or irb@wsu.edu.