INDIVIDUAL MORAL PHILOSOPHIES AND ETHICAL DECISION-MAKING
OF UNDERGRADUATE ATHLETIC TRAINING EDUCATION
STUDENTS AND INSTRUCTORS

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This dissertation entitled

INDIVIDUAL MORAL PHILOSOPHIES AND ETHICAL DECISION-MAKING
OF UNDERGRADUATE ATHLETIC TRAINING EDUCATION STUDENTS
AND INSTRUCTORS

BY

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This study investigates if differences exist in students’ and instructors’ ethical ideologies and ethical decision-making. Ethics comprises only a small portion of the athletic training curriculum, which is a competency-based model. Ethical decision-making, however, is vital to practice effectively across clinical settings, and an individual’s ethical ideology may affect athletic training practitioners’ ethical decision-making abilities. The Ethics Position (EPQ) and Dilemmas in Athletic Training Questionnaires (DAT-Q) assessed respondents’ ethical ideologies and ethical decision-making. Respondents (N = 598) included 373 females (62.4%) and 225 males (37.6%), ranging in age from 18 to 63 years (M = 23.5, SD = 6.3). Principal components factor analysis with varimax rotation revealed both the EPQ and DAT-Q to possess reasonable construct validity. Internal consistency of the EPQ’s idealism and relativism subscales and the DAT-Q scale were .79, .72 and .82, respectively. Overall, respondents reported higher idealism (M = 37.56, SD = 4.91) than relativism scores (M = 31.70, SD = 4.80). The mean DAT-
Q score for all respondents was \( (M = 80.76, \ SD = 7.88) \). The research design incorporated three separate 2 (gender) x 3 (educational status) factorial ANOVAs utilizing idealism, relativism and DAT-Q scores as dependent measures. The main effect for gender illustrated that males reported significantly higher relativism scores, \( F(1, 592) = 9.183, p < .05, \ \eta^2 = .015 \), than females. The main effect for educational status revealed significant differences between students’ and instructors’ idealism, \( F(2, 592) = 3.99, p < .05, \ \eta^2 = .013 \), relativism, \( F(2, 592) = 15.53, p < .001, \ \eta^2 = .050 \), and DAT-Q scores, \( F(2, 592) = 8.06, p < .001, \ \eta^2 = .027 \). Post-hoc analysis using Tukey’s HSD indicated instructors possessed lower idealism and relativism scores and higher DAT-Q scores than students. Findings do not support changes in athletic training educational practices to address gender specific needs. This was the first study of its kind in athletic training. Findings should serve as a baseline for future research examining students’ and instructors’ ethical ideologies and ethical decision-making levels.

Approved: Ralph Martin

Professor of Teacher Education
Dedication

To my parents Sam and Betty Caswell

and my grandparents Carl and Evelyn Harter
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To my parents, without your selfless support, encouragement and wisdom I would not have achieved my goals. Thank you and I love you both.

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Chapter One

Introduction

Practice continues at a professional football team’s training camp despite health warnings from the national weather service. A star player on the team, who has a known history of heat-illness, collapses from the August heat. Medical personnel attend to the player but err in judgment, failing to recognize a life-threatening situation. The athlete dies 13 hours later.

This is not a hypothetical situation. Minnesota Vikings Offensive Tackle Korey Stringer died in 2001 under similar conditions (McCallum & Munson, 2002). The media reported conflicting accounts of the circumstances surrounding his death. The team’s athletic trainers were at the center of this controversy. Much attention since Stringer’s tragedy has focused on improving medical skills to treat heat illness and other medical conditions. Doug Allen of the National Football League Players Association stated, “We’re concerned about the standard of care and the consistency of care, not just with the doctors but the trainers” (Farrey, 2002, p. 1). Great attention appears to have focused on how athletic trainers manage the physical aspects of sport’s injury, instead of the psychological and social aspects that can influence an athletic trainer’s decision-making (Wiese-Bjornstal, 2002).
“Decisions are easy when your values are clear” (Deivert, 1999, Quotes Section). This statement acknowledges the connection between personal moral principles and ethical decision-making. However, this statement fails to answer three crucial questions:

1. What consequences exist if a healthcare professional’s ethical values are unclear or inappropriate?
2. What ethical values do athletic training educators and students possess?
3. Do these ethical values affect an athletic trainer’s decision-making process regarding patient care situations?

This study attempts to answer these questions by investigating athletic training students’ and educators’ individual moral philosophies and ethical decision-making processes.

Sport’s influence on American society is growing rapidly. This rise in popularity has increased Americans’ participation in and spectatorship of sports at both recreational and professional levels. Sport has evolved from an enjoyable recreation into a highly competitive, $121.1 billion-per-year industry (Parkhouse, 1996). A greater number of individuals sustain injury from physical activity because of this increased participation. As a result, medical personnel working within competitive sporting environments now face a greater number of ethical challenges.
Athletic training is an American Medical Association recognized allied healthcare profession dedicated to providing quality medical service to a physically active population (Hannam, 2000; Hardy & Conway, 1988). The National Athletic Trainers’ Association (NATA), formed in 1950, is the governing body overseeing athletic training (Delforge & Behnke, 1999). Athletic training, which is similar to occupational therapy and physical therapy, was developed to serve a specific medical niche in secondary school, collegiate and professional athletics (O'Shea, 1980). The number of certified athletic trainers practicing in the United States more than doubled between 1990 and 1999, increasing with the popularity of sport. Healthcare funding, delivery and technology have undergone striking changes in recent years, in addition to the increasing competitive and monetary emphasis of sport. These changes, combined with an increased competition for scarce resources, have created new ethical challenges for athletic training professionals. The challenges are often complex and multifaceted. Some defy simple solutions.

Athletic training education programs can meet these new challenges by ensuring that graduating students’ skills reflect a commitment to the service of others and athletic training as a profession. Instructors should exhibit and teach appropriate professional behaviors and ethical decision-making skills, while still providing their students
with scientific knowledge and psychomotor skills. The NATA has reformed its educational programs to ensure that future athletic training professionals are adequately prepared. The NATA’s educational programs have increased in curricular breadth and have improved the quality of students’ clinical educational experiences by moving toward a competency-based model of education governed by an independent accrediting body. Unfortunately, there are few competencies and research studies relating to the development of values and ethical decision-making skills specific to the profession of athletic training (Hannam, 2000).

Background of the Study

The NATA’s mission statement from its inception has been to “build and strengthen the profession of athletic training” (Delforge & Behnke, 1999, p. 53). Athletic training education is trying to adhere to its mission statement by adapting to changes in healthcare and positioning itself as a competitor within the marketplace (Hannam, 2000). The NATA Education Task Force committee, comprised of 15 members from both curriculum and internship programs, in December 1996, initiated significant reforms by making 18 athletic training education recommendations to the NATA Board of Directors (McMullan, 1997). Consolidating the internship and curriculum educational routes, into a
single discipline-specific competency-based curriculum model was the most significant of these recommendations.

*Current educational reforms in athletic training education.* An accrediting agent called the Commission on Accreditation of Allied Health Education Programs (CAAHEP) is responsible for overseeing this reform. CAAHEP is an independent body that also reviews the education of several other allied healthcare professions. The CAAHEP competency-based curriculum improves upon previous educational models because it mandates that specific competencies and proficiencies be mastered by students in the cognitive, psychomotor and affective domains of the *Athletic Training Educational Competencies* (Hannam, 2000; NATA, 1999).

Ideally, this model attempts to integrate an academically-oriented curriculum with the philosophy of “hands-on” experiential learning (McCallum & Munson, 2002).

The delivery of quality medical services to patients is integral to the profession of athletic training. Clinical practice takes place in a variety of unique and expanding occupational settings. Providing quality healthcare to patients requires that students master multiple complex skills. Further, the delivery of quality healthcare also necessitates that effective practitioners be capable of making complex clinical decisions by applying scientific theory.
Educational programs are responsible for preparing students to graduate with knowledge, skills and professional behaviors that reflect the needs of the athletic training profession, of its beneficiaries and of a changing marketplace (Hannam, 2000). As a result, a large percentage of the reformed curriculum focuses on the experiential education of the athletic training student as a developing clinician. To improve entry-level, athletic training education, the CAAHEP has implemented specific, competency-based outcomes in the cognitive (knowledge), psychomotor (skills) and affective (values) domains. These competencies concentrate on the instruction, assessment and mastery of clinical proficiencies in the cognitive and psychomotor domains. The competencies of the affective domain are not as well developed, as easily measured or as consistently evaluated as those in the psychomotor and cognitive domains (Hannam, 2000; Litt, 2001). Rather, it is traditionally assumed in athletic training that affective domain competencies and appropriate professional behaviors are learned through professional role socialization (Pitney, Ilsley, & Rintala, 2002). Hannam (2000) refers to role socialization “as the learning of social roles to facilitate participation and adequate, appropriate performance in the professional society of which one is a member” (p. 7). Competencies in the affective domain should form the basis for professional values, which can then guide all clinical decisions and patient interactions. This is noted by Hannam (2000), who
wrote, “students (and the profession) cannot afford to ignore this critical aspect of professional development” (p. 7). Yet the affective domain currently is lacking the curricular substance necessary to ensure that students are receiving adequate professional preparation.

A need for ethics in the current educational reform. Athletic trainers, similar to other allied healthcare professionals, have been prepared to function in the scientific area. Nonetheless, moral judgments are essential components of decision-making necessary for effective practice across clinical settings (Felton & Parsons, 1987). According to Bandman & Bandman, (2002) “Moral problems arise whenever and wherever there is a possibility of good or harm to someone” (p. 39). Rest (1986) refers to the function of morality as providing a basic guideline for determining how conflicts in human interests are to be settled and for optimizing mutual benefit to people working in groups. These definitions indicate that nearly every decision made in athletic training possesses a moral component. Athletic trainers make moral decisions that require extensive knowledge beyond clinical expertise and skill. This responsibility is similar to nurses, physical therapists and medical doctors. Moral decisions require the ability to reason ethically about one’s professional demeanor and responsibilities (Aroskar, 1986). Ethical decision-making in athletic training involves deciding between two conflicting values, each of which represents something good in itself (Rest & Narváez, 1994).
Therefore, the athletic training profession must ensure that it is teaching its students to become reflective practitioners. A responsible and reflective practitioner could likely prevent undue harm or even the death of a patient.

Practitioners of athletic training may face a greater number of ethical dilemmas when making decisions in highly competitive sporting environments. Coaches and administrators often do not or cannot make the health interests of the athlete a priority. Many athletic training professionals are subjected to pressure from coaches whose career security relies upon winning games. Parents sometimes do not keep athletes’ health risks in perspective. The icon of highly-paid professional athletes, combined with greater professional sports opportunities and an increasing number of organized sports for children, can pressure young athletes to excel (Putukain, 1998). In addition, athletes and other physically active patients may be willing to sacrifice their health for short-term glory. A teammate, parent, coach or administrator often asks of the certified athletic trainer, “Will he or she be able to play in the next game?” (Matheson, 2002). These pressures result in the temptation to make decisions or perform acts that may seem innocent, but neglect a patient’s or the profession’s best interests (Ray & Loubert, 2000). For example, athletic trainers may feel as if they are a team member and thus, may feel compelled to make winning a priority. Therefore, athletic
trainers and other healthcare providers must place the health of the patient as a priority, despite the internal or external pressures to do otherwise (Putukain, 1998).

A need for ethics research in athletic training education. The development of professional behaviors and of values specific to athletic training has been a neglected research area while undergraduate education in the profession of athletic training has experienced significant reform (Hannam, 2000; Litt, 2001; Pitney et al., 2002). In an unpublished doctoral dissertation, Litt (2001), used Rest’s (1999) Defining Issues Test Two (DIT-2) to investigate the level of principled moral judgment of undergraduate athletic training students in Ohio. His investigation found a significant difference in the moral judgment scores between students enrolled in institutions with National Collegiate Athletic Association (NCAA) Division I and Division III athletic programs. Specifically, he found that students enrolled at institutions with large athletic programs experienced a decline in moral judgment achievement from first-year to final-year. Litt (2001) also found female students to have a significantly higher level of moral judgment capacity than males. This finding is consistent with several other studies that report women having different ethical standards than men (Ameen, Guffey, & McMillan, 1996; Franke, Crown, & Spake, 1997; Weeks, Moore, McKinney, & Longenecker, 1999; Wimalasiri, 2001). Researchers in other fields also
have demonstrated that moral judgment may be suspended in competitive environments (Bredemeier & Shields, 1986; Reall, Bailey, & Stoll, 1998). Studies have reported that athletes scored significantly lower on measurements of moral judgment, moral development and sportsmanship than non-athletes (Bredemeier & Shields, 1986; Hahm, 1989; Kleiber & Roberts, 1981) Other researchers have found that competitive sporting environments increase anti-social behaviors and decrease pro-social behaviors (Gelfand & Hartman, 1978; Kleiber & Roberts, 1981; McGuire & Thomas, 1975). In sum, researchers have identified competition as a variable that may inhibit moral development and moral conduct (Beller, 1990; Reall et al., 1998; Rest, 1979).

Athletic trainers function in a competitive environment so that environment’s effects on ethical decision-making and behavior of athletic trainers are questionable. Further, it is equally questionable whether or not athletic trainers are properly instructing students in these environments and are modeling appropriate ethical decision-making skills and professional behaviors.

All professionals are scrutinized, both by outsiders and by peers, in terms of their professional conduct. According to Hannam (2000), proper professional behaviors and ethical decision-making skills must be taught and are, “...the most necessary yet least focused upon skills that can be learned as one develops as a student” (p. 7). Upholding the
expected standard of professional behavior set forth by NATA’s code of ethics is the core of professionalism. The certified athletic trainer must function as an allied healthcare professional and make sound moral judgments, and must ethically exercise legally sanctioned control over a specialized body of knowledge. The certified athletic trainer has an obligation to serve the public. The fundamental relationship between caregiver and patient will remain a fiduciary role, despite expanding and changing professional responsibilities and work environments. This relationship demands and requires trust on behalf of the patient. It mandates responsible preparation by athletic training practitioners on behalf of the profession (Hannam, 2000). Therefore, the profession of athletic training must ensure that its students are receiving proper instruction within the affective domain, focusing on making ethical decisions and appropriate professional behaviors. Educators, have a duty to teach and model proper moral judgment and professional behaviors to their students regardless of whether the instructional mode is didactic or clinical.

*Models of ethical decision-making research.* Minimal research, to date, addresses the clinical decision-making process within athletic training. Still less research has focused on the ethical basis for such decisions (Flint & Weiss, 1992; Hannam, 2000; Litt, 2001). The behavioral sciences offer theoretical models that examine the nature of
differences in moral judgment including the psychoanalytic (Freud, 1927), cognitive developmentalism (Kohlberg, 1976), and social learning (Bandura, 1999) theories. An individual’s moral philosophy, or ethical ideology, is one factor that may contribute to differences in ethical decision-making (Forsyth, 1980; 1992a; 1992b; 2002a; Schlenker & Forsyth, 1977). Schlenker and Forsyth (1977) and Forsyth (1980; 1992b; 2002a) argue that ethical ideology can be described by two dimensions: idealism and relativism. Idealism refers to the extent to which individuals consider how the consequences of their actions affect the welfare of others when making decisions. Relativism refers to the extent to which individuals reject universal moral principles. Previous research has examined the impact of ethical ideology on business and other professions (Barnett, Bass, & Brown, 1994; 1996; Davis, Andersen, & Curtis, 2001; Eastman, Eastman, & Tolson, 2001; Tansey, Brown, Hyman, & Dawson, 1994; Tretise, Weigold, Conna, & Garrison, 1994). Forsyth (1992a) suggests that ethical judgments concerning the practice of athletic training are simply a “special case of general moral decision-making” (p. 461). This study investigated the nature of the relationship between ethical ideology and ethical decision-making. It also researched athletic trainers’ response to ethical dilemmas specific to athletic training.
Statement of the Problem

Little research exists for moral and ethical decision-making within the profession of athletic training. This absence of study has made it difficult to judge whether or not students and instructors are making ethical decisions in clinical settings. This study explored the relationship between ethical ideology (idealism and relativism) and ethical decision-making in collegiate settings where athletic training exists. It also explored whether or not gender and educational status influence subjects’ ethical ideologies and subjects’ ethical decisions.

Research Questions

Research questions are presented for ethical ideology and ethical decision-making and the interaction of the two processes.

1. What are under-class and upper-class students’ and athletic training instructors’ self reported levels of idealism, relativism and ethical decision-making?

2. Is there a difference between male and female subjects’ reported levels of idealism, relativism and ethical decision-making?

3. Is there a difference between under-class and upper-class students’ and athletic training instructors’ reported levels of idealism, relativism and ethical decision-making?

4. Is there a relationship among subjects’ levels of idealism, relativism and ethical decision-making?
Null Hypotheses

H₀₁: There is no significant difference between male and female athletic training students’ and male and female athletic training instructors’ mean scores for the idealism, relativism and ethical decision-making scales.

H₀₂: There is no significant difference between male and female subjects’ mean scores for the idealism, relativism and ethical decision-making scales.

H₀₃: There is no significant difference between athletic training under-class students’, upper-class students’ and instructors’ mean scores for the idealism, relativism and ethical decision-making scales.

H₀₄: There is no significant relationship among subjects’ idealism, relativism and ethical decision-making scores.

Significance of the Study

This study attempted to fill a gap in the literature by investigating the potential relationship between athletic trainers’ ethical ideology (idealism and relativism) and their ethical decision-making. The study of ethical decision-making of athletic trainers is especially important because inappropriate decision making processes can possibly injure or even fatally harm the recipients of their services.

No research within the profession of athletic training has assessed the levels of idealism and relativism or the impact of gender and
education on ethical decision-making. Researchers in other professional and healthcare fields have examined the ethical ideology, moral development and ethical decision-making levels held by their students. A number of studies in other disciplines report that women possess different ethical standards than men (Ameen et al., 1996; Franke et al., 1997; Weeks et al., 1999; Wimalasiri, 2001). Understanding any differences in the levels of males and females ethical decisions is important so that the profession can promote behaviors consistent with the NATA Code of Ethics.

Examining the ethical ideology and ethical decision-making of athletic training students and instructors has significance for athletic training education and practice because it is an important step in determining if current undergraduate and continuing educational practices are effective in improving students’ ethical decision-making skills. Athletic training instructors exert significant influence on student development. Instructors in athletic training serve as role-models for students who are being socialized into the profession through didactic course work and clinical field experiences. McNeel (1994) writes that there is little research examining the moral judgments of college educators. Further, this is a strange lack because an educators’ ability to create environments that facilitate growth in ethical decision-making
might be limited by the extent to which educators’ themselves have
developed higher order ethical decision-making skills.

Therefore, examining the ethical ideology and ethical decision-making of students and instructors may provide additional insight into the effectiveness of the student and instructor relationship and current athletic training education curriculum. These findings also may advance the profession of athletic training by providing preliminary evidence that an individuals’ ethical ideology influences his or her ethical decision-making about ethical issues in athletic training.

Limitations of the Study

Limitations exist in the design of this proposed study.

1. This study’s data may have been susceptible to time of measurement effects. Because subjects were only approached once, they may have been influenced by current events (Fife-Schaw, 1995).

2. The ethical dilemmas presented attempted to simulate real life situations. If the scenarios presented were similar to actual prior experiences by the subjects, this may have elicited strong emotions that biased their responses.

3. This study used a pencil and paper survey instrument. Although the ethical dilemmas presented attempted to simulate real life situations subjects’ responses may not accurately represent their decisions or behaviors in the clinical setting.
Delimitations of the Study

Delimitations provide this study’s boundaries. This study was delimited by several practical methodological considerations.

1. This study was delimited to ethical ideology as described by Forsyth (Forsyth, 1980; 1992b; 2002a; 2002b) and as measured by the Ethics Position Questionnaire.

2. This study was delimited to ethical decision-making as measured by the Dilemmas in Athletic Training Questionnaire (DAT-Q) and the ethical dilemmas it presents.

3. This study was delimited to CAAHEP-accredited, entry-level undergraduate athletic training programs having National Collegiate Athletic Association-sanctioned athletics. Programs that were of CAAHEP-entry level graduate status, CAAHEP-candidacy status or internship status were not included in the proposed study.

4. This study was delimited to instructors that supervise students in CAAHEP-accredited, entry-level undergraduate athletic training programs. Instructors that supervise students in CAAHEP-entry level graduate, CAAHEP-candidacy status or internship status programs were not included this study.
Definition of Terms

The following are the operational definitions of terms used in this study. Conceptual definitions and a more detailed discussion of these terms are provided in Chapter Two.

1. **Athletic Trainer Certified (ATC):** a skilled professional specializing in the prevention, evaluation, management and rehabilitation of injuries. ATCs work in cooperation with physicians and other allied healthcare personnel.

2. **Athletic Training Student (ATS):** is an individual enrolled in a CAAHEP-accredited athletic training program at a college or university that leads to a bachelor’s degree in athletic training.

3. **Clinical Decision-Making:** is the process used by athletic trainers to assess, discriminate and interpret patient information and make judgments, often during complex and uncertain conditions, resulting in the provision of patient care (White, Nativio, & Kobert, 1992).

4. **Clinical Proficiencies:** are the decision-making and skill application abilities expected of an entry-level athletic trainer. There are approximately 1,230 individual proficiencies (NATA, 1999).

5. **Commission on Accreditation of Allied Health Education Programs (CAAHEP):** is a non-profit accrediting organization for entry-level allied health education programs.
6. *Ethical Decision-Making*: is in this study the ability to make an appropriate decision about a morally-toned dilemma in athletic training as measured by a subject’s score on the Dilemmas in Athletic Training Questionnaire.

7. *Ethics Position Questionnaire (EPQ)*: is composed of two scales that classify individuals according to their ethical ideology or individual moral philosophy. Scale one measures idealism. Scale two measures relativism (Forsyth, 1980). The idealism scale measures one’s acceptance that desirable consequences can always be obtained with morally right action, whereas relativism measures the rejection of universal moral principles (Tansey et al., 1994; Vitell, Rallapalli, & Singhapakdi, 1993, p. 336).

8. *Individual Moral Philosophy (IMP)*: is also known as *ethical ideology*. IMP represents an integrated conceptual system of personal ethics. A person’s IMP provides guidelines for moral judgments, and solutions to ethical dilemmas, and prescribes action in ethical dilemmas. The model proposed by Forsyth (2002a) identifies four distinct IMPs: *situationism* (relativistic and idealistic), *subjectivism* (relativistic but not idealistic), *absolutism* (not relativistic but idealistic), and *exceptionism* (neither relativistic nor idealistic).

9. *Instructor*: is any NATABOC certified athletic trainer interacting with athletic training students within the collegiate clinical or didactic setting at an institution of higher education possessing a CAAHEP-
accredited undergraduate ATEP and an NCAA-sanctioned athletic program (NATAEC, 2002).

10. **Moral Judgment**: is a psychological construct that characterizes the process by which people determine that one course of action in a particular situation is morally right and another course of action is morally wrong. Moral judgment is used synonymously with ethical judgment throughout this paper (Rest, Thoma, & Edwards, 1997).

11. **National Athletic Trainers’ Association (NATA)**: is the governing body for the profession of athletic training. The mission of the NATA is: to enhance the quality of healthcare for athletes and those engaged in physical activity, and to advance the profession of athletic training through education and research in the prevention, evaluation, management and rehabilitation of injuries.

12. **Under-class athletic training student**: a baccalaureate student enrolled in year one or year two of a CAAHEP-accredited, undergraduate athletic training educational program.

13. **Upper-class athletic training student**: a baccalaureate student enrolled in year three, year four, or year five of a CAAHEP-accredited undergraduate athletic training educational program.

**Summary**

Chapter One described that athletic trainers need to act responsibly while making ethical decisions. A brief history was presented
on athletic training education and the importance of educating students
to incorporate appropriate professional values into their decision-making.
The problem statement, research questions, null hypotheses, significance
of the study, limitations, delimitations and definition of terms were
included in Chapter One. Chapter Two presents a review of relevant
literature pertaining to athletic training education, moral psychology
theory, ethical ideology and ethical decision-making. Chapter Three
presents a description of the research design, sampling plan, data
collection and data analysis procedures used in this study. Chapter Four
presents the results for each research question and null hypothesis
examined in this study. Finally, Chapter Five provides a discussion of the
results, presents conclusions, and recommendations for further
research.
CHAPTER TWO

Chapter Two begins by presenting an overview of athletic training education and relevant clinical education research. Second, moral psychology theories and a model of ethical decision-making are presented. Third, an interactional model of morality is discussed and general research presented. Fourth, a focused review of research literature concerning the influences of age, education, experience and gender on idealism, relativism and ethical decision-making is provided. Lastly, a brief description of the conceptual framework for this study is outlined.

Introduction

Former President Lyndon Johnson allegedly said, “It’s not doing what is right that’s hard for a president. It’s knowing what is right,” (White House advisor, Joseph Califano) as cited in (Rest & Narváez, 1994, p. x). This quote represents many of the ethical issues confronting professionals today. Cases exist in which an individual’s ethical philosophy may have influenced him or her in making a poor decision that caused harm. White collar crime is currently a high profile example in the news media. Some corporate executives exhibit self-serving behavior, valuing financial gain more than stockholders’ welfare. These corporate occurrences seemingly epitomize unethical decision-making.
The profession of athletic training is not immune to unethical behavior. Decision-making in athletic training poses a significant threat because unethical decision-making could cause a patient unnecessary harm or even death. The death of Minnesota Vikings Offensive Tackle Korey Stringer is an example. Stringer’s death was reported to be the result of heat-related illness during training camp in August 2001. The media gave conflicting accounts of the circumstances regarding his death and also reported the team’s athletic trainers were central to the controversy. Wiese-Bjornstal (2002) writes that improving management strategies (technical skills) to handle the physical consequences of heat illness received much attention following Stringer’s death. However, the ethical issues surrounding the Viking’s athletic trainers’ patient care decisions have not received the same attention. Therefore, investigating the levels of idealism and relativism that influence athletic trainers’ individual moral philosophies and decision-making is especially important because new ethical challenges are likely to arise as the profession of athletic training grows. Increased numbers of practicing athletic trainers may contribute to a concomitant increase in litigation because of improper and unprofessional behavior. This further indicates a need for the profession to examine its current and future practitioners’ ethical ideologies and ethical decision-making. This is an absolutely necessary step in determining if our educational programs and the
relationships between instructors and students foster the development of ethical decision-making and proper professional behavior.

**Athletic Training Education**

This section of the literature review discusses the history of athletic training education. A table summarizing this history can be seen in Appendix A.

*History of National Athletic Trainers’ Association Clinical Education*

The first national meeting of athletic trainers in 1950, held in Kansas City, Missouri, attracted 101 collegiate athletic trainers. According to O'Shea (1980), the purpose of the educational meeting was “to build and strengthen the profession of athletic training through the exchange of ideas, knowledge and methods” (p. 28).

In 1959, the NATA Board of Directors (NATABOD) approved the first official athletic training curriculum model. This model focused on the attainment of a secondary-level teaching certificate. Course work mainly consisted of prerequisites in physical therapy. The apprenticeship was the mode of clinical education of these “teacher-trainers” during the 1950s. This model of didactic and clinical education would remain largely unchanged until the 1970s (Delforge & Behnke, 1999).

The 1970s was a decade of large growth for athletic training education. Didactic courses shifted from teacher and pre-physical therapy preparation to a specific athletic training curriculum. Athletic
training students’ clinical education at this time consisted of a minimum, 600 “total clock hours” of apprenticeship training under the direct supervision of a NATA-certified athletic trainer. Behavioral objectives were devised during this period to assist clinical supervisors in assessing students’ clinical skills. This demonstrated the first sign that clinical education was being recognized as an important component of student development (Delforge & Behnke, 1999). Grace (1999) reported that 1,600 individuals became certified athletic trainers during the 1970s.

Clinical education underwent revision during the 1980s to focus on specific, professional skills thought necessary for athletic training practitioners. In 1982, the first NATA board of certification role-delineation study was completed to develop specific performance domains for the national certification examination. It identified an athletic trainer’s primary occupational tasks, behaviors and skills.

In June of 1983, the Competencies in Athletic Training replaced the behavioral objectives for clinical education, which was used in the 1970s. These competencies attempted to promote a competency-based curriculum in athletic training based on role-delineation performance domains (Delforge & Behnke, 1999). Five-thousand six hundred individuals became certified athletic trainers during the 1980s (Grace, 1999).
The Education Task Force was created in June 1994 to address the educational and professional preparation of athletic trainers. Starkey (1997b) writes, “competition in the healthcare arena, disparities in the preparedness of entry-level athletic trainers and the proliferation of new work environments all motivated the NATA’s Board of Directors to establish the Educational Task Force” (p. 113). The NATABOD adopted all 18 proposed recommendations in December 1996. The prerequisite that certification candidates hold a bachelor’s degree and complete successfully a CAAHEP-accredited athletic training program was the most significant change (Delforge & Behnke, 1999). This new requirement effectively ended the internship route to certification, which was a remnant of the original apprenticeship clinical educational model.

Athletic training education programs have revised their curriculums to meet the requirements of the CAAHEP and the educational reformation deadline in 2004. Considerable changes in the professional preparation of students has resulted. Reforming clinical education is one of the most pressing issues that plagues athletic training. “Educating the educator” is also an important area that must be improved because the educator interacts with students in a clinical setting (Starkey, 1997b).
The most recent *NATABOC Role-Delineation Study*, which was completed in 1999, identifies six performance domains. These domains define the cognitive knowledge, psychomotor skills and affective behaviors and attitudes that are necessary for a competent athletic training practitioner. The domains are further divided into specific skills and behaviors performed by an entry-level certified athletic trainer. The performance domains are: 1) prevention of athletic injuries and illnesses, 2) recognition, evaluation and assessment of injuries and illnesses, 3) immediate care of athletic injuries and illnesses, 4) treatment, rehabilitation and reconditioning of athletic injuries, 5) healthcare administration and 6) professional development and responsibility (Arnheim & Prentice, 2000). The NATA Educational Council (NATAEC) created from the role-delineation study the “*Athletic Training Education Competencies for the Health Care of the Physically Active*. This document defines the entry-level educational domains and is used as a curricular guide for all accredited and developing programs (Delforge & Behnke, 1999). Additionally, it organizes 20 competency task areas by articulating the basic requirements within the cognitive, psychomotor and affective behavioral domains (NATA, 1999).

Grace (1999) indicates that more than 15,000 individuals became certified athletic trainers during the 1990s. A more recent report
indicates that there were 23,012 certified members of the NATA as of May 2002, (NATA, 2002).

**Current Clinical Education and Field Experience in Athletic Training**

The “Guidelines for the Clinical Education of Students Enrolled in Accredited Athletic Training Education Programs Draft,” established by the NATAEC, describes that clinical preparation is composed of two facets. These facets are student clinical education and student field experience (NATAEC, 2002). Athletic training clinical education refers to the acquisition, practice and evaluation of the Entry-Level Athletic Training Clinical Proficiencies via formal classroom, laboratory and practical clinical experiences under a instructor's direct supervision (NATAEC, 2002). Clinical education should provide all athletic training students with an opportunity to integrate theoretical and practical educational components with realistic situations involving athletes or patients. In addition, Laurent & Weidner (2001) write that clinical education should promote a constructive and positive learning experience in which appropriate professional behaviors and attitudes are both learned and applied.

Field experience is similar to clinical education. Field experience allows students to practice clinical proficiencies in an actual healthcare facility or related setting, while under the supervision of a clinical instructor. (NATAEC, 2002). Ideally, the clinical education field
experience is designed to incorporate experiential learning and to provide an opportunity for students to develop cognitive knowledge, psychomotor skills, and behaviors modeled by instructors. Field experiences can range from the traditional collegiate or university setting to the clinical or industrial setting. Clinical instructors function in an important role during classroom and field experiences because they facilitate a student’s integration of athletic training knowledge skills and professional behaviors. Thus, it is important to identify a clinical instructor’s personal moral beliefs and ethical decision-making skills (Laurent & Weidner, 2001).

The time spent by students during practice-based clinical education should not focus entirely on proficiencies. Practice-oriented education should incorporate an athletic training student’s psychosocial assimilation into the work environment. According to a recent CAAHEP document written by Starkey, Koehneke, Sedory and Turocy (2002):

Clinical education is a process where students begin to develop their professional identity, an identity that embraces more than just the physical ability to perform job-related tasks. The student is socialized (the process of becoming competent in meeting the traditional professional expectations) into the profession by way of professional assimilation and acculturation. (professional integration section)
Furthermore, it is during the clinical field experience that properly-mentored students begin to assume “membership” into the profession by role-modeling the behaviors of clinical supervisors (Starkey et al., 2002). Unfortunately, students may also model behaviors of clinical supervisors who do not demonstrate professional ethics, which further justifies the need for an assessment of athletic trainers’ ethical ideologies and ethical-decision-making.

The method by which students gain acceptance into an accredited educational program differs depending upon the specific requirements of an institution. Many programs accept freshmen immediately into the program. Others require students to perform between one and two years of general education and pre-requisite coursework before being eligible for entrance. As a result, the length of an educational program varies from two to four years (NATAEC, 2002). According to the NATABOC and the NATAEC, clinical field experiences should be accumulated in no less than two years and no more than five years. In addition, field experiences should include the following four experiential criteria: 1) pre-event preparation, 2) practice and game coverage, 3) athletic training facility coverage and, 4) experience with a physically active population (NATAEC, 2002). Students’ exposure to various clinical field experiences allows them to interact within different environments and with different people. This environmental and social interaction enables students to access
diverse perspectives that can help them develop their own perceptions of professional conduct (Starkey, 1997a).

Clinical Education Research in Athletic Training

There is little research investigating clinical education in athletic training. Studies have examined the factors that influence the quality of education, but no studies have examined the levels idealism and relativism or ethical decision-making of instructors or students. Instructors have the most contact and influence over the clinical development of athletic training students’ professional behaviors. Weidner and Laurent (2001), write that it is important for all staff members and clinical instructors to follow practices outlined by the NATA Code of Ethics. Students learn by observing clinical instructors. Standards and criteria for clinical education should be implemented and adhered to. “A lack of formal emphasis on the clinical education setting promotes haphazard and coincidental learning during students’ clinical experiences” (Weidner & Laurent, 2001, p. 67).

This section reviews the relevant research in athletic training clinical education. Studies have examined the relationships between clinical instructors and athletic training students by surveying entry-level athletic trainers about their educational experiences in internship and curriculum programs.
Curtis et al., (1998) used a critical incident technique to question junior and senior students about their interactions with clinical instructors. They found that a clinical instructor’s behavior was an important factor in affecting athletic training students’ feelings and attitudes toward their clinical education. Students identified incidents of mentoring (45%) as the most helpful. Students listed qualities of clinical instructors such as constructive feedback and explanations, as being helpful mentoring behaviors. Clinical instructors’ failure to model professional behavior in an interaction with a student or athlete was a behavior identified as hindering students’ clinical experiences. The authors conclude that modeling professional behaviors is important for effective clinical instruction. They conclude, “that behaving as a caring, competent professional is important in the clinical instruction of students” (1998, p. 252).

A similar study surveyed entry-level athletic trainers about their educational experiences in both internship and curriculum programs. The majority of respondents reported that they had received adequate education within cognitive and psychomotor domains such as emergency care and orthopedic assessment. However, 52% of the entry-level athletic trainers reported they received insufficient education within the affective domain, specifically dealing with counseling athletes (Weidner & Vincent, 1992).
Clinical instructors interact daily with athletic training students during clinical field experiences. Studies indicate that athletic trainers consider mentoring to be an important component of their professional development (Pitney et al., 2002; Ruemruk, Bloom, & Crumpton, 2002). Clinical instructors hold a position of great socializing influence over student development of professional identity. Pitney et al., (2002) writes, “the professional socialization process involves learning particular skills, values, attitudes and norms of behavior and is considered to be a key component of professional preparation and continued development in the health and allied medical discipline” (p. 63). Furthermore, socialization is an inevitable and ongoing process exerting both positive and negative influences over the development of healthcare professionals.

There is limited research examining the socialization process in athletic training. Pitney et al., (2002) performed a qualitative study on Division I certified athletic trainers to explore subjects’ experiences of professional role-socialization. The authors were able to identify a pattern of professional socialization from interviewing 16 subjects (11 male, 5 female), Pitney et al, (2002) asserts:

Formal role preparation begins with the anticipatory socialization process during undergraduate professional education. Anticipatory socialization occurs when people are able to anticipate what it
would be like as a member of a particular group or occupation to which they do not yet belong. (p. 68)

The findings in this study are unsettling to athletic training. They indicate that subjects experienced unstructured socialization. Statements like “learning on the run” and “learning by doing” were indicative of such improper modeling (Pitney et al., 2002). There are many reasons why students may not receive adequate mentoring or experience positive socialization. An article written by Weidner and August (1997), suggests that clinical instructors are often overworked and too busy to deal with students. Overworked and inadequately trained clinical instructors may limit the time and quality of instruction students receive in the clinical setting. This combination may decrease the interaction between students and clinical instructors, meaning that an ideal environment is not provided that would foster appropriate professional behavior and ethical decision-making. A second study examining the life-stress sources of student athletic trainers similarly determined that clinical instructors should take an interest in the daily lives of their students (Stilger, Etzel, & Lantz, 2001, p. 404). The researchers’ concluded, “Certified athletic trainers who work with students have a significant effect on the daily functioning and development of these future professionals.” Ensuring that athletic training students have access to adequately trained mentors and role-
models who demonstrate appropriate behaviors is crucial if a student is to receive beneficial socialization into the profession of athletic training (Pitney et al., 2002).

*Ethics in Athletic Training*

Ethics are a reflection of professional values and provide a perspective from which to judge rightness or wrongness. Ethics, as it pertains to athletic training, is the study of rules, standards and principles that form the values dictating proper ethical decisions. With the title “healthcare professional” comes the responsibility that athletic trainers must act in an ethical manner. Unfortunately, making a correct and responsible decision is not easily accomplished in the midst of an ethical dilemma. The nature of athletic training assumes that its practitioners can provide proper care even when they are under immense pressures. The temptation to make decisions or behave in ways that may seem innocent, but are inherently unethical and are not in the best interests of the patients or the profession, is one of the consequences of these pressures (Ray & Loubert, 2000). Mangus and Ingersoll (1990) express that an athletic trainer may unconsciously cross ethical boundaries. Ethical decision-making requires both the sensitivity and knowledge that ethical responsibilities exist. A practitioner needs ethical motivation to act and emotional fortitude to endure the inevitable
hardships that accompany making and carrying out ethically correct decisions (Ray & Loubert, 2000; Rest et al., 1999; Rest & Narváez, 1994).

Athletic trainers must adhere to several sets of professional standards. The NATA Ethical Code of Conduct (Appendix B) sets the standard of behavior expected from every athletic trainer (Hannam, 2000). Students must learn the Code of Ethics to prevent misrepresentation of the profession, preserve the integrity of the profession and protect the public it serves (Hannam, 2000). Athletic training students should receive guidance during their educational experiences through positive mentoring and dilemma discussions. Mangus & Ingersoll (1990), wrote that athletic training education must include some training on ethical decision-making. However, there presently is no formal training for instructors that defines the best instructional methods for implementing and assessing student development of ethical decision-making. It is difficult to separate an instructor’s beliefs from what he or she does and teaches, so an investigation is vital of the individual moral philosophies of athletic trainers’ who role-model behaviors to students.

Research Examining Ethical Decision-Making in Athletic Training

Little research has been conducted on athletic trainers’ decision-making processes when returning an injured player to competition. Even less research has focused on the ethical basis of returning an athlete to
play. Flint and Weiss (1992), investigated the extent to which player status and game situation influenced athletic trainers’ and coaches’ decisions to return injured athletes to play. Respondents, completed a questionnaire in which they decided whether an injured player should be returned to competition. The researchers discovered that athletic trainers’ decisions were not influenced by either player status or game situation.

An injured athlete has a right to receive appropriate medical care based on clinical decisions guided by a professional code of ethics. Flint and Weiss (1992), contend that all decisions relating to the care of injured athletes must have a moral and ethical basis. They note that as the degree of competition increases, the team’s need for and reliance upon an athlete’s contribution also increases. Being completely objective in decision-making becomes increasingly difficult in such a pressured situation. In this case, athletic trainers run the risk of being trapped in a difficult situation rather than being able to rely on firm, moral grounding for their decisions (Flint & Weiss, 1992). For example, coaches and administrators often do-not or cannot-make the health interests of an athlete a priority. Many athletic training professionals are subjected to pressure from coaches whose career security relies on winning games. Therefore, teammates, parents, coaches or administrators often first ask the certified athletic trainer following an athlete’s injury, “Will he or she
be able to play in Saturday’s game?” (Matheson, 2002). In addition, athletes and other physically-active patients may be willing to sacrifice their health for short-term glory. These pressures may tempt an athletic trainer to make decisions or perform acts that seem innocent, but in actuality are not in the best interests of the patients or of the profession (Ray & Loubert, 2000).

Researchers in other fields have demonstrated “Bracketed Morality” a phenomenon where moral judgment may be suspended in athletics or other competitive environments (Bredemeier & Shields, 1986; Reall et al., 1998). Athletes have shown to score significantly lower on such measurements of morality as moral judgment, moral development and sportsmanship than non-athletes (Bredemeier & Shields, 1986; Hahm, 1989; Kleiber & Roberts, 1981). Other researchers have demonstrated that anti-social behaviors increase and pro-social behaviors decrease in competitive sporting environments (Gelfand & Hartman, 1978; Kleiber & Roberts, 1981; McGuire & Thomas, 1975). In sum, researchers have identified competition and the environment it creates as a variable that may inhibit moral development and ethical decision-making (Beller, 1990; Reall et al., 1998). Therefore, competitive environments seemingly may also affect athletic trainers’ ethical judgment when making clinical decisions.
Litt (2001), used Rest’s (1999) Defining Issues Test Two (DIT-2) to investigate the level of principled moral judgment of undergraduate athletic training students enrolled in institutions with National Collegiate Athletic Association (NCAA) Division I and Division III athletic programs. Litt found evidence that students at institutions with large, highly competitive athletic programs experienced a decline in moral judgment scores from first-year to final-year. Litt’s study was the first to address whether or not athletic trainers instructing students in competitive environments are modeling appropriate ethical decision-making and professional behaviors.

Moral Psychology

The following section of Chapter Two reviews relevant literature from the field of moral psychology and examines various theoretical models that attempt to explain moral processes.

Overview of the Psychological Study of Morality

Experimental investigation of ethical decision-making began more than a century ago. Sharp (1898), an early psychologist interested in moral judgment, complained that his research was hindered by disagreements about defining morality. Sharp noted that opposite conclusions were reached regarding a person’s moral value even among individuals with similar characteristics (Forsyth, 1980).
The study of morality, moral judgment and moral development as it pertains to ethical decision-making within healthcare is based primarily on moral psychological theory. Moral psychology offers several theoretical models examining moral processes. However, the study of moral psychology as it pertains to professional ethics can be described by dividing the field into two distinct theoretical perspectives—the constructivist theoretical models and the internalization theoretical models (Beller & Stoll, 1992).

Constructivist theorists Piaget (1932/1965), Kohlberg (1976) and Rest et al, (1999) are distinguished by their individualistic or cognitive-developmental views of morality. Constructivism is characterized by hierarchical developmental stages through which moral cognition progresses from simple to complex (Beller & Stoll, 1992). Internalization theories emphasize external or societal factors as influences on morality (Beller & Stoll, 1992). Internalization theories include, among others, behaviorism theory (Skinner, 1974), social learning theory (Bandura, 1999), psychoanalytic theory (Freud, 1927) and individual differences approaches (Hogan, 1973).

Much of the research literature in recent years evolved from conceptualizing ethical decision-making using a purely constructivist approach to using an interactional model. The interactionist model
acknowledges both individual variables’ and environmental variables’ influences on morality (Kurtines, 1986; Kurtines & Gewirtz, 1987).

_Cognitive Developmental Theory of Moral Development_

The development and use of sound cognitive judgment in decision-making has been important to educators for many years. Dewey wrote in 1938, “The crucial educational problem is that of procuring the postponement of immediate action upon desire until observation and judgment have intervened” (Dewey, 1998, p. 81). Socialization was the dominant view of moral development during Dewey’s time.

Accordingly, moral development was a matter of learning the norms of one’s culture, of accepting them and internalizing them, and behaving in conformity to them... Thus if the norms of one’s culture say to segregate the luncheon counters by race, then it is morally right to segregate them. (Rest & Narváez, 1994, p. 2)

_Jean Piaget’s model of moral development._ Piaget and Kohlberg are perhaps the most influential researchers in the advancement of cognitive developmental moral theory. Piaget’s model of moral development arose from research using the cognitive developmental approach to examine the moral development of children. He was interested in studying both cognitive development and moral development and hypothesized that they occurred concurrently (Beller & Stoll, 1992). Piaget believed that morality consisted of an individual’s acknowledgment of the importance
of rules and justice. He aimed to explain, from another person’s point of view, why an individual values certain things. He interviewed children about moral situations and found them to have their own perspectives, but also he found that a child’s perspective was very different from an adult’s perspective. Piaget postulated that different underlying organizations for interpreting experience, each with its own particular logic, characterized these differences between a child’s and an adult’s perspectives (Rest, 1979).

Piaget (1932/1965) interviewed children of various ages to define two stages of moral development. Stage One is morality of constraint, or heteronomy, in which the child is aware of moral rules and duties, but does not see them as social arrangements for regulating cooperative interaction. The child in this stage views morals as absolute rules that are, like physical laws, the same for everyone. These individuals tend to believe that what is right or wrong is “black and white.” Further, they tend to view rules as fixed and they determine their transgressions based on punishment. Stage Two is morality of cooperation, or “autonomous morality.” Right and wrong are not absolute, but rather they are dictated by the situation. In this stage, the individual views morals as “cooperative agreements,” or arrangements among equals that are agreed upon not because of obedience to authority, but for mutual benefit (Piaget, 1932/1965; Rest, 1979).
Lawrence Kohlberg’s model of moral development. A second and perhaps most prominent theorist in cognitive moral development is Lawrence Kohlberg. Kohlberg’s study in 1958 began the second phase of cognitive moral development research. The United States was dominated by behaviorism during the 1950s and 1960s. Kohlberg was an American advocate for applying the cognitive development approach to the study of personality and social development (Rest, 1979).

Kohlberg’s research and theories starkly contrasted with those of popular behaviorists of that time. He did not prescribe to the internalization model of morality. Rather, in agreement, “Kohlberg said it is the individual that determines right and wrong. The individual interprets situations, derives psychological and moral meaning from social events and makes moral judgments” (Rest & Narváez, 1994, p. 2). Kohlberg disagreed with the concept that moral development is the result of a simple transmission of moral rules. He argued that morality goes beyond the “stamping in” of cultural expectations by previous generations and mere conformity to social norms through cultural socialization (Carpendale, 2000; Kohlberg, 1981). Kohlberg termed this social-learning view of morality the “bag of virtues” approach. He believed socialization approaches to morality were flawed because they cannot account for how such moral norms came into existence. Instead, he
asserted that morality is constructed by the individual and not by social stimuli (Carpendale, 2000).

Kohlberg, building on the work of Piaget, devised a theory describing six hierarchical stages of moral development. Each subsequent stage provides a more complex system of moral reasoning and a more adequate concept of what is right and just. Immanuel Kant’s deontological philosophy strongly influenced Kohlberg’s definition of justice. An individual subscribing to deontological philosophy believes that an action is determined moral or immoral based on its comparison with some universal and unalterable moral principle (Brody, 1988). Therefore, cognitive developmentalists propose that higher stages of Kohlberg’s theory provide clearer guidelines to resolve moral conflicts (Hilbert, 1988).

Kohlberg defined moral situations as “ones of conflict of perspective or interest; justice principles are concepts for resolving these conflicts ... a person’s sense of justice is what is most distinctively and fundamentally moral” (Kohlberg, 1976, p. 40).

Kohlberg proposed a simple stage theory of moral development. Individuals in his theory are believed to move sequentially through the stages, one step-at-a-time. He believed that a person could not move back-and-forth between stages, could not skip stages, and could not function simultaneously in more than one. Therefore, an individual at
level three is more likely to act morally than an individual at level two or one (Hilbert, 1988). “The fundamental assumptions of moral judgment research are that a person’s moral judgments reflect an underlying organization of thinking and that these organizations develop through a definite succession of transformations” (Rest, 1979, p. 17).

*James Rest’s model of moral development.* The constructivist model of cognitive moral development has been advanced by James Rest’s work. He was a former student of Kohlberg’s, but Rest’s work is not a direct continuation of either the Piagetian or Kohlbergian theories. Rest, unlike his mentor, questions the simple step-by-step stage development theory. He hypothesized that moral development is more multi-faceted than moral judgment alone (Rest et al., 1999; Rest, 1979; Rest, 1987; Rest et al., 1986; Rest & Narváez, 1994).

Rest reviewed the stage theory literature and questioned Kohlberg’s model. He concluded that individuals may function within a developmental range. “I propose thinking of developmental change as an upward shift in the subjects’ distribution of responses, where ‘upward’ is defined as increases in higher stages or types at the expense of lower types” (Rest, 1979, p. 73). Rest (1979), referred to the distribution of responses as a “stage mixture.” He thought that individuals may continue to develop the structure of a lower stage even after beginning the next stage of development. He believed that Kohlberg’s six stages of
moral development should be viewed best by thinking of them as six concepts of how to organize cooperation (Rest & Narváez, 1994).

Rest developed an instrument called the Defining Issues Test (DIT) in 1979 to measure moral judgment. The DIT is a paper-and-pencil test that can be machine-scored. This makes the DIT easy to administer, score and interpret. Subjects are not required to produce responses to questions. Instead, subjects perform a recognition task, rating and ranking existing items. The DIT is the instrument most-used to assess moral judgment and has been used on hundreds-of-thousands of subjects and in many professions (Rest et al., 1999; Rest & Narváez, 1994).

*Multidimensional model of ethical decision-making.* Rest developed a Four-Component Model of morality to explain the multiple facets he believed influenced moral behavior. According to Rest, this Model starts with the question, "What must we suppose happens psychologically in order for moral behavior to take place?" (Rest & Narváez, 1994, p. 23). The model attempts to integrate the cognitive, affective and behavioral components of ethical decision-making. The Four-Component Model collectively describes the mechanisms necessary for athletic trainers’ to perceive a dilemma, evaluate the options, formulate a decision and take action in an ethical situation. A description of the each of the four components follows:
Component One: Moral Sensitivity: This involves interpreting the situation. It is the awareness of the presence of an ethical situation and that an ethical obligation exists. Further, it is also a sensitivity to how others will be affected by our actions. For example, an athletic trainer may fail to make a correct ethical decision because he or she did not realize a moral situation existed. Further, he or she did not recognize others may be affected by his or her decisions and actions (Rest et al., 1999; Rest et al., 1986; Rest & Narváez, 1994).

Component Two: Moral Judgment: This involves judging which act is morally right and which act is morally wrong. This is the Component that Kohlberg’s and Rest’s work advances and that the DIT assesses. Moral judgment is concerned with determining which line of action is more morally justifiable or, in other words, which alternative is just or right. Deficiencies in this Component represent overly simplistic ways of justifying choices of moral action. For example, an athletic trainer may withhold treatment from a patient and feel justified in terms of revenge because of that patients’ previous non-compliance. Moral judgment is important, but is not the only determinate of moral behavior (Rest & Narváez, 1994).

Component Three: Moral Motivation: This is prioritizing moral values in relation to other values. This component essentially concerns formulating the moral ideal in relation to the realistic course of action. It
involves determining a specific moral value’s importance compared to
other value’s (Rest & Narváez, 1994). For example, does the athletic
trainer value adhering to moral codes and the welfare of the patient or
does the athletic trainer place more value on winning.

Component Four: Moral Character: This Component involves ego
strength, or strength of conviction. A person can recognize a moral
situation (Component One), make good moral judgments (Component
Two), and place high priority on moral decisions (Component Three), but
if the person fails because of an inability to act on and carry out a
decision, then he or she is deficient in moral character (Rest & Narváez,
1994). For example, an athletic trainer fails to act as a moral agent
because of pressure from the coach, athletic administrator or because he
or she is afraid of being fired.

Moral failure occurs when a deficiency arises in any one of the four
components. A specific portion of each component is necessary to carry
out any line of moral action. Rest suggests that there is a complex
interaction between the four components. However, he does not suggest
that the Four-Component Model represents a logical analysis of what it
takes to have moral behavior (Rest et al., 1999; Rest & Narváez, 1994).

All four components of the Model interact and influence each
other. Rest contends that moral psychology cannot be represented as a
single component of this Model. Furthermore, a person who functions
well at one process may not necessarily be adequate in another. For example, an athletic trainer who is capable of formulating sophisticated judgments about a patient’s condition may not be aware of an ethical obligation or may lack the resolve to complete the proper course of action when faced with external pressures (Rest et al., 1986)

The Defining Issues Test (DIT) assesses only Component Two (moral judgment). The Four-Component Model assists in explaining why the DIT and other psychometric instruments that assess ethical decision-making perspectives only correlate with behavioral measures at modest levels. Rest argues that the modest correlation occurs because the other three components co-determine behavior and because no instrument exists currently that can measure all four components simultaneously (Rest et al., 1999).

Social-Psychological Model of Moral Reasoning

The social psychological model of morality represents an internalization approach to morality. Social psychological moral theory is not as developed as the cognitive developmental analysis of morality. Forsyth (1992b) contends that three, meta-theoretical assumptions present in traditional social psychology limit the study of moral processes. The first of these assumptions is sociogenism, which is the belief that the primary determinants of human behavior are external and situational rather than internal and dispositional. The second is egoism,
which is the belief that the motivation for thought and behavior is self-serving. The third is *positivism*, which is the belief that scientific inquiry should be empirical and devoid of personal bias (p. 240).

**The Sociogenic Model**

The sociogenic social psychological perspective argues that an athletic trainer working in an emergency situation only will demonstrate altruistic behavior if he or she is influenced by external situational factors. A purely sociogenic model contends that athletic trainers are not compelled to act by internal thoughts or feelings. Social psychologists who subscribe to the sociogenic model suggest that a truly altruistic athletic trainer does not exist (Forsyth, 1992b). In further support of this, Gergen, Gergen, & Meter (1972) demonstrated that individuals do not exhibit helping behavior universally among various situations. This research indicates that a consistently caring and beneficent athletic trainer is an abnormality.

Undoubtedly, caring and benevolent athletic trainers do exist. Rushton (1981) found that some people are steadily more caring than others. Other researchers support the idea that individuals who display empathy and commitment to moral principles demonstrate greater consistency in aiding others (Fogelman & Wiener, 1985; Underwood & Moore, 1982).
Forsyth (1992b) maintains that strict adherence to the metatheoretical assumptions of sociogenism and positivism has limited the social psychologists’ studies of moral behavior. He contends that advances can be made in the field of moral psychology if researchers take “the best from positivism and the best from constructivism and synthesize them into a dialectical philosophy of science” (p. 250).

Limitations of a purely sociogenic model of morality exist. Interactional models respond to these limitations by considering both personal (internal) and situational (external) factors and their influence on moral decisions and behavior. For example, Haan (1986) reasons that inconsistencies appear in individuals’ moral behavior because of variations in personal attributes across situations. Haan writes that moral action is “informed and influenced by variations in contexts” and by students’ own problem solving strategies (p. 1282). Comparable to Haan’s research, Kurtines (1986) and Kurtines & Gewirtz (1987) reported that subjects’ use of principled moral reasoning (Kohlberg’s highest stages) changed depending upon their situation and social role.

Forsyth’s Person X Situation Interactional Model

This study employs Forsyth’s interactional model. Forsyth (1980; 1985; 1992b; 2002a) created his own interactional model, the “Person X Situation” model, to address differences in the process of making moral judgments. He proposes that this model explains an individuals’
evaluation of an ethical dilemma as an expression of a person’s own integrated system ethics. He terms this integrated system of ethics one’s, “Individual Moral Philosophy” (IMP), or “Ethical Ideology.” A person’s moral beliefs, attitudes and values comprise his or her IMP (Forsyth, 1980). An IMP “provides guidelines for moral judgments, solutions to ethical dilemmas and prescriptions for actions in morally toned situations.” It likely contains distinctive elements produced by previous experiences in confronting and resolving ethical dilemmas (Forsyth, 2002a, p. 1). Forsyth (2002a) writes that these unique idiographic characteristics are complemented by regularities of rules or laws that “appear consistently across most people’s IMPs” (p. 2). The IMP model, in contrast with the Kohlbergian model of moral development, does not classify individuals solely on the basis of their level of principled moral reasoning. The IMP model represents a more general approach and therefore may be more useful if focused on the moral judgment of adults (Forsyth, 2002a).

*Development of the individual moral philosophy model.* Schlenker & Forsyth (1977) first employed the IMP model in an exploratory experimental study of individual differences in judgments about the ethics of psychological research. Factor analysis of a 68-item questionnaire, which measured dimensions of various major moral philosophies identified two prominent factors that explained the
influence of individual ethics on ethical judgments. These two prominent factors were idealism and relativism. Schlenker & Forsyth (1977) suggested that these two basic factors may best describe variations in ethical decision-making.

Idealism contends that desirable consequences can always be obtained with morally right action. It addresses “the tendency to avoid harming others while making moral judgments” (Tansey et al., 1994, p. 60). A highly idealistic individual is one who believes that causing harm to others is “always avoidable.” Such a person would “rather not choose between the lesser of two evils, which will lead to negative consequences for other people” (Forsyth, 1992a, p. 462). In contrast, a person low in idealism is a pragmatist who assumes that harm is sometimes necessary to produce good (Forsyth, 1980, 1985, 1992a, 1992b, 2002a, 2002b; Tretise et al., 1994).

Relativism contends that moral absolutes should be rejected, and that moral rules exist in a situational context as a function of time, place and culture (Tretise et al., 1994). Forsyth defines the relativism dimension as the “degree to which an individual rejects universal moral rules when making moral judgments” (Singhapakdi & Vitell, 1994, p 35). A highly relativistic person believes that universal ethical codes or moral principles are not important when making ethical or moral judgments because contextual factors must be considered. Less relativistic
individuals stress the importance of rigid adherence to ethical codes and moral absolutes when making moral judgments (Forsyth, 1992b).

Schlenker and Forsyth (1977) found that subjects characterized by both low idealism and low relativism considered the potential benefits of the research more than the potential harm to research subjects. Opposite this, individuals high in idealism and low in relativism considered the potential harm of the research more than the potential benefits when making an ethical decision. Finally, subjects high in relativism and either low or high in idealism considered both benefits and consequences heavily in their decision-making (Schlenker & Forsyth, 1977).

Forsyth writes that (1992b), idealism and relativism parallel conclusions reached by other researchers Gilligan, (1982); Haan, (1986); Hogan, (1973); Kohlberg, (1976); Piaget, (1932/1965). For example, Hogan (1973) distinguished between the inward focused “ethics of personal conscience,” which is an individual’s own ethical preconceptions, and the outwardly focused “ethics of responsibility,” which is a strict adherence to accepted societal codes. Kohlberg also recognized the importance of variations in relativism and revised his scoring system for the Moral Judgment Interview (MJI) to classify people according to their degree of relativism (Forsyth, 2002a).
The Ethics Position Questionnaire

Forsyth (1980) later refined the original 68-item Ethical Positions Questionnaire and developed a 20-item instrument designed to “facilitate the classification of individuals according to their ethical ideology” (p. 177). The refined instrument is applicable in almost any context of ethical judgment, and is called the Ethics Position Questionnaire (EPQ). The EPQ is composed of 20 attitudinal statements divided into two 10-item scales. The first 10 items focus on idealism and the last 10 items focus on relativism. The original responses ranged on a nine-point Likert-type scale from “completely disagree” to “completely agree” (Forsyth, 1980). However, different scaling techniques have been used, ranging from seven-point Likert-type questions to five-point and four-point Likert-type questions (Eastman et al., 2001; Forsyth, 2002b; Tretise et al., 1994; Ziegenfuss, 2001). EPQ subjects receive two scores by summing their responses from the two scales. The higher an individual scores, the more they adopt an idealistic or relativistic moral philosophy toward ethical matters. In contrast, the lower an individual scores, the more he or she rejects an idealistic or relativistic moral philosophy toward ethical matters (Forsyth, 1992a, 2002a, 2002b).

Taxonomy of Ethical Ideologies

Forsyth’s (1980) two-dimensional model contends that ethical decisions will vary according to one’s position on idealism or relativism.
However, many studies combine these dimensions to yield a taxonomy of ethical ideologies, or individual moral philosophies, also defined by Forsyth (Davis et al., 2001). Placement in the taxonomy is determined by whether an individual espouses idealistic or non-idealistic values and adopts moral rules as universal or relative. According to Forsyth (Forsyth, 1980, 1992a, 2002a, 2002b), a 2 X 2 classification of ethical ideologies results when these dimensions dichotomized and crossed (see Appendix C). The IMP model in this form represents a taxonomy in which individuals may embrace one of four approaches to making ethical decisions. These ethical ideologies are termed situationism, absolutism, subjectivism, and exceptionism. Subjects are categorized into one of these groups by their scores on the idealism and relativism scales of the EPQ (Forsyth, 1980, 1992a, 2002a, 2002b; Forsyth & Nye, 1990).

Situationism. The first IMP is situationism. These individuals score high on both the idealism and relativism scales of the EPQ. Individuals adopting this IMP feel that “people should make certain that their actions never intentionally harm another even to a small degree,” but that “no ethical principles are so important that they should be a part of any code of ethics.” In other words, an athletic trainer adopting a situationist moral philosophy would not believe that the NATA Code of Ethics or any other moral standard provides cross-situational exceptionless rules. Rather, he or she would believe that each situation must be examined
individually and the “right” choice is what appropriately fits the specific context (Forsyth, 1980, p. 178; 2002a, p. 2).

Subjectivism. The second IMP is subjectivism. Subjectivists score low on idealism and high on relativism scales of the EPQ. These individuals reject moral rules and believe moral decisions are subjective individualistic judgments that cannot be made based on the extent to which the action will benefit or harm others. Subjectivists maintain a teleological viewpoint that parallels an egoistic moral philosophy. This position contends that no moral judgments are valid except those made pertaining to one’s own behavior. Therefore, subjectivists strive to promote self-interest rather than the greater good for all. A subjectivist athletic trainer would agree with statements on the EPQ like “questions of what is moral or immoral for everyone can never be resolved since what is moral or immoral is up to the individual.” A subjectivist athletic trainer would disagree with statements on the EPQ like “if an action could harm an innocent other, then it should not be done” (Forsyth, 1980, p. 178; 2002a).

Absolutism. The third IMP is absolutism. Absolutists score high on idealism and low on relativism scales of the EPQ. These individuals strive to produce positive outcomes while, at the same time, maintaining rigid adherence to universal moral principles. This ideological combination parallels the moral philosophy of deontology, and is similar to the
principled levels of moral judgment as defined by Kohlberg (1976) and
Rest et al., (1999; 1986; 1994). Deontology contends that the basis for a
decision or act be compared to some universal moral rule or absolute.
Therefore, absolutists reject the use of consequences as the basis for
moral evaluation. For example, an athletic trainer may be tempted to lie
to a severely injured athlete about his or her chance for return-to-play.
An absolutist athletic trainer would argue that the “lie is a lie,” although
such a lie may have a positive influence on the patient’s psychological
status (Forsyth, 1980, p. 177). Therefore, an athletic trainer in an ethical
dilemma adopting an absolutist ideology would try to make decisions
consistent with NATA’s Code of Ethics.

Exceptionism. The fourth IMP is exceptionism. Exceptionists score
low on relativism and idealism scales of the EPQ. This individual, similar
to teleological ethical philosophy, is compelled to act in a utilitarian
manner that will produce the “greatest good for the greatest number”
(Forsyth, 1980, p. 177). “Exceptionists allow moral absolutes to guide
their judgments but remain pragmatically open to exceptions” (Forsyth &
Berger, 1982, p. 54). An athletic trainer adopting an exceptionist ideology
would believe that moral principles are important, but not absolute.
Therefore, they would believe the NATA Code of Ethics must be applied
pragmatically depending upon the context of a particular situation.
Research in Ethics

Overview of Research Using the Ethics Position Questionnaire

This section of the literature review provides a general overview of research using the EPQ to investigate individual variations in moral beliefs. A more in-depth review of literature examining the specific independent variables this study investigates is provided later in Chapter Two.

Prior research in business and other disciplines has utilized a typology approach by categorizing the continuous variables of idealism and relativism. Individuals are typed then categorized according to their individual moral philosophy using the median score on each scale. However, Forsyth and Nye (1990) warn that this “typological approach assumes discontinuity (where none may exist) and may reify complex processes through labeling” (p. 411). A recent study examined both methods of analysis and found that a loss of predictive power resulted from using idealism and relativism as categorical variables (Davis et al., 2001). Therefore, the typological approach was used only for descriptive purposes in this study.

Individual Moral Philosophies and Ethical Decision-Making

Several studies examine the differences between individuals of differing IMPs and their judgments about morally-toned situations. Barnett et al., (1994) combined the EPQ with 26 vignettes depicting
various business-related ethical dilemmas. They found idealism scores to be negatively correlated with business students’ ethical decisions in 21 of the 26 vignettes ($p < .05$). However, they found no significant relationship between students’ relativism scores and the vignettes. This finding is supported by other studies that indicate idealism may have the strongest influence on an individual’s judgments and attitudes about ethical situations (Davis et al., 2001; Singh & Forsyth, 1989; Singhapakdi, Vitell, & Franke, 1999). Barnett et al., (1994) also found students’ ratings of vignettes to be significantly different based on their IMP. Individuals scoring high in idealism and low in relativism (absolutists) rated unethical behavior most harshly in 14 of the 26 vignettes. Individuals scoring low in idealism and high in relativism were the most accepting of unethical behavior. This result agrees with a similar study that found individuals scoring high in idealism and low in relativism to rate harmful research studies more harshly than individuals adopting other IMPs (Forsyth & Pope, 1984). Barnett et al., (1994) discovered that in 12 of the 26 vignettes, students’ ethical judgments were not dependent on their IMP. They proposed that this may result from the vignettes lack of salience to the subject. A person must first perceive the situation to have ethical significance before he or she can make an ethical evaluation. Supporting this explanation are the results of Forsyth’s (1985) study, which measured the differences in the ways that subjects from the four
IMP's integrated information when they make ethical decisions. He asked participants to make moral judgments about a series of dilemmas. The research results suggested that while all four IMPs are sensitive to consequence and conformity-to-norm information. Each tends to integrate information differently.

Altogether, the research seems to indicate that highly relativistic athletic trainers should not believe in moral absolutes. These individuals believe that the morality of an action is dictated by the circumstances of the situation. Non-relativist athletic trainers should rely on universal moral standards, laws or the NATA Code of Conduct when making an ethical decision. Research also indicates that idealistic athletic trainers are likely to believe that moral actions will result in positive outcomes and that it is wrong to pursue a course of action that harms others. This is supported with evidence indicating that idealism is positively correlated to concepts of justice and of empathy for others (Davis et al., 2001), whereas less idealistic athletic trainers will be more pragmatic and believe that causing harm to another may be necessary to achieve the desired outcome (Forsyth, 1992a; Forsyth & Nye, 1990).

According to Forsyth (Forsyth, 1985, 2002a; Forsyth & Nye, 1990), the two-dimensional IMP model predicts that athletic trainers, who have different levels of idealism and relativism, will diverge when making decisions about ethical dilemmas if that situation contrasts with ethical
codes and could potentially yield negative consequences. Negative consequences can include, but are not limited to, injury or harm to patients or others, increased conflict, or unfair advantage (Forsyth, 2002a, p. 5). For example, Forsyth writes that at the bivariate level, both absolutist (high idealism and low relativism) and exceptionist (low idealism and low relativism) individuals will judge actions harshly that break moral codes. However, both absolutist and situationist (high idealism and low relativism) individuals will respond harsher to actions that yield negative outcomes. Further, the IMP model contends at multivariate levels that absolutist athletic trainers tend to emphasize moral principles and express sensitivity to harming others, so they will respond harshly to ethical dilemmas that violate moral codes and cause potential harm to patients. However, subjectivist athletic trainers will likely be the most accepting of these actions (Forsyth, 2002a, p. 5).

**Individual Moral Philosophies and Ethical Behavior**

Studies have demonstrated that an individual’s level of idealism and relativism can influence his or her ethical decision-making (Davis et al., 2001; Forsyth, 1985, 1992a; Forsyth & Nye, 1990), moral attitudes toward social issues (Forsyth, 1980) and judgments about research ethics (Forsyth & Pope, 1984; Hollman, 1997; Schlenker & Forsyth, 1977). However, the research findings examining the link between moral thought and moral action are mixed. Forsyth and Berger (Forsyth &
Berger, 1982) failed to identify idealism and relativism as predictors of behavior. Forsyth and Nye (1990) tested the “Person X Situation” model by tempting subjects with different IMPs to violate both salient and non-salient moral norms. They found that idealism did influence moral behavior, but in a direction opposite to what they had predicted. Results demonstrated that individuals claiming to be high in idealism were the most likely to lie and harm another person. The researchers termed this the “hypocrisy effect.” In a similar study, Keller (1998) used an experimental design in which computer simulation assessed subjects’ tax reporting behaviors. His results showed that individuals high in idealism and high in relativism were the most likely to engage in unethical tax behaviors.

Forsyth (2002a) describes three major intervening factors that may moderate the link between a person’s IMP and his or her behavior. First, the situation must be important to the individual. A person must sense and understand how his or her decision and subsequent actions relate to moral norms. If an individual fails to perceive a particular decision as having moral content, or if the pressure of a situation is great, then his or her IMP is less likely to be activated enough to influence his or her actions. Second, an individual may successfully make a decision, but may fail to act in congruence with his or her moral decision because of external pressures. Third, an individual high in idealism, because of his
or her need to avoid harming others, may be more likely to engage in immoral behavior as a means of helping others (Forsyth, 2002a).

Research Literature Examining the Variables in this Study

This section of the literature review examines the relevant research focusing on the specific independent variables investigated in this study.

Age, Experience, Education and Ethical Decision-Making

Literature that examines relationships between age, education and work experience, and scores on idealism and relativism scales of the EPQ, is mixed. Forsyth studied age with a sample of 221 students ranging from 17 to 42 years old. He found age trends to be significantly related to both idealism and relativism ($r = -.20, p < .05; r = -.25, p < .05$), respectively. This indicates that older subjects tended to score lower on both the idealism and relativism scales of the EPQ and therefore, adopted less idealistic and relativistic outlooks (Forsyth, 1980, 2002a).

Miesing and Preble (1985) surveyed 487 working business professionals, graduate students and undergraduate students on the business philosophies of Machiavellianism, Darwinism, Objectivism, Relativism and Universalism. Their findings indicated that individuals who scored higher in relativism were younger students without work experience. Lower scorers in relativism were older and more educated, and possessed more work experience. These findings are consistent with
those reported by Dawson (1997), who found that sales professionals became more ethical with work experience.

In a study of counseling students, Dinger (1997) found students’ relativism scores to be significantly negatively correlated with age ($r = - .41, p < .001$). However, he also found idealism scores to be significantly negatively correlated with Graduate Requisite Examination (GRE) scores ($r = -.38, p < .005$). This finding suggests that idealistic individuals may have low academic aptitude. This seemingly conflicts with the findings of Ho et al., (1997) who observed a trend that subjects with higher levels of education tended to be more idealistic.

These studies collectively present mixed results regarding the effect of education on idealism and relativism. However, this research does indicate that individuals may tend to adopt an exceptionist individual moral philosophy with increased age and work experience. These results seemingly indicate that older and more experienced athletic trainers would adopt an exceptionist individual moral philosophy. These athletic trainers would likely allow moral absolutes to guide their ethical-decisions, but would remain pragmatically open to exceptions.

Other studies using the EPQ argue that age, experience and education do not improve one’s ethics. For example, Singhapakdi and Vitell (1993; 1994) reported marketing students to have higher mean idealism scores than older marketing professionals. In addition, these
same studies also reported that marketing students scored lower in relativism than older marketing professionals. In contrast with Forsyth (1980), a study examining subjects’ idealism and relativism scores and their ethical views toward research practices failed to find a relationship between age and EPQ scores (Hollman, 1997).

A unique study performed by Eastman et al. (2001), found mixed results. They used the EPQ in combination with ethical dilemma vignettes related to medicine and managed care. Eastman et al. failed to find a relationship between age and idealism or relativism but did find in the vignettes that age was negatively related with patient care. This suggests that older physicians may be less likely to act in a patient’s best interests (Eastman et al., 2001).

Jointly these studies offer inconclusive information regarding the relationship between EPQ scores and the personal characteristics of age, education and work experience. The findings reported in the literature are inconsistent and, therefore, make it difficult to develop specific expectations for this study’s demographic variables of age, work experience and educational status.

*Age, Experience, Education, and Ethics in Athletic Training*

According to Hannam (2000), the NATA’s Code of Ethics and the affective domain competency of ethical decision-making are at the core of professionalism and must be taught to athletic training students.
“Students (and the profession) cannot afford to ignore this critical aspect of professional development” (p. 7). Hannam writes that, unfortunately, athletic training education has largely ignored the affective domain.

Researchers in many professions have taken a cognitive developmental approach using either the MJI or DIT to study the effects of age and education on moral judgment and ethical decision-making. For instance, studies in medicine (Self, 1994; Sheehan, Husted, Candee, Cook, & Bargen, 1998) and nursing (Duckett et al., 1992; Felton & Parsons, 1987) report that the affects of age are minimal in comparison to the effects of education on moral judgment development (Rest et al., 1999; Rest et al., 1986; Rest & Narváez, 1994).

Only one study has examined the moral domain within the profession of athletic training. Litt (2001) used the Defining Issues Test Two (DIT-2) (Rest et al., 1999), a cognitive developmental research instrument, to investigate the moral judgment of freshmen and senior athletic training students in Ohio. He found that athletic training students attending colleges or universities that require institution-wide courses in ethics demonstrated significantly greater improvements in DIT-2 scores than those students at schools not having the requirement. Litt reports that no significant relationship existed between DIT-2 scores and student participation in ethics courses required at the departmental level. In addition, he also reported that there was no significant
relationship between DIT-2 scores and athletic training education programs with a curricular theme focusing on the development of ethical competencies. Jointly, these findings seem to indicate that general education courses, such as a course in philosophy, may be more effective than other methods of improving ethical decision-making of athletic training students. This finding is interesting because discipline-specific ethics instruction seemingly should produce the greatest improvements in athletic training students’ levels of ethical decision-making.

Litt (2001) did not report the effect sizes for his investigation. However, based on McNeel (1994) a post hoc calculation was performed on the magnitude of difference between freshmen and senior athletic training students in CAAHEP-accredited programs. According to McNeel (1994), the effect size for the college experience in relation to moral development can be assessed by calculating the freshmen-to-senior change divided by the freshmen standard deviation. He suggests that a small effect size = .10 to .39, a moderate effect size = 0.40 to 0.69, a large effect size = .70 to .99, a very large effect size = 1.0 or more. Therefore, according to Litt’s results, the calculated effect size for DIT-2 principled scores of students in CAAHEP-accredited programs was less than small at .087. Litt’s (2001) findings justify further research examining the IMPs that influence the ethical decision-making of athletic training students and instructors.
Much debate has surrounded the research examining differences in ethical decision-making between men and women. According to Gilligan’s (1982) “Ethic of Caring,” women develop moral reasoning skills differently than men. Gilligan suggests that Kohlberg’s all-male longitudinal study, upon which his theory is based, is gender biased. Further, she also suggests that Kohlberg’s scoring system favors males and causes women to appear to have lower levels of moral judgment. Theoretically, the advocates for Gilligan’s approach argue that males and females use different moral orientations to resolve ethical dilemmas. Supporters of the constructivist approach argue that any gender differences arise from work environment and that these differences, if present, will be minimal (McCuddy & Perry, 1996; Wimalasiri, 2001).

Rest et al., (1999; 1986; 1994) refute Gilligan’s research in two ways. First, they say that she failed to complete a systematic review of the moral psychology literature. Second, Rest (1999) writes that gender differences only accounted for .002% of the variance in DIT scores in a meta-analysis of 56 DIT studies. Rest states, “when there are differences between the genders, females have higher averages” (p. 116).

Several studies examining students, faculty and practitioners have failed to find a significant relationship between gender and moral judgment. These studies used both Rest’s DIT and Forsyth’s EPQ.
McNeel (1994) examined student growth in moral judgment across four years of college education. An analysis of DIT scores, compatible with Rest’s argument, indicated no differences due to gender. However, the author notes that females slightly out performed males.

In a similar study, Vozzola and Higgens-D’alessandro (2000) investigated the influence of moral reasoning on college faculty members’ hiring decisions using hypothetical vignettes describing affirmative action dilemmas. Independent samples, $t$ tests found no significant differences for mean scores based on gender although the mean DIT and vignette scores were slightly higher for females than males. These results are comparable to Wimalasiri’s (2001) examination of the cognitive moral development of management students and practitioners. Wimalasiri found no significant relationship between male and female respondents to the DIT. However, consistent with Rest (1999) and the previously mentioned studies, Wimalasiri reported that female subject’s had slightly higher principled moral reasoning mean scores ($P$-score = 29.3) than males ($P$-score = 27.1).

Forsyth and Nye (1990) examined moral choice and individuals’ reactions following the transgression of moral norms. They found no differences due to gender using the EPQ. However, they did conclude that this result may have been caused by the gender-neutral experimental setting (Forsyth & Nye, 1990). No relationships were found
between gender and EPQ scores and ethical behavioral intentions of physicians (Eastman et al., 2001). These findings are consistent with other research using Forsyth’s two-dimensional model (Forsyth, 1980, 1985; Forsyth & Nye, 1990; Forsyth, Nye, & Kelley, 1988; Forsyth & Pope, 1984; McCuddy & Perry, 1996; Shaub, 1994).

Contrary to the aforementioned research, some studies using both the constructivist and “Person X Situation” interactional models do suggest that gender differences in ethical decision-making are possible. Litt (2001), in the only study examining moral development in athletic training, discovered significant differences between males student’s (P-score = 24.86) and females student’s (P-score = 30.39) principled moral judgment mean scores on the DIT-2. This finding indicates that female athletic training students use principled moral judgment when solving ethical dilemmas more frequently than male students.

A meta-analysis by Franke, Crown and Spake (1997), of 66 ethics studies and more than 20,000 participants, and three other studies support the supposition that women may be more ethical than men (Ameen et al., 1996; Ruegger & King, 1992; Whipple & Wolf, 1991). Funk (1987) used Kohlberg’s theoretical framework and determined that women possessed significantly higher moral judgment than equally-educated men. Women in this study tended to use justice-based reasoning more than males, and males used the caring-orientation more
than females. In agreement with Funk’s findings are Mustapha (1989) and Self et al. (1996), who investigated undergraduate and veterinary medicine students, respectively. Each reported females to have significantly higher DIT principled moral judgment scores (P-scores) than males. Finally, a recent study by Colesante and Biggs (2002) used Lind’s Moral Judgment Test combined with four other instruments to measure student’s (N = 654) moral judgment, tolerance, support for democratic norms, social responsibility and dogmatism. His results indicated that women showed a stronger preference for principled moral judgment than men.

Researchers using the EPQ and other instruments have also found gender differences in ethics cognition. Forsyth et al. (1988) found the idealism scale to be correlated .53 with scores on the “Ethic of Caring” (Gilligan, 1982). Miesing and Preble (1985) studied adult MBA students’ and undergraduate business students and reported men to be more relativistic than women. McHoskey (2001) found men to be less liberal and idealistic than women. He also wrote that the women who were studied demonstrated low relativism or a universalistic philosophy that moral values and principles are absolute. Davidson et al., (2000) support these findings. They administered the EPQ, combined with ethical dilemma vignettes to accounting professionals and found that females had significantly different mean scores on the EPQ and vignettes than
males. Although there is no mention of effect size, the researchers reported that females scored higher on the idealism scale (59.5) than males (54.6), indicating they were more idealistic. Further, males had higher mean total scores on the relativism scale (51.4) than females (47.4). According to Forsyth (2002a), a high idealism and low relativism score is consistent with an absolutist ethical ideology. This indicates that females may maintain a deontological viewpoint and strive to produce positive consequences while, at the same time, maintaining strict adherence to general moral principles. These characteristics are similar to what Kohlberg (1976) and Rest (1999) describe as their principled level of moral reasoning.

However, some research reports that females are both relativistic and idealistic. This combination may indicate that women use a situational decision-making style when resolving an ethical dilemma (Forsyth, 1980; Singhapakdi & Vitell, 1994). Singhapakdi and Vitell (1994) concluded, “because males are both less idealistic and less relativistic than females, they are more likely to believe conformity to moral rules is desirable, but that exceptions are permissible” (p. 40). The authors describe that males are more likely to believe that deception is allowable if it is unavoidable and attempts are made to prevent harm. Females believe that deception is acceptable if the outcome may yield favorable consequences. This finding is consistent with the original

The collective research reviewed in this section conflicts with Gilligan’s (1982) theories that women tend to morally reason from a caring orientation rather than a justice orientation. The research also supports that potential differences in ethical decision-making between men and women exist. However, the literature reviewed is inconclusive regarding the exact nature and magnitude of this difference. Therefore, research investigating the relationship between gender and ethical ideology and ethical decision-making within athletic training students and instructors is essential.

*Locus of Control and Ethical Decision-Making*

The theory of locus of control (LOC) originates predominantly from social learning theory (Rogers & Smith, 2001). Locus of control refers to an individual’s belief that outcomes in life are contingent upon his or her own ability or effort (internal LOC) opposed to forces beyond their control such as a powerful other or unpredictable situational factors (external LOC) (Coleman & Mahaffey, 2000; Reiss & Mitra, 1998). An athletic trainer espousing to an internal LOC believes that clinical outcomes are attributable to his or her decisions and actions. An athletic trainer espousing to an external LOC believes that clinical outcomes are not attributable to his or her decisions but rather due to powerful outside
situational or organizational factors such as, the demands of the coaching staff, players, athletics administrators, or team physicians.

Recent research has supported a potential correlation between LOC and subjects’ ethical attitudes toward unethical workplace behaviors (Reiss & Mitra, 1998), attitudes toward cheating (Coleman & Mahaffey, 2000), and ethical decision-making. These studies seem to be supported by other researchers who indicate that individuals of internal LOC make more ethical decisions (Jones & Kavanaugh, 1996; MuCuddy & Peery, 1996). However, other studies have failed to support the association of LOC with ethicality (Hagarty & Simms, 1979; Trevino & Youngblood, 1990).

Collectively, the literature reviewed appears inconclusive concerning the relationship between LOC and ethical decisions. Therefore, research investigating the relationship between LOC and ethical ideology and ethical decision-making within athletic training students and instructors is needed.

Conceptual Framework

The link between moral judgment and ethical decision-making has been researched in nursing, medicine and business. Only one such study has researched the area of professional ethics in athletic training (Litt, 2001). This study used a cognitive developmental approach administering the DIT-2 to a convenience sample of undergraduate
students in the state of Ohio. This study suggests that athletic training education programs may not be providing students with the guidance needed to develop appropriate ethical decision-making skills. The relationship between athletic training students and their instructors is an important factor in the development of an ethical professional. However, no research exists in athletic training that considers the individual differences of students’ and instructors’ moral philosophies. Further, no studies measure students’ or instructors’ responses to ethical dilemmas that are specific to athletic training. Figure 2.1, shows that students’ and instructors’ individual moral philosophies and ethical decision-making processes interact within complex didactic and clinical education settings and may potentially influence their clinical decisions and ultimately their professional behaviors.

Summary

Chapter Two reviewed the relevant literature related to ethical decision-making, moral psychology and athletic training education. Literature concerning the influences of age, education, experience and gender, and locus of control also was presented. Finally, the theoretical framework of this study was outlined. Chapter Three will describe the methods used in conducting this study.
Figure 2.1. Conceptual framework: Demonstrates the influence of personal and demographic characteristics on individual moral philosophy and its interaction within a complex educational paradigm to affect ethical decision-making.
CHAPTER THREE

Introduction

Chapter Three provides a description of the methods used to complete this study. This chapter is divided into the following sections: research design; null hypotheses; operational definitions; sampling plan; instrument development and instrument selection; pilot studies; data collection procedures; and data analysis procedures.

Research Design

Explanatory non-experimental research methodology was used in this study, and specifically, an *ex post facto* correlational research design (Tuckman, 1999). Gender and educational status were the independent variables in this study. The dependent variables in this study were, idealism, relativism scores and ethical decision-making scores. The two Ethics Position Questionnaire (EPQ) scores measured idealism and relativism. The Dilemmas in Athletic Training Questionnaire (DAT-Q) score measured the level of ethical decision-making.

Null Hypotheses

\( H_{01} \): There is no significant difference between male and female athletic training students’ and male and female athletic training instructors’ mean scores for the idealism, relativism and ethical decision-making scales.
H_{02}: There is no significant difference between male and female subjects’ mean scores for the idealism, relativism and ethical decision-making scales.

H_{03}: There is no significant difference between athletic training under-class students’, upper-class students’ and instructors’ mean scores for the idealism, relativism and ethical decision-making scales.

H_{04}: There is no significant relationship among subjects’ idealism, relativism and ethical decision-making scores.

**Operational Definitions of the Variables**

The following operational definitions identify the variables used in this study.

1. **Age**: A continuous independent variable representing the number years since birth of subjects in the study.

2. **Cumulative grade point average (GPA)**: A continuous independent variable indicating each students’ self-reported overall mean numerical mark of academic achievement at their institution measured on a four-point scale.

3. **Educational status**: A categorical independent variable measured on three levels identifying subjects’ self-reported position within the ATEP at their institution. Subjects were identified as an instructor, upper-class student or under-class student. An instructor was any certified athletic trainer supervising students clinically or didactically. An
upper-class student was in the third, fourth or fifth year of an ATEP. An under-class student was in the first or second year of an ATEP.

4. **Ethical decision-making score**: A continuous dependent variable measured as the sum of subjects’ self-reported responses to all items (1 to 20) of the DAT-Q.

5. **Gender**: A categorical independent variable measured on two levels, male and female.

6. **Idealism score**: A continuous dependent variable measured as the sum of subjects’ self-reported responses to items 1 to 10 of the EPQ.

7. **Relativism score**: A continuous dependent variable measured as the sum of subjects’ self-reported responses to items 11 to 20 of the EPQ.

8. **Years of experience**: A continuous independent variable identifying the number years an athletic training instructor has worked in the profession of athletic training.

**Sampling Plan**

The following section of Chapter Three describes the sampling procedures used in this study.

**Identification of the Population**

Participants for this study were selected from a theoretical population of all baccalaureate athletic training students and clinical instructors at Commission on Accreditation of Allied Health Education Programs (CAAHEP) accredited entry-level athletic training educational
Established senior colleges, universities and their affiliates sponsoring athletic training education programs must have accreditation from CAAHEP-recognized agencies. The CAAHEP also stipulates that sponsoring institutions assume all administrative functions pertaining to admission, instruction and documentation of satisfactory completion of the educational program (CAAHEP, 2001). The NATA Board of Certification (NATABOC) requires that the duration of a student’s clinical field experience be no less than two and no more than five years in length (NATABOC, 2000). Accordingly, the length of a student’s time enrolled in an ATEP can vary from two to five years. As a result, the under-class and upper-class terms were chosen to identify the desired target population of athletic training students used in this investigation. Only athletic training students 18 years of age or older were allowed to participate in this study.

Sampling Frame

The sampling frame used in this study consisted of a list of all CAAHEP-accredited undergraduate ATEPs having an NCAA-sanctioned athletic program (N=155). Each ATEP listed in the sampling frame was the primary sampling unit or listing unit used for this investigation (Groves, Kalton, Rao, Schwarz, & Skinner, 1999). A complete list of
institutions with accredited undergraduate programs is published quarterly by the CAAHEP (CAAHEP, 2002). Athletic training students and clinical instructors represented the elementary units of the target population for this investigation (Groves et al., 1999).

A modified method of multistage cluster sampling was used in this investigation. Cluster sampling is widely used in social science research (Groves et al., 1999). Each cluster has associated listing units and elementary units. This method of sampling is often hierarchical, beginning with the selection of large clusters and progressing to the selection of smaller clusters.

No adequate list of baccalaureate athletic training students or clinical instructors was available when planning the sampling design of this study. A comprehensive published list of CAAHEP-accredited ATEPs was available for this study. Cluster sampling was chosen for this study because it provided an economical and feasible equal probability selection method (EPSEM) that enabled the use of available lists (Groves et al., 1999; Kalton, 1983). According to Kalton (1983) “this solution has the benefit of giving the elements the same chance of appearing in the sample as their listings; in particular, if listings are sampled by EPSEM, the elements are also sampled by EPSEM” (p. 58).

The expected number of under-class and upper-class students at each institution equaled a combined total of 13 students, based on NATA
membership statistics (NATA, 2002). This estimation erred on the low side to compensate for the possibility that not all students were members of the NATA. The number of instructors at each institution was estimated to be three.

**Sampling Stages**

Following is a brief outline of the sampling process used in this study.

**Stage one.** Prior to choosing a sample, institutions listed in the sampling framework were proportionally stratified based on the size of their athletic programs into two primary clusters. Primary Cluster One consisted of institutions with NCAA Division One status. Primary Cluster One was defined operationally as large (N = 78) and represented 50.32% of ATEPs. Primary Cluster Two consisted of institutions with NCAA Divisions Two (n = 38) or Three (n = 39) status and were defined operationally as small (N = 77). These smaller institutions combined represented 49.68% of ATEPs (NATA, 2002).

**Stage two.** Stage two of sample selection began following stratification of ATEPs based on NCAA Division level. A total of 100 ATEPs were selected randomly. Fifty ATEPs from large institutions and 50 ATEPs from small institutions were selected using the EPSEM of simple random sampling (SRS). Each individual ATEP selected represented a secondary cluster. Program directors, after all ATEPs were
selected, were contacted by a letter that requested their participation in administering the survey instrument at their respective institutions to all athletic training students and athletic training instructors (see Appendix D-1). An incentive to participate was provided to increase the number of program directors agreeing to participate in the study. Program directors were offered a report profiling how athletic training students and instructors at their institution compared to a national average in return for their participation. Program directors with such a report have the means to assess their students’ and instructors’ individual moral philosophies and their educational programs’ effectiveness in facilitating improvements in ethical decision-making. Appendix E-1 provides an overview of the sampling procedure. Appendix E-2 illustrates the distribution of ATEPs invited to participate in the study by state.

Sample Size and Statistical Power

A minimum sample size of N = 162 (n = 27 per cell) respondents was determined necessary for this study. Sample size is a function of effect size, alpha level and power. The sample size necessary to meet these specifications was ascertained when a certain effect size is anticipated and alpha and power are held constant (Cohen, 1977, p. 14). Thus, effect size, alpha level and power were important considerations in determining the desired number of subjects for use in this study. Cohen (1977) wrote, “this type of power analysis must be at the core of any
rational basis for deciding on the sample size to be used in an investigation” (p. 14).

Type I error ($\alpha$) occurs when the null hypothesis is incorrectly rejected and research hypothesis is considered to be supported (Aron & Aron, 1997, p. 127). The a priori alpha level of 0.05 used in this study represents a five percent chance of committing a type I error. An alpha of 0.05 commonly serves in the behavioral and biological sciences as an unofficial convention for rejection of the null hypothesis (Cohen, 1977, p. 12). All hypotheses tested in this study were non-directional because of inadequate research. Therefore, the use of two-tailed tests was justified. In addition, a two-tailed test can reveal the direction in which the mean difference occurs when the null hypothesis is rejected (Aron & Aron, 1997, p. 99-104).

Type II error ($\beta$) is deciding to incorrectly fail-to-reject the null hypothesis and consider the research hypothesis to be unsupported (Aron & Aron, 1997, p. 129). The power of a statistical test influences sample size and is defined as one minus the probability of committing a type II error (1- $\beta$). Cohen refers to statistical power as the probability of correctly rejecting the null hypothesis when it is false (Cohen, 1977, p. 1). Therefore, the power of a statistical test is the probability of correctly choosing the alternative hypothesis when it is true (Aron & Aron, 1997, p. 130). The a priori level of power in this investigation was set at 0.80.
Cohen (1977) recommends using this level of power when performing exploratory research.

Another factor in determining the sample size is effect size. “Effect size is the degree to which a phenomenon is present in the population or the degree to which a null hypothesis is false” (Cohen, 1977, p. 9-10). The larger the predicted difference between two population means (effect size), the greater the statistical power (Aron & Aron, 1997, p. 134). Therefore, fewer subjects are required to complete studies. Cohen suggests the use of a medium effect size when previous research is limited. A medium effect size is described as an overlap between two population means of approximately 67% or as being large enough to be seen by the naked eye (Aron & Aron, 1997, p. 139; Cohen, 1977, p. 26). A medium effect size of 0.25 was determined acceptable for use in this study because no published research existed examining the levels of idealism and relativism or ethical decision-making of athletic training students and instructors.

_Timing of survey administration_

The survey packets were mailed to ATEP directors on October 18, 2002. The 18th of October was chosen because September is a busy time of the year for athletic training instructors and because September is also a busy and stressful time for new and returning athletic training students. Therefore, instruments were administered in October to allow
time for students and instructors to become accustomed to the college environment.

Instrumentation

This section briefly describes the development of the Dilemmas in Athletic Training Questionnaire (DAT-Q).

*Development of the Dilemmas in Athletic Training Questionnaire*

Several instruments were reviewed prior to developing the DAT-Q—the Defining Issues Test (short and long forms) (Rest, 1979), the Defining Issues Test Two (DIT-2) (Rest et al., 1999) the Rudd, Stoll, Beller, Hahm (RSBH) Values Choice Inventory (Rudd, 1998), the Hahm-Beller Values Choice Inventory (Beller & Stoll, 1992), and the Judgments About Nurses Decisions (JAND) (Ketefian & Ormond, 1988). No instrument was found to examine ethical decision-making specific to the profession of athletic training from an extensive review of literature. Therefore, an instrument to meet the needs of this research study was developed.

Many of the instruments reviewed used hypothetical vignettes depicting ethical scenarios to elicit responses. Vignettes were chosen for use in this study for two main reasons; First, vignettes have been shown to reduce respondent social desirability bias by asking participants to make judgments about a hypothetical vignette character. It is believed that this may cause a distancing effect between participants’ real lives and situations presented in the vignettes (Hughes & Huby, 2002).
Second, many individuals are sensitive to ethical issues. This presents problems if a typical questionnaire is used. For example, simply asking someone if he or she is ethical, likely will elicit a biased affirmative response. Vignettes can present an ethical dilemma in third person by using hypothetical characters. This allows researchers to assess responses to questions that typically would be too controversial to ask or occur too rarely to observe. Thus, the vignette approach has been shown to decrease subjects’ distrust of researchers and reduce the potential harm to participants (Hughes & Huby, 2002).

However, if the hypothetical situations presented in the vignettes are similar to actual events experienced by respondents the advantage of vignettes can also become a disadvantage. Familiar situations may activate subjects’ feelings or prejudices and therefore elicit biased responses from the respondents or cause them to become distrustful of the researcher.

Fourteen ethical dilemma vignettes were initially developed. Several of these vignettes were inspired by ethical dilemmas presented in Ray’s (2000) text, in the Hahm-Beller Values Choice Inventory (Beller & Stoll, 1992), and in current events as reported in the media (Farrey, 2002). Personal experiences and speaking with athletic training professionals and students also contributed to ethical dilemma development. An item pool consisting of about 10 questions per vignette
originally was developed. Questions were inspired by Rest et al’s, (1999; 1986) Four-Component Model of morality and by research with Forsyth’s (1980) Ethics Position Questionnaire. Next, all 14 vignettes and questions were shared with a panel of nine experts in the field of athletic training and presented to a focus group for a “think aloud” consisting of athletic training professionals and students. The expert panel consisted of five NATA BOC certified athletic trainers working as practicing clinicians in collegiate or clinical orthopedic settings, two educators, and two graduate students. One expert on the panel was also a member the NATA ethics committee. These individuals provided feedback regarding the content and validity of both the vignettes and questions. Two vignettes and five questions were eliminated from the DAT-Q based on verbal feedback received from members of panel and focus group. The remaining 10 vignettes and five questions were rewritten to remove ambiguity and unnecessary or interfering elements. In addition, the use of a five-point Likert-type scale, ranging from “Strongly Agree” to “Strongly Disagree,” was justified by members of the panel and focus groups who reported that the seven and nine-point Likert-type scales offered too many choices.

In the final stage of instrument development, two pilot studies were performed using the DAT-Q. Following the first pilot study item analysis, feedback from open-ended questions and additional input from the
athletic training experts assisted in reducing the number of vignettes to six. All panel members attested to the content validity of the vignette scenarios, agreeing that the ethical dilemmas and the characters’ actions were a fair representation of reality. All five questions were retained following the first pilot. Both the questions and the vignettes were refined to maximize their capacity to measure ethical decision-making. Finally, a second pilot study was performed. Item and factor analysis of responses assisted in reducing the DAT-Q to five separate vignettes accompanied by four items each.

**Instrument Selection and Description**

A three-section survey instrument was used in this study. This portion of Chapter Three briefly describes each section of the survey instrument.

*Section One: Demographic Information*

Section One of the survey instrument collected information from respondents regarding demographic, educational and professional characteristics (see Appendix F).

*Section Two: Dilemmas in Athletic Training Questionnaire*

Section Two of the survey was the DAT-Q (see Appendix F). The final version of the DAT-Q presented subjects with five vignettes depicting hypothetical ethical dilemmas specific to the athletic training
profession. Subjects were then asked to rate their levels of agreement with four declarative statements accompanying each vignette.

The four items accompanying each vignette were inspired by Rest’s Four-Component and Forsyth’s “Person X Situation” models of morality (Forsyth, 1992b, 2002a; Rest et al., 1999; 1986). Item One required subjects to judge whether or not a vignette character “should” perform a specific action. This ethical judgment is similar to Component Two, “moral judgment,” of Rest’s Four-Component Model of morality.

Item Two required subjects to respond as to whether or not they agreed the vignette character had an ethical responsibility in the situation presented. This rating of “ethical awareness” is similar to Component One, “moral sensitivity,” of Rest’s Four-Component Model of morality. Research has demonstrated that an individual’s moral philosophy may not be activated if he or she does not perceive the situation to be ethically toned or that an ethical obligation exists (Forsyth, 2002a; Rest et al., 1999).

Item Three required a subject to respond if he or she would perform the same action as the vignette character. This “ethical intention” is similar to Component Three, “moral motivation,” of Rest’s Four-Component Model. Ideally, one’s ethical intention should be in agreement with his or her ethical judgment. However, situational and contextual factors presented in an ethical dilemma may moderate this
relationship. Therefore, a disagreement between an individual’s ethical judgment and his or her ethical intention may occur.

Finally, Item Four required subjects to rate whether or not they felt that the situation presented was important. This item attempted to measure the salience of the ethical dilemma to the subject. Some research indicates that a person’s individual moral philosophies may not be activated if he or she does not perceive a situation to be important (Bowes-Sperry & Powell, 1999; Davidson et al., 2000; Forsyth, 2002b). Therefore, Item Four seemingly is also related to Component One of Rest’s Four-Component Model (Rest et al., 1999).

These questions do not consider all factors contributing to athletic trainers’ ethical decision-making. Rather, they represent a first attempt to measure four elemental constructs identified as important components of making an ethical decision.

Variations of these four items were repeated following each vignette. Combined, they formed a cohesive 20-item scale in which total possible scores could range from 20 to 100. The sum of responses to items 1 to 20 of the DAT-Q were calculated, and served as a subject’s ethical decision-making score.

Section Three: Ethics Position Questionnaire

Section Three of the questionnaire consisted of Forsyth’s (1980; 2002b) Ethics Position Questionnaire (EPQ) (see Appendix F). The EPQ
was derived from Schlenker and Forsyth’s (1977) original 68-item Ethical Positions Questionnaire. Forsyth (1980) developed the EPQ to be a shorter more general instrument to measure ethical judgments regarding psychological research (Forsyth, 1980). The EPQ has been used in research to examine idealism and relativism as related to moral judgments (Forsyth, 1985), psychological research (Forsyth & Pope, 1984), behavior (Forsyth & Berger, 1982; Keller, 1998), business (Barnett et al., 1994; Curtis et al., 1998; Davidson et al., 2000; Forsyth, 1992a) moral choice (Forsyth & Nye, 1990), sexual attitudes (Bowes-Sperry & Powell, 1999; Singh & Forsyth, 1989) and ethical decision-making in medicine (Eastman et al., 2001).

The EPQ is a self-reported 20-item inventory containing two subscales; one to measure idealism and a second to measure relativism. Various scales have been used with the EPQ such as from Forsyth’s original nine-point Likert-type questions, and seven-point, five-point and four-point Likert-type scales (Bandman & Bandman, 2002; Eastman et al., 2001; Forsyth, 2002b; Tretise et al., 1994; Ziegenfuss, 2001). Respondents indicated their degree of agreement with each item on a five-point, Likert-type scale. A five-point scale was selected to keep the number of items consistent across sections of the survey, (Forsyth, 2002b).
Idealism scale. The idealism subscale consisted of items 1 to 10 and measured the degree to which individuals “assume that desirable consequences can, with the ‘right action’ always be obtained” (Forsyth, 1980, p. 176). Idealistic individuals tend to adhere to moral absolutes when making ethical decisions. Forsyth writes, “highly idealistic individuals feel that harming others is always avoidable, and they would rather not choose between the lesser of two evils which will lead to negative consequences for other people” (Forsyth, 1992a, p. 462). However, less idealistic individuals, “assume that harm will sometimes be necessary to produce good” (Forsyth, 1992a, p. 462). The idealism score was obtained by calculating the sum of subjects’ responses to items 1 to 10.

Relativism scale. The relativism subscale consisted of items 11 to 20 and measured “the extent to which an individual rejects universal moral rules” when making ethical decisions (Forsyth, 1980, p. 175). Relativistic individuals tend to accept a moral philosophy based on skepticism (Singhapakdi, Kraft, Vitell, & Rallapalli, 1995). Forsyth explains that relativists generally feel that moral actions depend upon the nature of the situation and the individuals involved and, when making ethical decisions, they tend to weigh the circumstances more than the ethical principles (Forsyth, 1992a). The relativism score was obtained by calculating the sum of subjects’ responses to items 11 to 20.
Possible scores on the relativism and idealism subscales range from 10 to 50.

Reliability of the EPQ. The reliability of the EPQ is well established. Forsyth (1980) reported an acceptable level of reliability for the EPQ with a sample of (N=462) undergraduate psychology students. He reported an internal consistency, as measured by Cronbach’s alpha, of .80 for the idealism scale and .73 for the relativism scale. Mean of item-to-total correlations for the idealism and relativism scales were .67 and .66, respectively. Test-retest correlations were low—but acceptable—for idealism .67 and relativism .66. Several more recent studies support Forsyth’s original data on the reliability of the EPQ (Davidson et al., 2000; Davis et al., 2001; Forsyth, 1992a, 2002a; McHoskey, 2001).

Validity of the EPQ. Forsyth et al. (1988) examined the validity of the EPQ using principal components factor analysis. They reported the EPQ to have a reasonable factor structure loading on two orthogonal primary factors that accounted for 42.4% of the total variance; idealism and relativism contributed 22.4% and 20.0% of the variance, respectively. Dinger (1997) also reports that a third factor accounted for 7.8% of the variance. He reported the EPQ to load on two primary factors that accounted for approximately 31.0% of the variance; idealism and relativism contributed to 12.85% and 18.04%, respectively. A more recent study by Davis et al. (2001) supports these findings because they
performed a confirmatory factor analysis using (N = 285) undergraduate and graduate business students. However, they did find the final two items on the relativism scale to load as a third factor, which they termed veracity.

Pilot Studies

This section of Chapter Three describes the two pilot studies that assisted in the development of the DAT-Q.

Pilot Study One

A convenience sample of (N = 34) first-year graduate students enrolled in the physical therapy program at Ohio University, Athens, volunteered to participate in the first pilot study. Each respondent received a demographic section, an EPQ and a DAT-Q. This DAT-Q version consisted of 12 separate ethical dilemma vignettes accompanied by five questions. In addition, several open-ended questions were included, such as, “How would you make this story better,” and “Was this question clear?” Each subject spent about 45 minutes completing the survey, which was disseminated in a classroom setting. In addition, all 34 subjects participated in a group debriefing session immediately following completion of the questionnaire.

Item analysis and Pearson product-moment correlation coefficients between total scores for each vignette assisted in reducing the number of vignettes from twelve to six. Open-ended responses and responses during
the debriefing session indicated the presence of several interfering and ambiguous elements in both the vignettes and the accompanying items. Also, some respondents indicated that the vignettes were too lengthy and took too long to read. Vignettes because of such feedback were rewritten to be more clear and concise. One question was rewritten completely because subjects reported it to be misleading.

**Pilot Study Two**

A convenience sample of (N = 287) graduate and undergraduate students in the School of Recreation and Sport Sciences at Ohio University, Athens, volunteered to participate in Pilot Study Two. Each respondent received a demographic section, an EPQ and a DAT-Q. The DAT-Q version tested in Pilot Two consisted of six separate ethical dilemma vignettes each accompanied by five items. Several open-ended questions again were included. Each subject spent about 20 minutes completing the survey, which was disseminated in a classroom setting.

Item and factor analysis assisted in reducing the number of vignettes from six to five. In addition, the number of items accompanying each vignette was reduced from five to four.

**Pilot Study Two Results**

The means and standard deviations for the EPQ’s idealism and relativism subscales and the DAT-Q are provided in Table 3.1. Separate 2 (gender) x 5 (educational status) between groups factorial ANOVA’s were
Table 3.1.

Mean and Standard Deviation Values for the Variables in Pilot Study Two

<table>
<thead>
<tr>
<th>Variables</th>
<th>M</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>20.82</td>
<td>3.27</td>
</tr>
<tr>
<td>GPA</td>
<td>3.04</td>
<td>.54</td>
</tr>
<tr>
<td>Class Status</td>
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<td>1.23</td>
</tr>
<tr>
<td>Degree</td>
<td>1.44</td>
<td>1.03</td>
</tr>
<tr>
<td>EPQ-I Score</td>
<td>3.55</td>
<td>.59</td>
</tr>
<tr>
<td>EPQ-R Score</td>
<td>3.43</td>
<td>.45</td>
</tr>
<tr>
<td>DAT-Q Score</td>
<td>3.69</td>
<td>.39</td>
</tr>
</tbody>
</table>

*Note.* EPQ-I = Idealism Score; EPQ-R = Relativism Score; DAT-Q = Ethical Decision-Making Score.
performed on each dependent variables mean scores. The 2 X 5 ANOVA on DAT-Q scores revealed only a significant main effect for gender, \( F(1, 271) = 9.126, p < .05, \eta^2 = .033 \). Females reported higher mean DAT-Q scores than males. The only other significant finding was a main effect for educational status on relativism scores, \( F(4, 271) = 4.950, p < .05, \eta^2 = .068 \). A Tukey Honestly Significant Difference (HSD) follow-up procedure was performed \( (p = .05) \) to assess the pairwise differences among the five levels for the main effect of educational status. Results indicated that graduate students’ mean relativism scores were significantly lower than freshmen, sophomore, junior and senior students’. There were no significant differences in idealism scores. Significant correlations were found between the groups’ demographic characteristics and the dependent variables. Mean idealism scores demonstrated a moderately strong correlation with DAT-Q scores \( (r = .23, p < .001) \). Relativism scores also were found to have a small but significant negative correlation with age \( (r = -.20, p < .001) \), grade point average (GPA) \( (r = -.18, p < .001) \), class status (Spearman’s rho) \( (r_s = -.18, p < .001) \) and highest degree earned \( (r_s = -.21, p < .05) \). In addition, DAT-Q scores were found to be moderately positively correlated with gender (point biserial) \( (r_{pb} = .21, p < .001) \), age \( (r = .14, p < .05) \) and with highest degree earned \( (r_s = .13, p < .05) \).
Collectively, these results appear to support previous findings that indicate individuals may become less relativistic with age and education (Forsyth, 1980). In addition, they also lend support to previous findings indicating that females may possess better ethical decision-making skills than men (Davidson et al., 2000).

Reliability and validity. Pilot Study Two indicated that Cronbach’s alphas for the EPQ’s idealism and relativism subscales and the DAT-Q were .83, .68 and .81, indicating that each scale had acceptable internal consistency. Further, the principal components factor analysis revealed the DAT-Q to exhibit a reasonable factor structure attesting to its validity.

Responses to open-ended questions. Similar to Pilot Study One, all respondents in Pilot Study Two were asked to respond to open-ended questions about each vignette and the accompanying items. Overall, most respondents felt that the vignettes and items were clear. However, some students believed that more information needed to be provided in the vignettes. In addition, nearly all students found the vignette regarding HIV and patient confidentiality confusing. This vignette exhibited extremely low internal consistency and therefore, Vignette Six was removed from the DAT-Q. In addition, three vignettes were rewritten to include more detailed information, and one ambiguous question was removed. The final version of the DAT-Q (see Appendix F) consisted of
five vignettes with four accompanying questions each, forming a 20-item scale.

Data Collection Procedures

A description of the data collection procedures used in this study are provided in this portion of Chapter Three.

Questionnaire packets were mailed to a random sample of 30 ATEP program directors that agreed to participate in the study. Packets included the following items: a cover letter describing the purpose of the study (see Appendix D-2) and student and instructor versions of the DAT-Q and EPQ instruments. The student and instructor versions were identical except for the demographic information section. Differences in the demographic sections were because certain demographic questions asked of instructors were not appropriate for students. Each program director was asked to invite all baccalaureate athletic training students and athletic training instructors at his or her institution to volunteer for this study. The letter also requested that the instrument be administered in a classroom setting.

Timing for administering the instrument was left to the convenience of each program director. However, the instruments were requested to be administered and returned within four weeks. Two weeks following the initial mailing, an email was sent to all program directors as a reminder.
Program directors, after receiving the completed surveys, returned the instruments to the investigator by first-class priority mail using a self-addressed envelope provided with return postage provided in the initial mailing.

Data Analysis Procedures

This section provides a general description of the data analysis procedures performed in this study. Explanations of the statistical analyses performed for each research question and their accompanying null hypothesis is included. All analyses performed used SPSS version 11.5.

Data Analysis for Research Question One

Research Question One asked: What are under-class and upper-class students’ and athletic training instructors’ assessed levels of idealism, relativism and ethical decision-making? Descriptive statistics were analyzed to describe the characteristics of the sample as related to idealism, relativism and ethical decision-making scores.

Data Analysis for Research Questions Two and Three

Null Hypothesis One examined the interaction between the main effects of gender and educational status on the idealism, relativism and ethical decision-making scales. Null Hypothesis Two stated that no significant difference existed between male and female subjects’ idealism, relativism and ethical decision-making scores. Finally, Null Hypothesis
Three stated that no significant difference existed between (educational status) athletic training under-class students’, upper-class students’ and instructors’ idealism, relativism and ethical decision-making scores.

Three separate 2 (gender) X 3 (educational status) between-participants factorial analyses of variance (ANOVA) were performed to test these null hypotheses. Specifically, one 2 X 3 factorial ANOVA was performed to investigate the interactions and main effects for each of the three dependent variables (idealism score, relativism score and ethical decision-making score). Separate 2 X 3 factorial ANOVAs were performed instead of using a 2 X 3 factorial multivariate analysis of variance (MANOVA) as an omnibus test of significance because of two reasons. First, MANOVA requires that dependent variables are theoretically and empirically correlated (Weinfurt, 1995). The literature reports the EPQ’s idealism and relativism to be two separate and uncorrelated scales (Davis et al., 2001; Forsyth, 1980; Forsyth et al., 1988). Tabachnick and Fidell (2001) state that, “MANOVA is wasteful if DVs [dependent variables] are uncorrelated– naturally, or if they are factor or component scores” (p. 357). Second, performing a MANOVA does not control for experiment-wise type I error (Tabachnick & Fidell, 2001; Weinfurt, 1995). The Tukey HSD follow-up procedure was performed following each factorial ANOVA to assess pairwise differences among the three levels for the main effect for educational status. This method was chosen because it has been
shown to provide conservative protection against error, and to be robust to moderate departures from non-normality and homogeneity of variance, and unequal sample sizes (Dunnett, 1980; Toothaker, 1993). All significance levels were set to an a priori level of $\alpha = .05$.

Factorial analysis of variance requires that the data collected conform to three assumptions. First, data should be collected as interval or ratio data. The dependent variables analyzed for this study were all mean scores and, therefore, satisfied this assumption. The second assumption was independence of observation, which was satisfied in this study’s design because each subject was given the survey in a classroom setting. The third assumption was that the dependent measures were normally distributed within the population. ANOVA is quite robust to violations of this assumption. However, the assumption of normality was satisfied in this study by examining a measure of skewness, histograms and normal probability plots. The final assumption was homogeneity of variance. This assumption examined whether the variances of the dependent measures are equal for each level of the independent variables used in the analysis. ANOVA is also robust to violation of this assumption when differences are not large in the number of subjects per cell. This assumption was satisfied by examining Levene’s Test of Equality of Error Variance (Stevens, 1999).
Null Hypothesis Four stated that no significant relationship exists among subjects’ idealism, relativism and ethical decision-making scores. Pearson’s product-moment correlation coefficients were examined to determine if a linear relationship existed between idealism, relativism and ethical decision-making mean scores.

Pearson’s product-moment correlation coefficient requires that three assumptions be satisfied. First, scores must be measured on an interval or ratio scale. The variables used for this study were all mean scores, and therefore satisfied this assumption. Second, all scores must be sampled randomly with equal probability from the population. This study used an EPSEM of cluster sampling that satisfied this assumption. Third, the measures must be normally distributed within the population. A descriptive measure of skewness and histograms were used to determine if this assumption was met (Brase & Brase, 1987). All significance levels were set to an a priori level of $a = .05$.

Summary

Chapter Three described the methods and procedures used in this study. First, the research design and operational definitions were provided. Second, sampling procedures were outlined followed by instrument development and selection. Finally, the pilot study, data collection and data analysis all were discussed. This research study was
approved by the Ohio University Office of Research Compliance Institutional Review Board. (See Appendix G).
Chapter Four

Introduction

Chapter Four presents the results of the data collected during this study. This chapter is divided into the following sections: research procedures; respondents’ descriptive and demographic data; instrument reliability and validity; results respective to the hypotheses; and additional findings of the research study.

Research Procedures

A simple random sample of 100 athletic training education programs (ATEP) was selected, using SPSS 11.5, from a sampling frame of 153 CAAHEP-accredited undergraduate ATEPs having an NCAA sanctioned athletic program. The 100 ATEPs selected seemed to be a fair representation of the distribution ATEPs nationally and consisted of ATEPs from 40 states and all ten NATA regional districts. Program directors, at all 100 ATEPs, were invited to participate in late October by mail using the United States Postal Service and by electronic correspondence (see appendix D-1). As an added incentive, program directors who agreed to participate were offered a report profiling how athletic training students and instructors at their institutions compare to a national average. This report may provide program directors with a means of assessing their students’ and instructors’ individual moral
philosophies and their educational programs’ effectiveness in facilitating improvements in ethical decision-making.

Thirty of the 100 invited ATEP directors agreed to participate in the study. Survey packages were shipped via priority mail to directors that agreed to participate approximately one week after the initial contact. Of these, 12 ATEPs—15.58% of all ATEPs at institutions having NCAA Division I athletics—were located at institutions designated as large and 18 ATEPs—23.38% of all ATEPs at institutions having NCAA Division II or III athletics—were located at institutions designated as small. Each package contained a letter to the program director (see Appendix D-2), the appropriate number of survey instruments for students and instructors at that institution, and a pre-paid, self-addressed return envelope. A follow-up contact was made with program directors via phone and electronic mail two weeks following the mailing of survey packages. Completed survey packages upon receipt were analyzed using SPSS 11.5.

Demographic Data

The following section of Chapter Four provides information that describes the demographic characteristics of the sample.

Characteristics of Participating Athletic Training Education Programs

Completed survey packages were returned from 25 (83.3%) of the 30 athletic training programs surveyed. Athletic training programs in all
ten NATA regional districts were represented in the sample with districts two (25.0%) and four (32.0%) accounting for the highest percentage of programs responding. The sampling distribution of programs nation-wide can be seen in Appendix E-2. Eleven (44.0%) of the returned packages were from institutions designated as large, having NCAA Division I athletics programs. Fourteen (56.0%) of the returned packages were from institutions designated as small, having NCAA Division II or III athletics programs.

**Participant Characteristics**

Twelve incomplete surveys were eliminated from the final analysis because they were missing more than 15% of the data necessary for analysis (George & Mallery, 2001). Completed survey instruments from 598 respondents—373 females (62.4%) and 225 males (37.6%)—were used in the final analysis. The ages of all respondents ranged from 18 to 63, with a mean of 23.5 \( (SD = 6.3) \) years.

The sample was stratified by institution size and seemed evenly distributed with large institutions contributing 311 (52.0%) respondents and small institutions providing 287 (48.0%) respondents. The greatest number of respondents came from NATA regional Districts Two (23.1%) and Four (31.4%). Districts Two and Four also have a large number of accredited ATEPs compared to other NATA regional districts. Table 4.1
Table 4.1

Distribution of Respondents by Gender and Educational Status

According to NATA Regional District

<table>
<thead>
<tr>
<th>NATA District</th>
<th>Under-Class</th>
<th>Upper-Class</th>
<th>Instructor</th>
<th>Sample</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(n = 256)</td>
<td>(n = 205)</td>
<td>(n = 137)</td>
<td>(N = 598)</td>
</tr>
<tr>
<td></td>
<td>Male Female</td>
<td>Male Female</td>
<td>Male Female</td>
<td>%</td>
</tr>
<tr>
<td>One</td>
<td>0 9</td>
<td>2 5</td>
<td>2 0</td>
<td>3.0</td>
</tr>
<tr>
<td>Two</td>
<td>26 35</td>
<td>19 36</td>
<td>12 10</td>
<td>23.1</td>
</tr>
<tr>
<td>Three</td>
<td>5 19</td>
<td>1 6</td>
<td>2 3</td>
<td>6.0</td>
</tr>
<tr>
<td>Four</td>
<td>21 47</td>
<td>27 55</td>
<td>20 18</td>
<td>31.4</td>
</tr>
<tr>
<td>Five</td>
<td>9 28</td>
<td>7 7</td>
<td>11 8</td>
<td>11.7</td>
</tr>
<tr>
<td>Six</td>
<td>4 5</td>
<td>5 5</td>
<td>3 2</td>
<td>4.0</td>
</tr>
<tr>
<td>Seven</td>
<td>5 5</td>
<td>0 0</td>
<td>1 5</td>
<td>2.7</td>
</tr>
<tr>
<td>Eight</td>
<td>2 3</td>
<td>6 6</td>
<td>15 9</td>
<td>6.9</td>
</tr>
<tr>
<td>Nine</td>
<td>0 7</td>
<td>8 9</td>
<td>0 5</td>
<td>4.8</td>
</tr>
<tr>
<td>Ten</td>
<td>8 18</td>
<td>0 1</td>
<td>4 7</td>
<td>6.4</td>
</tr>
<tr>
<td>Total</td>
<td>80 176</td>
<td>75 130</td>
<td>70 67</td>
<td>100.0</td>
</tr>
</tbody>
</table>
describes the distribution of respondents in each NATA regional district by gender and educational status.

Students accounted for 461 (77.1%) of the 598 survey instruments used in the final analysis; 155 (33.6%) were males and 306 (66.4%) were females. Students’ ages ranged from 18 to 36, with a mean of 21.1 ($SD = 2.1$) years. The mean grade point average for students participating in the study was 3.32 ($SD = 0.4$). The majority of students (76.1%) reported that they had not taken a formal course in ethics. Table 4.2 describes students’ demographic characteristics pertaining to age, educational status and highest level of formal education completed.

Instructors accounted for 137 (22.9%) of the 598 survey instruments used in the final analysis; 70 (51.1%) were males and 67 (48.9%) were females. Instructors’ ages ranged from 20 to 63, with a mean of 31.8 ($SD = 8.6$) years. On average, instructors reported they had been working in their current positions for 4.9 ($SD = 6.4$) years and had been a certified athletic trainer for 8.6 ($SD = 7.6$) years. The majority of instructors (59.1%), like students, reported that they had not taken a formal course in ethics. Table 4.3 describes instructors’ demographic characteristics pertaining to age, years certified as an athletic trainer and highest level of formal education completed.
Table 4.2

Demographic Characteristics of Student Participants (N = 461)

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Age at time of survey (years)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>18-20</td>
<td>193</td>
<td>41.9</td>
</tr>
<tr>
<td>21-23</td>
<td>229</td>
<td>47.9</td>
</tr>
<tr>
<td>24-26</td>
<td>25</td>
<td>5.4</td>
</tr>
<tr>
<td>27-29</td>
<td>10</td>
<td>2.2</td>
</tr>
<tr>
<td>30-32</td>
<td>3</td>
<td>.7</td>
</tr>
<tr>
<td>33+</td>
<td>1</td>
<td>.2</td>
</tr>
<tr>
<td><strong>Year/ Educational Status</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>First</td>
<td>130</td>
<td>28.2</td>
</tr>
<tr>
<td>Second</td>
<td>126</td>
<td>27.3</td>
</tr>
<tr>
<td>Third</td>
<td>123</td>
<td>26.7</td>
</tr>
<tr>
<td>Fourth</td>
<td>82</td>
<td>17.8</td>
</tr>
<tr>
<td><strong>Highest education level completed</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>High School</td>
<td>407</td>
<td>88.3</td>
</tr>
<tr>
<td>Associate</td>
<td>41</td>
<td>8.9</td>
</tr>
<tr>
<td>Bachelor</td>
<td>9</td>
<td>2.0</td>
</tr>
<tr>
<td>Master</td>
<td>4</td>
<td>.9</td>
</tr>
</tbody>
</table>
Table 4.3

Demographic Characteristics of Instructor Participants (N = 137)

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Age at time of survey (years)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>18-24</td>
<td>30</td>
<td>21.9</td>
</tr>
<tr>
<td>25-30</td>
<td>45</td>
<td>32.8</td>
</tr>
<tr>
<td>31-36</td>
<td>31</td>
<td>22.6</td>
</tr>
<tr>
<td>37-42</td>
<td>14</td>
<td>10.2</td>
</tr>
<tr>
<td>43-48</td>
<td>11</td>
<td>8.0</td>
</tr>
<tr>
<td>49 +</td>
<td>6</td>
<td>3.5</td>
</tr>
<tr>
<td><strong>Years certified as an athletic trainer</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>0-5</td>
<td>103</td>
<td>75.2</td>
</tr>
<tr>
<td>6-10</td>
<td>18</td>
<td>13.1</td>
</tr>
<tr>
<td>11-15</td>
<td>5</td>
<td>3.6</td>
</tr>
<tr>
<td>16-20</td>
<td>6</td>
<td>4.4</td>
</tr>
<tr>
<td>21+</td>
<td>5</td>
<td>3.7</td>
</tr>
<tr>
<td><strong>Highest education level completed</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bachelor</td>
<td>40</td>
<td>29.2</td>
</tr>
<tr>
<td>Master</td>
<td>82</td>
<td>59.9</td>
</tr>
<tr>
<td>Doctorate</td>
<td>15</td>
<td>10.9</td>
</tr>
</tbody>
</table>
Results for Research Question One: Participants’ Reported Levels of Idealism, Relativism and Ethical Decision-Making.

Research Question One explored under-class students’ and upper-class students’ and instructors’ reported levels of idealism, relativism, and ethical decision-making. The following section describes respondents’ reported idealism scores, relativism scores and ethical decision-making scores. A description of male and female respondents’ reported idealism scores, relativism scores and ethical decision-making scores by educational status is presented in Table 4.4.

Overall, respondents (N = 598) reported higher idealism ($M = 37.56$, $SD = 4.91$) scores than relativism scores ($M = 31.70$, $SD = 4.80$). Instructors reported the lowest idealism scores ($M = 36.70$, $SD = 5.70$) of all respondents. Approximately one-half of all respondents, 297 (49.7%), scored above the mean of the idealism scale, endorsing a highly idealistic individual moral philosophy toward ethical matters. The other 301 (50.3%) subjects scored below the mean, adopting a low idealist individual moral philosophy toward ethical matters.

Similar to the results for the idealism scale, the number of respondents scoring above and below the mean of the relativism scale ($M = 31.70$) was approximately equally distributed. Instructors reported the lowest relativism scores ($M = 29.92$, $SD = 4.86$) of all respondents. However, respondents appeared to exhibit a slight inclination toward
Table 4.4.

Means and Standard Deviations for Males’ and Females’ Idealism Scores, Relativism Scores and Ethical Decision-Making Scores by Educational Status.

<table>
<thead>
<tr>
<th>Ed. Status</th>
<th>Males</th>
<th></th>
<th></th>
<th></th>
<th></th>
<th>Females</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M</td>
<td>SD</td>
<td>n</td>
<td>M</td>
<td>SD</td>
<td>n</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Idealism Score</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Under-Class</td>
<td>38.22</td>
<td>5.18</td>
<td>80</td>
<td>38.23</td>
<td>4.33</td>
<td>176</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Upper-Class</td>
<td>36.97</td>
<td>5.14</td>
<td>75</td>
<td>37.27</td>
<td>4.29</td>
<td>130</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Instructor</td>
<td>36.27</td>
<td>6.33</td>
<td>70</td>
<td>37.55</td>
<td>4.92</td>
<td>67</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Relativism Score</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Under-Class</td>
<td>33.19</td>
<td>4.70</td>
<td>80</td>
<td>31.45</td>
<td>4.52</td>
<td>176</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Upper-Class</td>
<td>33.04</td>
<td>4.89</td>
<td>75</td>
<td>32.21</td>
<td>4.53</td>
<td>130</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Instructor</td>
<td>30.47</td>
<td>4.87</td>
<td>70</td>
<td>29.35</td>
<td>4.82</td>
<td>67</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ethical Decision-Making Score</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Under-Class</td>
<td>80.29</td>
<td>8.37</td>
<td>80</td>
<td>80.46</td>
<td>7.13</td>
<td>176</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Upper-Class</td>
<td>78.92</td>
<td>8.82</td>
<td>75</td>
<td>80.20</td>
<td>7.85</td>
<td>130</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Instructor</td>
<td>82.89</td>
<td>7.63</td>
<td>70</td>
<td>83.07</td>
<td>7.67</td>
<td>67</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
adopting a highly relativistic individual moral philosophy, with 323 (54.0%) respondents scoring above the mean of the relativism scale. The other 265 (46.0%) respondents scored below the mean of the relativism scale, adopting a non-relativist individual moral philosophy toward ethical matters. Figure 4.1 displays respondents’ reported idealism and relativism scores as a function of educational status.

Finally, the mean ethical decision-making score for all respondents was \( M = 80.76, \ SD = 7.88 \). Instructors reported the highest ethical decision-making scores \( M = 82.98, \ SD = 7.62 \) of all respondents. Figure 4.2 displays respondents’ reported ethical decision-making scores as a function of educational status.

**Respondents Individual Moral Philosophies**

Forsyth (1980; 1992a; 2002a; 2002b) described a 2 X 2 IMP model of ethical ideologies that results when the dimensions of idealism and relativism are dichotomized and crossed (see Appendix C). Respondents were categorized into one of four ethical ideologies based on whether or not they scored above or below the medians of the idealism \( Mdn = 37.00 \) and relativism scales \( Mdn = 32.00 \). These ethical ideologies were termed situationism, absolutism, subjectivism and exceptionism. Results revealed the typology of subjectivism to contain the largest percentage of respondents (28.8%). The typology of exceptionism contained the lowest percentage of respondents (21.6%) (see Figure 4.3). However, the
Figure 4.1. Respondents’ reported idealism and relativism scores as a function of educational status.
Figure 4.2. Respondents’ reported ethical decision-making scores as a function of educational status.
Figure 4.3. Number and Percentage of Respondents Adopting each IMP Typology.
proportion of respondents in each typology was not significantly different, 
\( x^2(4, N = 598) = 2.11, p = .72, V = .06. \)

**Results for Instrument Reliability and Validity**

Item analysis revealed no negatively discriminating items (see Appendix H-1). Further, Cronbach’s alphas for the EPQ’s idealism and relativism subscales and the DAT-Q scale were .79, .72 and .82 respectively. Principal components factor analysis with varimax rotation revealed the 20 items of the EPQ to load on five factors with two primary factors (Eigenvalues of 3.72 and 2.85) that accounted for approximately 26.35% of the variance (see Appendix H-2). Items from the idealism subscale loaded most heavily on Component One (16.36%). Items from the relativism subscale loaded most heavily on component two (9.99%).

Principal components factor analysis with varimax rotation revealed the DAT-Q to load on six factors (Eigenvalues of 4.69, 2.18, 2.09, 1.80, 1.57, 1.25) that accounted for 67.98% of the variance (see Appendix H-3).

**Results for Tests of Statistical Assumptions**

This section addresses statistical assumptions related to the parametric statistical procedures used to test the hypotheses in this study. The dependent variables seemingly satisfied the assumption of normality based on descriptive measures of skewness, histograms and normal probability plots (see Appendixes H-4 to H-9).
The second assumption was homogeneity of variance. Levene’s Test of Equality of Error Variance was used to examine this assumption. Results of this test revealed no significant differences in the variances for each level of the independent variables for the dependent variables of relativism score, $F(5, 592) = .36, p = .87$, and ethical decision-making score, $F(5, 592) = 1.76, p = .12$. However, results of Levene’s Test for the dependent variable of idealism score, $F(5, 592) = 4.64, p = .000$, violated the homogeneity of variance assumption. Therefore, Barlett’s test, which is an $F$-ratio of the group with largest variance compared with the group with smallest variance was used to examine if group variances for idealism score were significantly different. The results for Barlett’s test revealed the ratio of largest variance to smallest variance to be less than 2:1 indicating an acceptable departure from the variance homogeneity assumption when sample sizes are unequal (Dunbar, 1998). Based on this finding and literature suggesting that increases in sample size have been shown to cause ANOVA to become less sensitive to variance heterogeneity (Glass, Peckham, & Sanders, 1972). A decision was made to proceed with the planned parametric procedures.

The third assumption was independence of observations. Because instruments were not completed in groups, but rather individually by each respondent, this assumption was not likely violated (Stevens, 1999).
Hypothesis Testing: Results for Research Questions Two, Three and Four

This study explores the relationship between ethical ideology (idealism and relativism) and ethical decision-making in collegiate athletic training education settings. In addition, the study also examined whether or not gender and educational status were related to subjects’ ethical ideologies and subjects’ ethical decisions. The following section identifies each of the study’s null hypotheses and the results of statistical tests conducted on the data. All significance levels were set to an a priori level of $\alpha = .05$.

Null Hypotheses One Results: Gender and Educational Status Interaction

Null Hypothesis One predicted no significant difference exists between male and female athletic training students’ and instructors’ mean scores for the idealism, relativism and ethical decision-making scales. The potential interactions of gender and educational status were evaluated to identify significant combined differences for the three dependent variables (idealism score, relativism score and ethical decision-making score). Specifically, one 2 (gender) X 3 (educational status: under-class students, upper-class students and instructors) between-participants factorial ANOVA was performed for each of the three dependent variables.

The analysis of idealism scores, relativism scores and ethical decision-making scores indicated that no interactions were significant
between gender and educational status, $F(2, 592) = .737, p = .479, \eta^2 = .002$, $F(2, 592) = .507, p = .603, \eta^2 = .002$ and $F(2, 592) = .312, p = .732, \eta^2 = .001$ respectively (see Table 4.5). This suggests no combined overall significant differences exist in idealism scores, relativism scores or ethical decision-making scores for male and female under-class students, upper-class students and instructors. Therefore, a decision was made to fail to reject Null Hypothesis One. Figures 4.4, 4.5, and 4.6, display respondents’ reported idealism, relativism and ethical decision-making scores as a function of gender and educational status.

**Null Hypothesis Two Results: Gender**

Null Hypothesis Two stated no significant difference exists between male and female subjects’ mean scores for the idealism, relativism and ethical decision-making scales. Two, 2 (gender) X 3 (educational status) between-participants factorial ANOVAs indicated that no significant differences in idealism or ethical decision-making scores were attributable to the main effect of gender, $F(1, 592) = 1.55, p = .214, \eta^2 = .003$ and $F(1, 592) = .635, p = .426, \eta^2 = .001$, respectively. Therefore, a decision was made to fail to reject Null Hypothesis Two as it pertained to the dependent variables of idealism score and ethical decision-making score.

A third 2 (gender) X 3 (educational status) factorial ANOVA was conducted on the dependent variable of relativism score. The main effect
Table 4.5. 2 (Gender) X 3 (Educational Status) ANOVA Results by Dependent Variable.

<table>
<thead>
<tr>
<th>Source</th>
<th>SS</th>
<th>MS</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Idealism Score</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gender (A)&lt;sup&gt;a&lt;/sup&gt;</td>
<td>36.90</td>
<td>36.90</td>
<td>1.55</td>
</tr>
<tr>
<td>Educational Status (B)&lt;sup&gt;b&lt;/sup&gt;</td>
<td>190.07</td>
<td>95.04</td>
<td>4.00*</td>
</tr>
<tr>
<td>A X B</td>
<td>35.11</td>
<td>17.56</td>
<td>.74</td>
</tr>
<tr>
<td><strong>Relativism Score</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gender (A)&lt;sup&gt;a&lt;/sup&gt;</td>
<td>200.31</td>
<td>200.31</td>
<td>9.18*</td>
</tr>
<tr>
<td>Educational Status (B)&lt;sup&gt;b&lt;/sup&gt;</td>
<td>677.38</td>
<td>338.69</td>
<td>15.52**</td>
</tr>
<tr>
<td>A X B</td>
<td>22.10</td>
<td>11.05</td>
<td>.51</td>
</tr>
<tr>
<td><strong>Ethical Decision-Making Score</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gender (A)&lt;sup&gt;a&lt;/sup&gt;</td>
<td>38.70</td>
<td>38.70</td>
<td>.64</td>
</tr>
<tr>
<td>Educational Status (B)&lt;sup&gt;b&lt;/sup&gt;</td>
<td>982.10</td>
<td>491.04</td>
<td>8.06**</td>
</tr>
<tr>
<td>A X B</td>
<td>38.04</td>
<td>19.02</td>
<td>.31</td>
</tr>
</tbody>
</table>

<sup>a</sup>df = 1, 592. <sup>b</sup>df = 2, 592.

*<em>p</em> < .05. **<em>p</em> < .01
Figure 4.4. Idealism scores as a function of gender and educational status.
Figure 4.5. Relativism scores as a function of gender and educational status.
Figure 4.6. Ethical Decision-Making scores as a function of gender and educational status.
for gender for relativism illustrated that males reported significantly higher relativism scores, $F(1, 592) = 9.183, p < .05, \eta^2 = .015$, than females, regardless of educational status. This indicated that gender was associated with about 1.5% of the variance in a subject’s relativism score, which represented a small effect size, according to Cohen (1988). Therefore, a decision was made to reject Null Hypothesis Two as it pertains to relativism scores. Table 4.6 summarizes the cell means and standard deviations for idealism, relativism, and ethical decision-making scores as functions of the main effect for gender. Figure 4.7 illustrates respondents’ reported idealism, relativism and ethical decision-making scores as functions of gender.

**Null Hypothesis Three Results: Educational Status**

Null Hypothesis Three stated no significant differences exist because of the main effect of educational status between subjects’ mean scores on each of the three dependent variables. One, 2 (gender) X 3 (educational status) between-participants factorial ANOVA was performed on each dependent variable of idealism score, relativism score and ethical decision-making score to determine if significant differences existed between under-class students’, upper-class students’ and instructors’ scores.

Results for each of the three factorial ANOVAs revealed a statistically significant main effect for educational status on the
Table 4.6.
Means and Standard Deviations for Gender and Dependent Variables

<table>
<thead>
<tr>
<th>Variable</th>
<th>Males (n = 225)</th>
<th>Females (n = 373)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M</td>
<td>SD</td>
</tr>
<tr>
<td>Idealism</td>
<td>37.22</td>
<td>5.59</td>
</tr>
<tr>
<td>Relativism</td>
<td>32.31</td>
<td>4.96</td>
</tr>
<tr>
<td>Ethical Decision-Making</td>
<td>80.64</td>
<td>8.43</td>
</tr>
</tbody>
</table>
Figure 4.7. Ethical Decision-Making scores as a function of gender and educational status.
dependent variables of idealism scores, \( F(2, 592) = 3.99, p < .05, \eta^2 = .013 \), relativism scores, \( F(2, 592) = 15.53, p < .001, \eta^2 = .050 \), and ethical decision-making scores, \( F(2, 592) = 8.06, p < .001, \eta^2 = .027 \). Of these, educational status demonstrated the largest association with relativism scores. This indicated that educational status was associated with about 5.0% of the variance in a subject’s relativism score, which represented a small to medium effect size according to Cohen (1988). Therefore, a decision was made to reject Null Hypothesis Three.

*Pairwise comparisons.*

The Tukey Honestly Significant Difference (HSD) follow-up procedure \( (p = .05) \) was performed for each factorial ANOVA to assess pairwise differences among the three levels for the main effect for educational status. The results for the dependent variable of idealism score indicated that under-class students’ idealism scores \( (M = 38.23) \) were significantly higher than instructors’ idealism scores \( (M = 36.90) \). However, neither under-class students’ nor instructors’ idealism scores differed significantly from upper-class students’ idealism scores \( (M = 37.16) \).

The Tukey HSD results were similar for the dependent variables of relativism score and ethical decision-making scores. Results revealed that under-class students’ relativism scores \( (M = 31.99) \) and upper-class students’ relativism scores \( (M = 32.51) \) were significantly higher than
instructors’ relativism scores ($M = 29.92$). Similarly, results also indicated that both under-class students’ ethical decision-making scores ($M = 80.40$) and upper-class students’ ethical decision-making scores ($M = 79.73$) significantly were lower than instructors’ ethical decision-making scores ($M = 82.98$). However, under-class students’ and upper-class students’ relativism scores and ethical decision-making scores did not differ significantly. Table 4.7 summarizes the cell means and standard deviations for idealism, relativism, and ethical decision-making scores as functions of the main effect for educational status.

**Null Hypothesis Four Results: Idealism, Relativism and Ethical Decision-Making Relationship**

Null Hypothesis Four predicted that no significant linear relationship existed among subjects’ idealism, relativism and ethical decision-making scores. Pearson’s product-moment correlation coefficients were examined to test Null Hypothesis Four.

Examination of the correlation coefficients revealed a significant negative relationship between subjects’ relativism scores and ethical decision-making scores $r (596) = -.14, p < .01$. This finding indicated that 2.01% of the variance in a subject’s ethical decision-making score was associated with his or her relativism score, which, according to Cohen, (1988) represents a small effect size. Similarly, an examination of the correlation coefficients also revealed a significant positive relationship
Table 4.7.
Means and Standard Deviations for Educational Status by Dependent Variable

<table>
<thead>
<tr>
<th>Variable</th>
<th>Under-Class (n = 256)</th>
<th>Upper-Class (n = 205)</th>
<th>Instructor (n = 137)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M</td>
<td>SD</td>
<td>M</td>
</tr>
<tr>
<td>Idealism</td>
<td>38.23&lt;sub&gt;a&lt;/sub&gt; 4.60</td>
<td>37.16&lt;sub&gt;a,b&lt;/sub&gt; 4.61</td>
<td>36.90&lt;sub&gt;b&lt;/sub&gt; 5.70</td>
</tr>
<tr>
<td>Relativism</td>
<td>31.99&lt;sub&gt;a&lt;/sub&gt; 4.63</td>
<td>32.51&lt;sub&gt;a&lt;/sub&gt; 4.67</td>
<td>29.92&lt;sub&gt;b&lt;/sub&gt; 4.86</td>
</tr>
<tr>
<td>Ethical Decision-Making</td>
<td>80.40&lt;sub&gt;a&lt;/sub&gt; 7.53</td>
<td>79.73&lt;sub&gt;a&lt;/sub&gt; 8.22</td>
<td>82.98&lt;sub&gt;b&lt;/sub&gt; 7.62</td>
</tr>
</tbody>
</table>

*Note. Means in the same row that do not share subscripts differ at p < .05 in the Tukey honestly significant difference comparison.*
between subjects’ idealism scores and ethical decision-making scores, $r(596) = .34, p < .01$. This finding indicated that 11.56% of the variance in a subject’s ethical decision-making score was associated with his or her idealism score, which, according to Cohen (1988), represented a medium effect size, (see Table 4.8). Based on these findings a decision was made to reject Null Hypothesis Four.

Additional Findings

This was the first study in the profession of athletic training to research the potential relationship between athletic trainers’ ethical ideology and their ethical decision-making. The hypotheses discussed previously in Chapter Four concerned any potential differences in respondents’ idealism scores, relativism scores and ethical decision-making scores with respect to gender and educational status. In addition, the potential relationship between idealism, relativism and ethical-decision-making also was investigated. Because this study was the first of its kind and exploratory, additional analyses examining students’ and instructors’ idealism scores, relativism scores and ethical decision-making scores was essential. The following section examines research questions that developed during this study.

Individual Moral Philosophies and Ethical Decision-Making

A one-way ANOVA was performed to assess the potential association of ethical ideology with ethical decision-making scores.
Table 4.8.

Intercorrelations, means, and standard deviations for Idealism Score, Relativism Score and Ethical Decision-Making Score.

<table>
<thead>
<tr>
<th>Measure</th>
<th>EPQ-I</th>
<th>EPQ-R</th>
<th>DAT-Q</th>
<th>M</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>EPQ-I</td>
<td>--</td>
<td>-.05</td>
<td>.34**</td>
<td>37.56</td>
<td>4.91</td>
</tr>
<tr>
<td>EPQ-R</td>
<td>--</td>
<td>--</td>
<td>-.14**</td>
<td>31.70</td>
<td>4.80</td>
</tr>
<tr>
<td>DAT-Q</td>
<td>--</td>
<td>--</td>
<td></td>
<td>80.76</td>
<td>7.88</td>
</tr>
</tbody>
</table>

Note. EPQ-I = Idealism Score; EPQ-R = Relativism Score; DAT-Q = Ethical Decision-Making Score.

**p < .01.
Results indicated significant differences in ethical decision-making across the four levels of ethical ideology, \( F (3, 594) = 21.72, p < .001, \eta^2 = .099 \). This finding indicated that about 9.9% of the variance in a subject’s ethical decision-making score was associated with his or her ethical ideology. According to Cohen (1988), this represented a medium-to-large effect size. Table 4.9 summarizes the cell means and standard deviations for ethical decision-making scores as a function respondents’ individual moral philosophies, (see Appendix H-10 for a summary of ANOVA results). The Tukey HSD follow-up procedure (\( p = .05 \)) was performed to assess pairwise differences among the four levels of ethical ideology. Results revealed that absolutists’ (\( n = 145 \)) ethical decision-making scores (\( M = 84.25 \)) were significantly higher than the ethical decision-making scores of individuals adopting all other ethical ideologies. Situationists’ ethical decision-making scores were the second highest (\( M = 81.93 \)) among all ethical ideologies and significantly higher than both exceptionists (\( M = 79.30 \)) and subjectivists (\( M = 77.89 \)), who were the lowest scorers. Table 4.10 summarizes the Tukey HSD results.

Institution Size, Idealism, Relativism, Ethical Decision-Making and Locus of Control

Four independent sample \( t \) tests revealed no significant differences in respondents’ idealism scores, relativism scores, ethical decision-
Table 4.9.


<table>
<thead>
<tr>
<th>IMP</th>
<th>Ethical Decision-Making</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M</td>
</tr>
<tr>
<td>Situationist</td>
<td>81.93</td>
</tr>
<tr>
<td>Absolutist</td>
<td>84.25</td>
</tr>
<tr>
<td>Subjectivist</td>
<td>77.89</td>
</tr>
<tr>
<td>Exceptionist</td>
<td>79.30</td>
</tr>
</tbody>
</table>

*Note. IMP = Individual Moral Philosophy.*
Table 4.10.
Tukey HSD Results for Ethical Decision-Making by IMP.

<table>
<thead>
<tr>
<th>(I) IMP</th>
<th>(J) IMP</th>
<th>Mean Difference</th>
<th>Standard Error</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Situationist</td>
<td>Absolutist</td>
<td>-2.23*</td>
<td>.87</td>
<td>.04</td>
</tr>
<tr>
<td>Subjectivist</td>
<td>Absolutist</td>
<td>4.03*</td>
<td>.83</td>
<td>.00</td>
</tr>
<tr>
<td>Subjectivist</td>
<td>Absolutist</td>
<td>2.62*</td>
<td>.90</td>
<td>.02</td>
</tr>
<tr>
<td>Absolutist</td>
<td>Situationist</td>
<td>2.33*</td>
<td>.87</td>
<td>.04</td>
</tr>
<tr>
<td>Subjectivist</td>
<td>Absolutist</td>
<td>6.36*</td>
<td>.85</td>
<td>.00</td>
</tr>
<tr>
<td>Subjectivist</td>
<td>Absolutist</td>
<td>4.95*</td>
<td>.91</td>
<td>.00</td>
</tr>
<tr>
<td>Subjectivist</td>
<td>Situationist</td>
<td>-4.03*</td>
<td>.83</td>
<td>.00</td>
</tr>
<tr>
<td>Absolutist</td>
<td>Absolutist</td>
<td>-6.36*</td>
<td>.85</td>
<td>.00</td>
</tr>
<tr>
<td>Subjectivist</td>
<td>Absolutist</td>
<td>-1.41</td>
<td>.87</td>
<td>.37</td>
</tr>
<tr>
<td>Exceptionist</td>
<td>Situationist</td>
<td>-2.62*</td>
<td>.90</td>
<td>.02</td>
</tr>
<tr>
<td>Absolutist</td>
<td>Absolutist</td>
<td>-4.95*</td>
<td>.91</td>
<td>.00</td>
</tr>
<tr>
<td>Subjectivist</td>
<td>Absolutist</td>
<td>1.41</td>
<td>.87</td>
<td>.37</td>
</tr>
</tbody>
</table>

* p < .05.
making scores and locus of control scores as functions of the independent variable, institution size, (see Appendix H-11).

**Institutional Size and Individual Moral Philosophy (Ethical Ideology)**

A 2 (institution size) X 4 (individual moral philosophy) chi-square test indicated no evidence of a relationship between institution size and individual moral philosophy, $\chi^2(3, N = 598) = 1.70, p = .64, V = .05$.

**Ethics Course Work, Idealism, Relativism, Ethical Decision-Making and Locus of Control**

Four independent sample $t$ tests were used to test the effects of ethics course work on idealism scores, relativism scores, ethical decision-making scores and locus of control scores. No significant differences were found between individuals who reported having not taken a course in ethics ($n = 432$) and those who had taken a course in ethics ($n = 152$), (see Appendix H-12).

**Locus of Control**

The final item of the survey instrument assessed respondents’ loci of control (LOC). This question asked student respondents to rate their levels of agreement with the statement: “Athletic trainers have complete authority to make patient care decisions in the absence of a physician.” The question asked instructors to rate their level of agreement with the statement: “I feel that I have complete authority to make patient care decisions in the absence of a physician.” Respondents indicated their
degree of agreement with each statement on a five-point, Likert-type scale ranging from “Always” to “Never.” The mean of all subjects responses to this statement was ($M = 3.43$) indicating that they agreed with these statements from “Sometimes” to “Most of the time.” Subjects next were categorized as having internal LOC or external LOC, based on whether they scored above or below the item’s mean, respectively. Respondents reported to be divided approximately equally between internal LOC (51%) and external LOC (49%). Multiple chi-square tests revealed no evidence of significant relationships among subjects’ genders, educational status, institution sizes, IMPs, and their LOC.

*Locus of Control, Idealism, Relativism and Ethical Decision-Making*

Three separate independent sample $t$ tests were performed on idealism, relativism, and ethical decision-making scores. There were no significant differences in the respondents’ relativism scores as function of LOC. However, respondents having internal did LOC demonstrate significantly higher idealism and ethical decision-making scores than respondents having external LOC, $t(596) = -2.03$, $p < .05$, $d = .16$, and $t(596) = -2.35$, $p < .05$, $d = .19$ respectively (see Appendix H-13). According to Cohen (1988) the effect size of these differences was small and not statistically meaningful.
The Relationship of Selected Demographic Variables with Idealism Scores, Relativism Scores and Ethical Decision-Making Scores

Correlations between respondents’ demographic characteristics and their scores on the dependent variables were significant. Idealism scores were discovered to have a small but significant negative correlation with educational status, \((\text{Spearman’s rho}) r_s (596) = -.11, p < .001\). Relativism scores were found to have a small but significant negative correlation with educational status, \(r_s (596) = -.14, p < .001\), highest degree earned, \(r_s (596) = -.21, p < .05\), age, \(r (596) = -.18, p < .001\), grade point average (GPA), \(r (429) = -.14, p < .001\), and gender, (point biserial) \(r_{pb} (596) = -.10, p < .05\). Finally, ethical decision-making scores were found to have a small but significant positive correlation with educational status, \(r_s (596) = .10, p < .05\), highest degree earned, \(r_s (596) = .17, p < .001\), and age, \(r (596) = .16, p < .001\).

Alternative Analyses

This study used three separate 2 X 3 factorial ANOVAs to test Null Hypotheses One, Two and Three rather than using a single 2 X 3 factorial multivariate analysis of variance (MANOVA) as an omnibus test. A 2 (gender) X 3 (educational status) factorial MANOVA was performed following the initial analyses, which seemed to validate the results of the three 2 X 3 univariate ANOVAs. The multivariate analysis of idealism scores, relativism scores and ethical decision-making scores were similar
to univariate analyses that indicated no interactions between gender and educational status were significant, Wilks $\lambda = .99, F(3, 591) = .62, p = .71, \eta^2 = .01$. The multivariate main effect for gender was Wilks $\lambda = .98, F(3, 591) = 3.4, p < .05, \eta^2 = .02$, and for educational status was Wilks $\lambda = .91, F(3, 591) = 9.5, p < .001, \eta^2 = .05$, each was similar to the results of the univariate analyses.

Previously, in Chapter Three, a decision was made to continue with the planned parametric ANOVAs, despite violating the homogeneity of variance assumption for idealism score. This decision was made because ANOVA has been shown to be robust to violating of the homogeneity of variance assumption. However, two non-parametric Kruskal-Wallis analyses of variance tests interestingly resulted in the same findings for the main effects of gender and educational status as those for the parametric ANOVAs performed.

**Summary**

Chapter Four presented the results of this study. Within this chapter were research procedures, respondents’ descriptive and demographic data; instrument reliability and validity; results of the four null hypotheses presented in Chapter One; and additional findings of the research study. Chapter Five will present a discussion of the results, conclusions and recommendations for further study.
Chapter Five

Introduction

Chapter Five presents a discussion of the data results analyzed in this study and is divided into the following major sections: summary of the study; summary and discussion of research findings; conclusions of the study; and recommendations for further research.

Summary of the Study

Athletic training education has significantly reformed since 1996. These reforms primarily have focused on improving students’ scientific knowledge and clinical skills. Athletic trainers must be capable of reasoning ethically about their professional decisions and behaviors. These ethical decisions require extensive knowledge beyond clinical expertise and skills. Ethical decision-making skills are, according to Hannam (2000), “… the most necessary yet least focused upon skills that can be learned as one develops as a student” (p. 7).

Statement of the Problem

A review of the athletic training education literature indicated a research emphasis on the development of ethical decision-making skills is lacking. This deficiency of research has made difficult determining whether or not athletic trainers are making ethical decisions. More specifically, no research has investigated whether or not athletic training students are learning to make proper ethical decisions from instructors.
who model proper ethical decision-making. This study attempted to explore the relationship between ethical ideology and ethical decision-making in collegiate athletic training settings. Additionally, this study also questioned whether or not gender and educational status were associated with respondents’ ethical ideologies and respondents’ ethical decisions.

**Research Design**

This study used a non-experimental correlational research design (Tuckman, 1999). The independent variables in this study were, gender (male and female) and educational status (under-class students, upper-class students, and instructors). The dependent variables in this study were, idealism, relativism, and ethical decision-making scores.

A simple random sample of 100 CAAHEP-accredited athletic training programs was selected. The directors of the 100 programs were solicited by United States Postal Service and electronic mail to participate in this study. Thirty of 100 programs agreed to participate. Then the Dilemmas in Athletic Training (DAT-Q) and Ethics Position (EPQ) Questionnaires were mailed.

The DAT-Q was designed specifically for this study and measured subjects’ ethical decision-making using hypothetical ethical dilemmas specific to athletic training. The EPQ section of the research instrument was designed to measure subjects’ self-reported levels of idealism and
relativism. The idealism subscale of the EPQ was designed to measure the degree to which subjects believe the “right” decision does not harm others. Highly idealistic athletic trainers believe that harming others is always avoidable and, therefore, always choose the least injurious option when making a decision. On the contrary, less idealistic athletic trainers espouse to a more pragmatic moral philosophy, believing that causing harm to others is sometimes necessary to achieve desirable outcomes (Forsyth, 1980, p. 176).

The relativism subscale of the EPQ was designed to measure the degree to which an individual rejects universal moral standards when making ethical decisions. Highly relativistic athletic trainers believe that ethical decisions depend on the circumstances of a situation, not on universal ethical principles. Athletic trainers who are less relativistic believe that abiding by universal moral principals is important when making ethical decisions.

An email was sent and phone was made two weeks after the initial mailing to remind programs to complete and return the instrument. Twenty-five (83.3%) of the 30 athletic training education programs (ATEPs) sampled returned the survey instruments. Athletic training education programs from all ten NATA districts were represented. Returned instruments were analyzed upon receipt using SPSS 11.5. Variations in mean scores were analyzed using three 2 (gender) X 3
(educational status: under-class student, upper-class student, instructor) factorial analyses of variance. The relationships among idealism, relativism, and ethical decision-making were explored using Pearson product-moment correlation coefficients. The level of statistical significance for all hypothesis testing was set at \( a \) priori level of \( a = .05 \).

**Summary and Discussion of Quantitative Research Results**

The following section of Chapter Five provides a summary and discussion of research results specific to each research question.

**Summary of Results for Research Question One**

Research Question One asked: What are under-class and upper-class students’ and athletic training instructors’ reported levels of idealism, relativism and ethical decision-making?

The present study seemed to demonstrate a slight decline in respondents’ idealism scores as their educational status increased. Results revealed that under-class students reported the highest idealism scores of all three groups. Upper-class students reported the second highest idealism scores of all three groups. Instructors reported the lowest idealism scores of all three groups.

Relativism scores also appeared to increase as students progressed from under-class to upper-class educational status. Under-class and upper-class students’ reported relativism scores higher than instructors’
scores. However, upper-class respondents’ scored highest on the relativism scale. Instructors reported the lowest relativism scores.

Particularly noteworthy was that instructors, although they reported the lowest idealism scores and relativism scores, reported the highest ethical decision-making scores. A small increase in ethical decision-making scores was noted as students progressed in educational status.

Discussion and conclusions for Research Question One. Collectively, these findings seemingly imply that students bring with them to the ATEP a clear moral philosophy—harming others is avoidable and universal moral principals are important. This was evidenced by statements of under-class students who wrote; “It is always wrong to cause hurt to someone else” and “I believe a person does their best work and makes the best decisions when always considering others interests.” Students seemed to become less concerned about harming others as they progressed through the ATEP. Further, their judgments about what was ethical also seemed to be influenced by the circumstances surrounding a situation. This was evidenced by several upper-class students’ written statements regarding a vignette about illegal drug use. For example, one upper-class student wrote: “If the drug use had happened while ‘on duty’ it would have been a different story. Although I am not supporting drug use. I feel that everyone is entitled to their personal life.” A second upper-
class student wrote; “The illegal drug use one, what do you mean by illegal? Marijuana and heroin are different!” Finally, athletic training instructors, seemed to adopt a less idealistic moral philosophy—harming others is sometimes necessary to achieve a desired outcome. However, athletic training instructors’ lower scores on the relativism scale seemed to counter their low idealism scores. This indicated they believed in universal ethical principles, which may have contributed to their high ethical decision-making scores. For example, an athletic training instructor wrote,

Every situation in athletic training is a sliding scale depending on variables like age, sport, position, attitude of the athlete, etc. Ethical boundaries need to be observed but other factors need to be considered to make the best overall decision for the athlete.

*Summary of Results for Research Question Two: Gender*

Research Question Two explored if differences existed among male and female subjects’ reported levels of idealism, relativism, and ethical decision-making.

The results of this study indicated that no significant differences exist in males’ and females’ reported levels of idealism and ethical decision-making. Results did reveal that males’ relativism scores were significantly higher than females’ scores. However, the magnitude of this difference was small. Additional analyses provided added support,
revealing a significant but small negative correlation between gender and relativism scores. Supplemental analyses also provided evidence that male and female students’ relativism scores differed only in the first or second year of their athletic training programs. No support for gender differences in relativism scores was revealed for upper-class students or instructors.

Discussion of results for gender: Research Question Two. A recent study by Litt (2001), discovered that female athletic training students when presented with hypothetical ethical dilemma vignettes reported significantly higher moral judgment scores than male students. Litt’s findings contrasted with Gilligan’s (1982) who argued that men and women use different orientations when making ethical decisions. The results of this study diverge from those of Litt (2001) and Gilligan (1982), because males’ and females’ ethical decision-making scores were found not to differ significantly. This finding appears to strengthen Rest’s conclusion that gender differences concerning ethicality are insignificant (Rest et al., 1999; Rest et al., 1986; Rest & Narváez, 1994). This finding supported research suggesting men and women in other professions do not differ in moral judgments of hypothetical ethical dilemma vignettes (McCuddy & Perry, 1996; McNeel, 1994; Vozzola & Higgen-D'Alessandro, 2000; Wimalasiri, 2001).
Previous research findings have reported gender differences in subjects’ scores on the EPQ (McHoskey, 2001; Miesing & Preble, 1985). This study failed to support the existence of any practically meaningful gender differences in idealism and relativism scores. This observation was consistent with the findings of a similar study, also in healthcare. Eastman et al. (2001) detected no significant gender differences in physicians’ idealism and relativism scores. Collectively, this study’s findings seemingly support Forsyth’s (1980) original study and several recent studies, which failed to detect gender differences in idealism or relativism scores (Forsyth & Nye, 1990; Forsyth et al., 1988; Forsyth & Pope, 1984; MuCuddy & Peery, 1996; Shaub, 1994).

**Conclusions for Research Question Two: gender.** Athletic training is evolving from a male-dominated profession toward a profession into one in which females may some day represent a majority. Litt’s finding that gender was associated with differences in moral judgment scores suggests, that changes to address gender-related differences may need to be made in curricular and instructional practices. This study found a significant difference between males’ and females’ relativism scores, although the difference was minimal. The large sample size used in this study may have increased the statistical power to detect minute differences in scores. This study seems to provide added theoretical support to previous researchers who argue that no systematic
relationship between gender and ethicality exist, because the statistical power of detecting a gender difference was great and no sizable gender differences were observed.

This study’s results collectively seemed to suggest that potential gender differences in ethical ideology and ethical decision-making have little practical significance for educators. Therefore, results do not support a need to address gender differences in current athletic training educational practices.

*Summary of Results for Research Question Three: Educational Status*

Research Question Three in this investigation explored whether or not differences existed between athletic training under-class and upper-class students’ and instructors’ reported levels of idealism, relativism and ethical decision-making.

The results of this study revealed significant differences associated with educational status in subjects’ reported levels of idealism, relativism and ethical decision-making. This section of Chapter Five first discusses the results for idealism and relativism scores and then discusses the results for ethical decision-making.

*Summary of Idealism and Relativism Results for Research Question Three*

Under-class students’ idealism scores were statistically significantly higher than instructors’ idealism scores. However, the magnitude of this difference was negligible. Pairwise comparisons
revealed that upper-class students’ idealism scores failed to differ significantly with either under-class students’ or instructors’ idealism scores. Upper-class students demonstrated non-significantly lower idealism scores than under-class students’ and also non-significantly higher idealism scores than instructors.

The results for the relativism subscale revealed that both under-class students’ and upper-class students’ relativism scores were statistically significantly higher than instructors’ scores. The magnitude of this difference was larger than that of idealism, but still was relatively small. Additional analyses provided further support, revealing educational status, age and highest degree earned each had statistically significant, but small negative correlations with relativism scores. No statistically significant differences were observed between under-class and upper-class students’ relativism scores.

Discussion and conclusions of the idealism and relativism results. The idealism and relativism findings of this study support previous research that found more educated business professionals had lower idealism and relativism scores than students (Dawson, 1997; Miesing & Preble, 1985; Singhapakdi & Vitell, 1993, 1994). However, this study’s results conflict with the finding of Ho et al., (1997) who observed a rise in students’ idealism scores with increased education.
The idealism and relativism results suggest students first enter ATEPs believing that causing harm to others always is wrong. Interestingly, these students seem to believe correct decisions depend on situational circumstances. Instructors seemed to adopt less idealistic moral philosophies about harming others. Athletic training instructors may therefore rely more often than students on universal ethical principles or professional codes when making ethical decisions. Differences in idealism and relativism scores for educational status are questionable in their practicality to educators. The strength of the relationships was weak, and therefore, other related factors likely exist in addition to educational status. However, separating an instructor’s personal moral beliefs from what he or she teaches and models to students is difficult, and therefore, important to educational practice.

**Summary of Ethical Decision-Making Results for Research Question Three**

Students’ and instructors’ ethical decision-making scores showed athletic training instructors ethical decision-making scores were statistically significantly higher than students. The size of this difference was small. This result was supported by additional analyses. Correlations demonstrated educational status, age, and highest degree earned each had a statistically significant, but small positive relationship with ethical decision-making, further supporting the original finding. No
statistically significant differences existed between under-class students’ and upper-class students’ ethical decision-making scores.

Discussion and conclusions of the ethical decision-making results.

No statistically significant differences existed in the ethical decision-making scores of under-class and upper-class athletic training students. This finding diverges from several studies in healthcare and other professions, which all found formal education to have great effects on moral judgment and ethical decision-making (Duckett et al., 1992; Felton & Parsons, 1987; Rest et al., 1999; Rest et al., 1986; Rest & Narváez, 1994; Self, 1994; Sheehan et al., 1998).

This study’s results support Litt (2001). Litt used the DIT-2 to examine moral judgment scores. He found athletic training students from their first year to their final year demonstrated a small (one point) improvement in moral judgment scores. The magnitude of this difference was insignificant according to McNeel (1994).

Instructors’ ethical decision-making scores in this study were statistically significantly higher than students’. The magnitude of this difference, however, was small. Instructors’ scores were approximately two points higher than students’ scores. Educators’ own ethical decision-making skills might limit their abilities to model decisions and facilitate growth in students’ ethical decision-making. Athletic training education, therefore, may benefit from programs designed to ensure that instructors
selected to educate athletic training students have appropriate levels of ethical decision-making. In addition, instructors may also benefit from attending continuing education courses designed to identify and develop instructional practices that best facilitate improvements in students’ ethical decision-making.

**Summary and Discussion of Results for Research Question Four**

Research Question Four asked: Does a significant relationship exist among subjects’ idealism, relativism and ethical decision-making scores?

This study concluded subjects’ idealism and relativism scores were significantly related to ethical decision-making scores. Respondents’ idealism scores were moderately positively correlated with their ethical decision-making scores. This suggested highly idealistic individuals may score high in ethical decision-making. Supported by this study is Vitell’s (1993) research, which suggested athletic trainers who scored high on the idealism scale likely make ethical decisions based on patient welfare.

A significant negative relationship existed in this study between subjects’ relativism scores and their ethical decision-making scores. This suggested that highly relativistic subjects may score low in ethical decision-making. This finding again supported Vitell’s (1993) research, which suggested athletic trainers scoring high on the relativism scale likely make ethical decisions based on their own best interests or their
employer’s best interests. The strength of this relationship, however, was weak.

Collectively, this study’s findings support previous research suggesting that idealism has a stronger influence than relativism on individuals’ decisions and attitudes about ethical situations (Davis et al., 2001; Singh & Forsyth, 1989; Singhapakdi et al., 1999). Results also demonstrated no significant correlation between idealism and relativism. Strengthened by this finding is Davis et al’s (2001) research, which supports Forsyth’s (1980) contention that idealism and relativism address different issues.

However, unsupported by this study is Eastman et al’s (2001) research in healthcare, which failed to detect a relationship among physicians’ levels of idealism and relativism and their ethical decisions in patient care situations. This study found athletic trainers, with more education seemed to become increasingly aware that harming others may be necessary, to achieve desired outcomes. However, idealism and relativism failed to be strongly associated with ethical decision-making. Therefore, future investigations examining other variables are needed to determine better predictors of athletic trainers’ ethical decision-making. In addition, educators may benefit from future research investigating methods of improving athletic trainers’ ethical awareness and increasing their concern for patient welfare.
Summary and Discussion of Results for Additional Findings

The following section discusses the results of research questions that developed during this study.

Individual Moral Philosophy Typologies and Ethical Decision-Making

Previous studies have combined idealism and relativism to yield a 2 x 2 taxonomy of individual moral philosophies. According to Forsyth, the IMP model in this form represents a typology in which individuals may embrace one of four approaches to making ethical decisions.

Respondents in this study who adopted different IMPs diverged when making ethical decisions. A person’s IMP accounted for a moderate-to-large amount of variance in a respondent’s ethical decision-making score. However, respondents did not prefer a particular IMP. Individuals scoring high in idealism and low in relativism (absolutists) reported significantly higher ethical decision-making scores than all other respondents. Respondents scoring high in idealism and high in relativism (situationists) reported the next highest ethical decision-making scores. Individuals scoring low in idealism and high in relativism (subjectivists) reported the lowest ethical decision-making scores.

This study’s findings appear to support previous research, which suggested that athletic trainers adopting an absolutist IMP, compared to other IMPs, are most likely to avoid harming patients and abide by moral codes of conduct when making decisions about ethical dilemmas.
Additionally, highly idealistic respondents’ scored higher in ethical decision-making than those with low idealism scores. This finding supports previous research that suggests idealism may exert a greater influence than relativism on individuals’ decisions and attitudes about ethical situations (Davis et al., 2001; Singh & Forsyth, 1989; Singhapakdi et al., 1999).

This study does not support Davis et al’s (2001) research, which reported a loss of predictive power when idealism and relativism are combined yielding a 2 x 2 IMP taxonomy. This study suggested an individual’s IMP, when compared to other variables such as age, gender and educational status, may be more strongly associated with his or her ethical decision-making score. However, other variables exist that may have greater influence on a subject’s ethical decision-making scores, as apparent by this finding’s moderate effect size.

Institution Size and Idealism, Relativism, and Ethical Decision-Making

Athletic training and its educational process is indivisible from sport and competition. Researchers in other fields have examined “Bracketed Morality”, a phenomenon in which moral judgments are suspended within a competitive environment (Bredemeier & Shields, 1986; Hahm, 1989; Kleiber & Roberts, 1981; Reall et al., 1998). Litt (2001) used Rest’s DIT-2 to investigate the relationship between an
athletics programs’ competition level and athletic training students moral judgment. Litt’s research on “Bracketed Morality” was inconclusive. He found students at large institutions with highly competitive NCAA Division I athletics programs demonstrated significantly higher moral judgment scores than students at smaller institutions with less competitive NCAA Division II or III athletics programs. However, Litt’s research revealed athletic training students showed a decline in moral judgment scores from their freshmen to senior year at institutions with highly competitive athletics programs.

This study found no significant differences in students’ or instructors’ idealism, relativism, and ethical decision-making scores associated with institution size or NCAA competition level. Therefore, this failed to support Litt’s findings or the theory of “Bracketed Morality.”

Supported by this study is Flint and Weiss’s (1992) research, which found athletic trainers’ decisions to return an injured athlete to activity were not significantly influenced by competitive environments. This study’s results seem to have practical significance because they suggest competitive environments do not adversely affect clinicians or students moral philosophies and ethical decision-making. Therefore, current educational environments, which embed students in competition, need not be changed.
Ethics Course Work and Idealism, Relativism, and Ethical Decision-Making

Seventy-four percent of respondents reported never having formal course work in ethics. No significant differences existed between the idealism, relativism and ethical decision-making scores of respondents who took an ethics course and those who reported not taking an ethics course. This finding conflicts with Litt’s (2001) research, which determined collegiate athletic training students who took institutionally required courses in ethics demonstrated significantly greater improvements in moral judgment scores than those students who did not take a required ethics course. The majority of athletic training students and instructors seemed to lack formal ethics course work, as reported by this study. Results suggested improvements in athletic trainers’ idealism scores, relativism scores and ethical decision-making scores are unrelated to formal ethics courses. Other healthcare professions by incorporating ethics into their curriculums have improved students’ moral judgment scores (Bebeau & Pimple, 1995; Duckett et al., 1997). Therefore, athletic training educators may enhance their students’ educations by integrating ethical content into athletic training courses.

Locus of Control and Idealism, Relativism, and Ethical Decision-Making

An approximately equal proportion of athletic training students and instructors in this study had internal or external LOC. Research suggested athletic trainers with internal LOC may exhibit better ethical
decision-making than athletic trainers with external LOC. This study detected no significant differences in the relativism scores of subjects with internal or external LOC. Respondents’ reporting to have internal LOC did demonstrate significantly higher idealism and ethical decision-making scores than respondents’ reporting to have external LOC. However, the meaningful magnitude of these differences was small. Therefore, this study does not support research suggesting relationships existed between subjects’ LOC and ethical attitudes (Reiss & Mitra, 1998), or ethical decision-making (Coleman & Mahaffey, 2000; Jones & Kavanaugh, 1996; McCuddy & Perry, 1996). This study seems to support other studies that failed to demonstrate an existing relationship between LOC and ethicality (Hagarty & Simms, 1979; Trevino & Youngblood, 1990). Several athletic training instructors declared that standing orders dictate their working under a physician’s authority, even if the physician is absent. Such an explanation may have contributed to this study’s failure to detect a meaningful significant relationship between LOC and idealism, relativism and ethical decision-making.

Summary and Conclusions of the Study

Magnus and Ingersoll (1990) said athletic training education must include for its students education in ethical decision-making. Hannam (2000) similarly indicated the core of professionalism was teaching students to value and abide by the NATA Ethical Code of Conduct.
Clearly, some athletic training professionals understand the importance of ethics in clinical decision-making. However, several educators in this study believed teaching students ethical decision-making was impossible. One athletic training educator who completed the survey instrument wrote, “Ethics are subjective—not something that can be taught.” Other instructors expressed their beliefs that this study’s purpose was unimportant to athletic training. For example, an instructor with twenty years of experience wrote,

    I believe this profession is going beyond its means with all the ‘new stuff’ that is coming out. We are not putting out athletic trainers anymore. With all that is coming out, this association is putting ideas into the heads of New Be’s. We need to get back to athletic training and not all this ethics garbage!

A lack of research, negative attitudes, and disinterest in athletic training ethics seem to have decreased instructors’ understandings of the Best Practices to promote growth in students’ ethical decision-making. Modeling in athletic training has been the default method of ethics instruction. An educator’s own moral philosophies and ethical decision-making skills may therefore hinder growth in students’ ethical decision-making (McNeel, 1994). Consequently, an important first step to improve current educational practices is determining if an individual’s moral philosophies are related to his or her ethical decision-making.
Research has indicated males and females may reason with different ethical orientations. Therefore, gender may be related to the learning of ethical decision-making. This study failed to reveal any meaningful systematic gender differences between male and female athletic trainers’ scores on idealism, relativism and ethical decision-making. Therefore, no changes in current athletic training education practices seem warranted to address gender specific needs.

An athletic trainer’s idealism, relativism, and ethical decision-making scores in this study were associated with his or her educational status. Idealism and relativism scores seemed to decrease as educational status increased. Respondents’ reported levels of idealism demonstrated a sizable positive relationship with their ethical decision-making scores. These findings collectively suggest that athletic training students and educators may benefit from education that increases awareness of patient welfare.

This study did not consider all factors contributing to athletic trainers’ ethical decision-making. Rather, it represented a first attempt to measure a few elemental constructs identified as important components of making an ethical decision.

In conclusion, this study provides a baseline for continued research to examine the individual moral philosophies and ethical decision-making scores of athletic training students and instructors.
Improvements in ethical decision-making will not occur simply by modeling clinical behaviors. Nor will improvements occur simply by introducing students to the NATA Ethical Code of Conduct. Cultivating practitioners who reflect on their professional demeanors requires instructors who believe ethics are important. Instructors also must teach ethics and actively engage students to reason ethically about their clinical practices.

**Recommendations for Athletic Training Education**

1. This investigation found idealism to have a moderate relationship with ethical decision-making. Idealism scores seemed to decrease as educational status increased. Therefore, continuing education programs may benefit by addressing apathy and promoting sensitivity for patient welfare.

2. Research and common sense suggests educators should have a higher level of ethical decision-making than students. This study found instructors levels of ethical decision-making to be higher than students, but the size of this difference was small. Therefore, selecting instructors with high levels of ethical decision-making to educate athletic training students may be appropriate.

3. This study demonstrated that the majority of athletic training students and instructors sampled took no formal courses in ethics. Experience in a formal ethics course was not associated with
improvements in ethical decision-making. Therefore, athletic training education may benefit by directly integrating ethics education into athletic training courses throughout the curriculum rather than require a single course.

4. A third-year student in this study wrote, “The scenarios were hard to answer due to the fact that we have only briefly covered the code of ethics and do not have a class on them.” Simply introducing the NATA Ethical Code of Conduct to students is not adequate to produce ethical young professionals. Athletic training educators should use multiple instructional tools, such as dilemma discussions, role-playing and reflective journals. These methods may help students to become thoughtful practitioners who can evaluate their own professional decisions and behaviors.

5. Increased curricular emphasis on ethics is needed to advance athletic training’s status among allied healthcare professions. Teaching students technical skills is import but how to reason and behave in a manner that befits a responsible healthcare professional is equally as important. 542 educational competencies and 1,230 proficiencies existed at the time of this study. Twenty-three of the 542 competencies addressed ethics. Furthermore, only two specifically focused on ethical decision-making.
Recommendations for Further Research

1. This investigation was the first attempt to measure athletic training students’ and instructors’ ethical decision-making using vignettes specific to athletic training. The vignettes developed for this investigation do not represent all possible ethical dilemma situations. Nor do they present all possible courses of action to resolve a dilemma. Therefore, future research should consider revising the current vignettes and developing new scenarios that may better represent the potential ethical dilemmas encountered by athletic trainers.

2. An individual’s level of idealism and relativism do not represent all factors that may influence an athletic trainer’s ethical decision-making. Future research should consider using an experimental factorial vignette design to determine if a vignette character’s personal characteristics—such as ethnicity, gender or competition level influence athletic trainers’ ethical decisions.

3. This study found that athletic trainers adopting various individual moral philosophies differed significantly in their ethical decision-making scores. Therefore, future research should identify factors that influence an athletic trainer’s preference for a particular individual moral philosophy.

4. Research in other professions has found that instruction using dilemma discussions is associated with improvements in moral judgment
scores. Therefore, future research should investigate which instructional methods, such as dilemma discussions, role-playing, simulations, or direct instruction, are associated with the greatest improvements in students’ ethical decision-making scores.

5. Athletic training educators may benefit from future research identifying the individual moral philosophies and ethical decision-making skills of instructors. This may allow educators to determine which instructor and student individual moral philosophy pairings facilitate optimal improvements in students’ ethical decision-making scores.

6. Future research is needed to validate the DAT-Q. Investigations should consider; using a longitudinal design, sampling from population outside of the collegiate athletic training setting, and examining other characteristics that may be associated with respondents’ ethical decision-making, such as, organizational climate, job title, income, race, and personality type.

7. No known literature in athletic training has examined LOC in relation to clinical practice. In this study respondents’ having internal LOC reported significantly higher scores in idealism and ethical decision-making than those with external LOC. However, the size of these differences were very small. This result is suspect because this study used only one question to assess athletic trainers’ LOC. Therefore, future research should use existing LOC instruments in combination with the
DAT-Q to further investigate the potential relationship between LOC and ethical decision-making.
References


CAAHEP. (2002, May 26). *Athletic Trainer Programs* [Internet].
Commission on Accreditation of Allied Health Education Programs.
Retrieved July 7, 2002, from the World Wide Web:
http://www.caahep.org/programs/at/at-prog.htm


Duckett, L., Rowan, M., Ryden, M., Krichbaum, K., Miller, M.,


http://sports.espn.go.com/espn


Matheson, G. O. (2002). First, ask no harmful questions. *The physician and sports medicine, 30*(5), Editor's Notes Section.


NATABOC. (2000). *Credentialing requirements and disciplinary procedures*. Retrieved, from the World Wide Web:

www.nataboc.org/atc/docs/standards/#requirements


www.cewl.com/clined/clindef.htm


APPENDIX A

History of Athletic Training Education
<table>
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<tr>
<th>Year(s)</th>
<th>Historical Events in Athletic Training Education</th>
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<tbody>
<tr>
<td>1950</td>
<td>First national meeting of collegiate athletic trainers</td>
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<td>1959</td>
<td>NATA Board of Directors approves first curriculum model for athletic training education</td>
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<td>1970s</td>
<td>Didactic courses become specific to athletic training profession.</td>
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<td>1982</td>
<td>First Role Delineation Study completed, identified athletic trainers’ primary occupational tasks, behaviors and skills</td>
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<td>1983</td>
<td>Competencies in Athletic Training developed to promote a competency-based curriculum in athletic training based on role-delineation study</td>
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<tr>
<td>1990</td>
<td>American Medical Association formally recognizes athletic training as an allied health care profession</td>
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<td>1994</td>
<td>NATA Education Task Force is created to address the educational and professional preparation of athletic trainers</td>
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<td></td>
<td>Taskforce addresses issues of curriculum design, preparation of educators, and program accreditation</td>
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<td>1996</td>
<td>NATA Board of Directors adopts all 18 recommendations submitted by the Education Task Force</td>
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<td></td>
<td>Task force recommends termination of internship route to certification as of 2004</td>
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<tr>
<td></td>
<td>NATA Education Council is formed to function as “clearinghouse” for educational policy, development, and instruction</td>
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<td></td>
<td>Original six performance domains in athletic training are restructured to encompass 12 competency areas</td>
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<td>1998</td>
<td>Education council begins to draft both didactic and clinically-based competencies.</td>
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<tr>
<td>1999</td>
<td>Joint Review Committee on Athletic Training (JRC-AT) presents new educational guidelines which include new competencies</td>
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APPENDIX B

National Athletic Trainers’ Association

Ethical Code of Conduct
Preamble

The Code of Ethics of the National Athletic Trainers' Association has been written to make the membership aware of the principles of ethical behavior that should be followed in the practice of athletic training. The primary goal of the Code is the assurance of high quality health care. The Code presents aspirational standards of behavior that all members should strive to achieve.

The principles cannot be expected to cover all specific situations that may be encountered by the practicing athletic trainer, but should be considered representative of the spirit with which athletic trainers should make decisions. The principles are written generally and the circumstances of a situation will determine the interpretation and application of a given principle and of the Code as a whole. Whenever there is a conflict between the Code and legality, the laws prevail. The guidelines set forth in this Code are subject to continual review and revision as the athletic training profession develops and changes.

Principle 1:

Members shall respect the rights, welfare and dignity of all individuals.

1.1 Members shall not discriminate against any legally protected class.

1.2 Members shall be committed to providing competent care consistent with both the requirements and the limitations of their profession.

1.3 Members shall preserve the confidentiality of privileged information and shall not release such information to a third party not involved in the patient's care unless the person consents to such release or release is permitted or required by law.

Principle 2:
Members shall comply with the laws and regulations governing the practice of athletic training.

2.1 Members shall comply with applicable local, state, and federal laws and institutional guidelines.
2.2 Members shall be familiar with and adhere to all National Athletic Trainers' Association guidelines and ethical standards.

2.3 Members are encouraged to report illegal or unethical practice pertaining to athletic training to the appropriate person or authority.

2.4 Members shall avoid substance abuse and, when necessary, seek rehabilitation for chemical dependency.

Principle 3:

Members shall accept responsibility for the exercise of sound judgment.

3.1 Members shall not misrepresent in any manner, either directly or indirectly, their skills, training, professional credentials, identity or services.

3.2 Members shall provide only those services for which they are qualified via education and/or experience and by pertinent legal regulatory process.

3.3 Members shall provide services, make referrals, and seek compensation only for those services that are necessary.

Principle 4:

Members shall maintain and promote high standards in the provision of services.

4.1 Members shall recognize the need for continuing education and participate in various types of educational activities that enhance their skills and knowledge.

4.2 Members who have the responsibility for employing and evaluating the performance of other staff members shall fulfill such responsibility in a fair, considerate, and equitable manner, on the basis of clearly enunciated criteria.
4.3 Members who have the responsibility for evaluating the performance of employees, supervisees, or students, are encouraged to share evaluations with them and allow them the opportunity to respond to those evaluations.

4.4 Members shall educate those whom they supervise in the practice of athletic training with regard to the Code of Ethics and encourage their adherence to it.

4.5 Whenever possible, members are encouraged to participate and support others in the conduct and communication of research and educational activities that may contribute knowledge for improved patient care, patient or student education, and the growth of athletic training as a profession.

4.6 When members are researchers or educators, they are responsible for maintaining and promoting ethical conduct in research and educational activities.

Principle 5:

Members shall not engage in any form of conduct that constitutes a conflict of interest or that adversely reflects on the profession.

5.1 The private conduct of the member is a personal matter to the same degree as is any other person’s except when such conduct compromises the fulfillment of professional responsibilities.

5.2 Members of the National Athletic Trainers’ Association and others serving on the Association’s committees or acting as consultants shall not use, directly or by implication, the Association’s name or logo or their affiliation with the Association in the endorsement of products or services.

5.3 Members shall not place financial gain above the welfare of the patient being treated and shall not participate in any arrangement that exploits the patient.

5.4 Members may seek remuneration for their services that is commensurate with their services and in compliance with applicable law.
APPENDIX C

Forsyth’s 2 X 2 Dichotomy of Individual Moral Philosophies
<table>
<thead>
<tr>
<th>EPQ</th>
<th>High Relativism</th>
<th>Low Relativism</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Situationist</strong></td>
<td>Rejects application of universal moral principles. Believes that moral acts should have positive consequences for all persons affected by action or decision.</td>
<td><strong>Absolutist</strong></td>
</tr>
<tr>
<td>High Idealism</td>
<td>Philosophical Relationship&lt;br&gt;*Similar to skeptical philosophies of Fletcher (1966) and James (1891/1973) value pluralism</td>
<td><strong>Philosophical Relationship</strong>&lt;br&gt;*Similar to deontological philosophy and principled levels on Kohlbergian scale of moral development.</td>
</tr>
<tr>
<td></td>
<td>*Ethical principles unimportant</td>
<td><strong>A lie is a lie no matter what good may come from it, to lie is wrong.</strong></td>
</tr>
<tr>
<td><strong>Subjectivist</strong></td>
<td>Rejects moral rules, and believes that moral decisions are subjective, individualistic judgments. Believes that negative consequences do not necessarily make an action immoral.</td>
<td><strong>Exceptionist</strong></td>
</tr>
<tr>
<td>Low Idealism</td>
<td>Philosophical Relationship&lt;br&gt;*Ethical Egoist</td>
<td><strong>Philosophical Relationship</strong>&lt;br&gt;*Rules-Utilitarianism, pragmatically contend that rules provide a good framework for making decisions but can sometimes cause more harm than good.</td>
</tr>
<tr>
<td></td>
<td>* No moral judgments are valid except those made in regard to one’s own behavior. Strive to promote self-interest.</td>
<td><strong>Judgments must be made by weighing the good and bad consequences of an action</strong></td>
</tr>
<tr>
<td></td>
<td>* A subjectivist AT would disagree with statements like. “If an action could harm an innocent other, then it should not be done”</td>
<td></td>
</tr>
</tbody>
</table>
APPENDIX D

Correspondence with Program Directors
Appendix D-1. Letter of Invitation to Participate in Study

Dear (Athletic Training Program Director):

I am conducting a study to investigate the ethical decision-making processes of athletic training students and instructors using a brief, 10-minute questionnaire. There are 542 educational competencies and 1,230 proficiencies, however only 23 of competencies focus on ethics. Further, only two specifically focus on ethical decision-making. The continued growth of the athletic training depends on student development—and instructor modeling—of behaviors appropriate to our allied healthcare profession. I ask that you please participate in this study because your involvement is crucial to the improvement of current educational and clinical practices. You will, upon agreement, then receive in the mail an ethical dilemmas questionnaire specific to athletic training and accompanying instructions.

You will receive in May 2003, following your participation, a report that describes how your institution’s athletic training students and instructors ethical decision-making skills compare to each other and to the national average. You can use this information to help your students’ develop ethical behaviors and decision-making specific to athletic training and evaluate the effectiveness of your current instructional practices. Many will use this information in their CAAHEP self-study materials and for outcomes assessment.

I am aware that your time is valuable. If you are unable to participate in this study, I would appreciate any names of other athletic training staff members at your institution that may be able to assist me with this important study.

Please reply to shanecaswell@msn.com with your acceptance to participate, refusal to participate, or information of other willing participants. I promptly will send you the materials. I am hopeful to complete data collection by the Thanksgiving holiday. The Ohio University Institutional Review Board approved this project August 19, 2002. Please feel free to contact Jo Ellen Sherow, director of research compliance at Ohio University, at 740.593.0664, Richard Deivert, Ph.D., ATC, Director of athletic training education at Ohio University at 740.593.0496 or myself (Shane Caswell) at 740.593.4649.

Sincerely,

Shane V. Caswell, MS, ATC
Doctoral Graduate Assistant
Graduate Athletic Training Education
Ohio University
740-593-4649
shanecaswell@msn.com
Appendix D-2. Cover Letter to Program Directors

Dear (Athletic Training Program Director):

Thank you for deciding to participate in this important research study. I realize that your time is valuable and greatly appreciate your efforts to assist me with my data collection. As per our original correspondence, please find enclosed in this package: Two versions of the Dilemmas in Athletic Training Questionnaire and return postage.

Please administer the white questionnaire packets to all students and the yellow packets to all certified athletic trainers at your institution that supervise students either clinically or didactically. The questionnaire should be administered in a classroom type setting and must not be group administered or discussed prior to or during administration. Most subjects should easily complete the questionnaire in approximately 10-15 minutes. Upon completion of the survey please collect all questionnaires and return them in the pre-paid envelop provided.

All questionnaires are coded for tracking purposes and are used to identify only your institution. The researchers will not have knowledge of the identity of subjects in this investigation.

As with any research study, your participation and student and instructor participation is voluntary. All individuals volunteering to participate in this study should be made aware that their participation is voluntary and that they may choose to withdraw their participation at any time without penalty.

The Ohio University Institutional Review Board approved this project August 19, 2002. Please feel free to contact Jo Ellen Sherow, director of research compliance at Ohio University, at 740.593.0664 if you have any questions regarding your rights as a participant in this research project. If you have further questions regarding this study, please contact either myself (Shane Caswell) at 740.593.4649 or Richard Deivert, Ph.D., ATC, Director of athletic training education at Ohio University at 740.593.0496.

Sincerely,

Shane V. Caswell, MS, ATC
Graduate Athletic Training Education
Ohio University
740-593-4649
shanecaswell@msn.com
APPENDIX E

Sampling Procedure and Sampling Distribution of ATEPs Invited to Participate and ATEPs Participating in Study
**SAMPLING FRAME**
ALL CAAHEP ACCREDITED PROGRAMS
HAVING NCAA ATHLETICS PROGRAMS
(Total # ATEPs = 155)

**STAGE ONE:**
STRATIFICATION BASED ON
NCAA ATHLETICS PROGRAM
DIVISION SIZE

LARGE INSTITUTIONS
(Primary Cluster)

NCAA DIVISION I
Total # ATEPs = 78
Total % of all ATEPs = 50.32

SMALL INSTITUTIONS
(Primary Cluster)

NCAA DIVISION II + III
Total # Small ATEPs = 77
Total % of all ATEPs = 49.68
Division II – Total = 38 ATEPs
Total % of Small ATEPs = 49.35
Division III – Total = 39 ATEPs
Total % of Small ATEPs = 50.65

**STAGE TWO:**
SIMPLE RANDOM SAMPLE
OF 100 ATEPs

SRS of 50 Large ATEPs
SRS of 50 Small ATEPs

- All 100 ATEPs selected were contacted and invited to participate in study, (64.51%) of all 155 ATEPs
- 30 ATEPs accepted (30.00%) of all invited ATEPs: Each participating ATEP represented a secondary cluster
- Instrument administered to all athletic training students and instructors at each participating ATEP
- 25 (83.33%) of the 30 participating ATEPs completed and returned survey instrument

*Figure E-1. Overview of the sampling procedure used in this investigation.*
Figure E-2. Nation-wide distribution of athletic training education programs invited to participate in the study. The number of athletic training programs invited are listed for each state.
Figure E-3. Nationwide distribution of athletic training education programs participating in the study. The number of athletic training programs that returned survey instruments are listed for each state. The (*) indicates a program that agreed to participate but failed to return the survey.
Appendix F

Survey Instruments:
Dilemmas in Athletic Training Questionnaire

Instructions: Please fill-in the blank or circle one answer.

AGE: _______ GPA: _____ /4.0 Gender: M / F

Have you taken a course in ethics? Yes / No Year in athletic training program? _____

Class status: Freshmen / Sophomore / Junior / Senior

Highest degree earned: High School / Associate / Bachelor / Master

Instructions: Please read the following stories and respond to the accompanying statements. The statements require that you rate your level of agreement or disagreement. Please circle the one response you feel best represents your opinion.

Strongly Agree (SA) Agree (A) Neutral (N) Disagree (D) Strongly Disagree (SD)

1) Shannon should prevent James from practicing. SA A N D SD
2) Shannon has an ethical responsibility in this situation. SA A N D SD
3) I would allow James to continue practicing. SA A N D SD
4) I feel that this scenario is important. SA A N D SD

Shannon is an athletic trainer working with a successful football program. Shannon notices James, a senior and 310-lb. offensive lineman, vomiting during a light practice the night before a game. James says he feels ill but needs to continue practicing so he doesn’t lose his starting position. Shannon attempts to remove James from practice, but the coach tells James, “you need to practice because you’re a team leader.”

5) Pat should select another player for the drug test. SA A N D SD
6) Pat has an ethical responsibility in this situation. SA A N D SD
7) I would perform the drug test on Chris. SA A N D SD
8) I feel that this scenario is important. SA A N D SD

Pat is an athletic trainer working with a successful collegiate basketball team. Chris, the team’s star player, was selected randomly to take a drug test. Chris has a known history of drug use. The coach fears that Chris will be ineligible for the national tournament if Chris fails the drug test. The coach suggests that Pat select another player instead of Chris.
Mary, a senior and star volleyball player, suffers a grade-one concussion from striking her head against the floor during practice. The team’s Athletic Trainer, Lee, recommends that Mary miss the first playoff game, which is in two days. Mary is still complaining of a headache one hour prior to the playoff game. Her parents, teammates and coach are encouraging Lee to let Mary play.

9) Lee should allow Mary to play.  
10) Lee has an ethical responsibility in this situation.  
11) I would prevent Mary from playing.  
12) I feel that this scenario is a minor issue.

Terry is an athletic training student gaining field experience with soccer. Terry sees the team’s leading scorer use illegal drugs at a party following the last, regular-season game. The athlete will be suspended from the team and forced to attend drug rehabilitation if Terry notifies the coach. The athlete will miss playoffs and thus, will significantly reduce the team’s chances of winning the league championship.

13) Terry should report the athlete’s drug use.  
14) Terry has an ethical responsibility in this situation.  
15) I would report the athlete’s drug use.  
16) I feel that this scenario is important.

Kim, a senior and star forward, sprains her knee during soccer practice. The team’s Athletic Trainer, Morgan, recommends that Kim miss the first playoff game, which is in three days. Another player’s father, who is also a physician, offers Kim one hour prior to playoffs a shot that will numb her knee so she can play. Kim’s teammates and coach are encouraging her to receive the shot.

17) Morgan should intervene and prevent Kim from receiving the shot  
18) Morgan has an ethical responsibility in this situation.  
19) I would allow Kim to receive the shot.  
20) I feel that this scenario is important.
<table>
<thead>
<tr>
<th></th>
<th>ETHICS POSITION QUESTIONNAIRE</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Instructions:</strong> Please indicate if you agree or disagree with the following items. Each item represents a commonly held opinion. There are no right or wrong answers. Rate your reaction to each statement by <em>circling the most appropriate answer</em>.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Strongly Agree (SA) Agree (A) Neutral (N) Disagree (D) Strongly Disagree SD)</td>
</tr>
<tr>
<td>1)</td>
<td>People should make certain that their actions never Intentionally harm another even to a small degree.</td>
</tr>
<tr>
<td>2)</td>
<td>Risks to another should never be tolerated, irrespective of how small the risks might be.</td>
</tr>
<tr>
<td>3)</td>
<td>The existence of potential harm to others is always wrong, irrespective of the benefits to be gained.</td>
</tr>
<tr>
<td>4)</td>
<td>One should never psychologically or physically harm another person.</td>
</tr>
<tr>
<td>5)</td>
<td>One should not perform an action which might in any way threaten the dignity and welfare of another individual.</td>
</tr>
<tr>
<td>6)</td>
<td>If an action could harm an innocent other, then it should not be done.</td>
</tr>
<tr>
<td>7)</td>
<td>Deciding whether or not to perform an act by balancing the positive consequences of the act against the negative consequences of the act is immoral.</td>
</tr>
<tr>
<td>8)</td>
<td>The dignity and welfare of the people should be the most important concern in any society.</td>
</tr>
<tr>
<td>9)</td>
<td>It is never necessary to sacrifice the welfare of others</td>
</tr>
<tr>
<td>10)</td>
<td>Moral behaviors are actions that closely match ideals of the most &quot;perfect&quot; action.</td>
</tr>
<tr>
<td>11)</td>
<td>There are no ethical principles that are so important that they should be a part of any code of ethics.</td>
</tr>
<tr>
<td>12)</td>
<td>What is ethical varies from one situation and society to another.</td>
</tr>
<tr>
<td>Strongly Agree (SA)</td>
<td>Agree (A)</td>
</tr>
<tr>
<td>---------------------</td>
<td>-----------</td>
</tr>
<tr>
<td>13) Moral standards should be seen as being individualistic; what one person considers to be moral may be judged to be immoral by another person.</td>
<td>SA</td>
</tr>
<tr>
<td>14) Different types of morality cannot be compared as to &quot;rightness.&quot;</td>
<td>SA</td>
</tr>
<tr>
<td>15) Questions of what is ethical for everyone can never be resolved since what is moral or immoral is up to the individual.</td>
<td>SA</td>
</tr>
<tr>
<td>16) Moral standards are simply personal rules that indicate how a person should behave and are not to be applied in making judgments of others.</td>
<td>SA</td>
</tr>
<tr>
<td>17) Ethical considerations in interpersonal relations are so complex that individuals should be allowed to formulate their own individual codes.</td>
<td>SA</td>
</tr>
<tr>
<td>18) Rigidly codifying an ethical position that prevents certain types of actions could stand in the way of better human relations and adjustment.</td>
<td>SA</td>
</tr>
<tr>
<td>19) No rule concerning lying can be formulated; whether a lie is permissible or not permissible totally depends upon the situation.</td>
<td>SA</td>
</tr>
<tr>
<td>20) Whether a lie is judged to be moral or immoral depends upon the circumstances surrounding the action.</td>
<td>SA</td>
</tr>
<tr>
<td>21) Athletic trainers have complete authority to make patient care decisions in the absence of a physician.</td>
<td>Always</td>
</tr>
</tbody>
</table>

Please write in the space below questions or comments regarding any of the stories or statements in this survey.
Two versions of the Dilemmas in Athletic Training Questionnaire were used in this investigation. Each version was exactly the same except for their demographic section, item number 21, and the invitation for additional comments. Listed below is the instructors demographic questions, item 21, and the invitation for additional comments.

(Demographic Section)

AGE: ________ Gender: M / F

Have you taken a course in ethics? Yes / No

Current position: ________ Years working in current position: ________

Years certified: __________

Highest degree earned: Bachelor / Master / Doctoral

(21) Instructor Item

21) I feel that I have complete authority to make patient care decisions in the absence of a physician.

Always Most of the time Sometimes Seldom Never

(Invitation for Additional Comments)

Your comments are valued. Please use the space below to share any comments regarding this questionnaire or regarding ethics in athletic training. Please feel free to attach additional sheets as needed. Thank you for your participation.
APPENDIX G

Institution Review Board Approval
A determination has been made that the following research study is exempt from IRB review because it involves:

Category 2 research involving the use of educational tests, survey procedures, interview procedures or observation of public behavior

Project Title: Moral Judgement and Clinical Decision-Making Among Undergraduate Athletic Training Education Students and Clinical Instructors

Project Director: Shane V. Caswell

Department: Recreation and Sports Sciences

Advisor: Ralph Martin

Rebecca Cale, Associate Director, Research Compliance
Institutional Review Board

Date 8/19/02
APPENDIX H

Additional Statistical Tables and Figures
<table>
<thead>
<tr>
<th>Item</th>
<th>M</th>
<th>SD</th>
<th>Corrected Item-Total Correlation</th>
<th>Alpha if Item Deleted</th>
</tr>
</thead>
<tbody>
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<td>1.</td>
<td>3.81</td>
<td>.92</td>
<td>.35</td>
<td>.82</td>
</tr>
<tr>
<td>2.</td>
<td>4.11</td>
<td>.77</td>
<td>.35</td>
<td>.82</td>
</tr>
<tr>
<td>3.</td>
<td>3.56</td>
<td>.94</td>
<td>.33</td>
<td>.82</td>
</tr>
<tr>
<td>4.</td>
<td>3.89</td>
<td>.77</td>
<td>.33</td>
<td>.82</td>
</tr>
<tr>
<td>5.</td>
<td>4.60</td>
<td>.71</td>
<td>.31</td>
<td>.82</td>
</tr>
<tr>
<td>6.</td>
<td>4.57</td>
<td>.68</td>
<td>.35</td>
<td>.82</td>
</tr>
<tr>
<td>7.</td>
<td>4.43</td>
<td>.75</td>
<td>.34</td>
<td>.82</td>
</tr>
<tr>
<td>8</td>
<td>4.43</td>
<td>.68</td>
<td>.37</td>
<td>.81</td>
</tr>
<tr>
<td>9</td>
<td>4.46</td>
<td>.71</td>
<td>.36</td>
<td>.81</td>
</tr>
<tr>
<td>10.</td>
<td>4.46</td>
<td>.64</td>
<td>.38</td>
<td>.81</td>
</tr>
<tr>
<td>11.</td>
<td>4.32</td>
<td>.74</td>
<td>.42</td>
<td>.81</td>
</tr>
<tr>
<td>12.</td>
<td>4.13</td>
<td>.94</td>
<td>.25</td>
<td>.82</td>
</tr>
<tr>
<td>13.</td>
<td>3.32</td>
<td>1.01</td>
<td>.48</td>
<td>.81</td>
</tr>
<tr>
<td>14.</td>
<td>3.65</td>
<td>.94</td>
<td>.45</td>
<td>.81</td>
</tr>
<tr>
<td>15.</td>
<td>3.22</td>
<td>1.02</td>
<td>.50</td>
<td>.81</td>
</tr>
<tr>
<td>16.</td>
<td>3.79</td>
<td>.85</td>
<td>.49</td>
<td>.81</td>
</tr>
<tr>
<td>17.</td>
<td>3.90</td>
<td>.94</td>
<td>.45</td>
<td>.81</td>
</tr>
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<td>18.</td>
<td>4.09</td>
<td>.75</td>
<td>.45</td>
<td>.81</td>
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<td>19.</td>
<td>3.84</td>
<td>.92</td>
<td>.42</td>
<td>.81</td>
</tr>
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<td>20.</td>
<td>4.10</td>
<td>.66</td>
<td>.46</td>
<td>.81</td>
</tr>
<tr>
<td>Total (N = 598)</td>
<td>80.76</td>
<td>7.88</td>
<td>——</td>
<td>.82</td>
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</table>
Table H-2.

Principal Components Factor Analysis with Varimax Rotation for the Ethics Position Questionnaire.

<table>
<thead>
<tr>
<th>Item</th>
<th>Factor Loadings</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1</td>
</tr>
<tr>
<td>4. EPQ – Idealism</td>
<td>.77</td>
</tr>
<tr>
<td>3. EPQ – Idealism</td>
<td>.74</td>
</tr>
<tr>
<td>2. EPQ – Idealism</td>
<td>.73</td>
</tr>
<tr>
<td>6. EPQ – Idealism</td>
<td>.71</td>
</tr>
<tr>
<td>5. EPQ – Idealism</td>
<td>.68</td>
</tr>
<tr>
<td>1. EPQ – Idealism</td>
<td>.65</td>
</tr>
<tr>
<td>15. EPQ – Relativism</td>
<td>.68</td>
</tr>
<tr>
<td>16. EPQ – Relativism</td>
<td>.66</td>
</tr>
<tr>
<td>17. EPQ – Relativism</td>
<td>.57</td>
</tr>
<tr>
<td>11. EPQ – Relativism</td>
<td>.50</td>
</tr>
<tr>
<td>12. EPQ – Relativism</td>
<td>.66</td>
</tr>
<tr>
<td>13. EPQ – Relativism</td>
<td>.40</td>
</tr>
<tr>
<td>14. EPQ – Relativism</td>
<td>.59</td>
</tr>
<tr>
<td>18. EPQ – Relativism</td>
<td>.37</td>
</tr>
<tr>
<td>19. EPQ – Relativism</td>
<td>.86</td>
</tr>
<tr>
<td>20. EPQ – Relativism</td>
<td>.84</td>
</tr>
<tr>
<td>10. EPQ – Idealism</td>
<td>.66</td>
</tr>
<tr>
<td>8. EPQ – Idealism</td>
<td>.58</td>
</tr>
<tr>
<td>9. EPQ – Idealism</td>
<td>.32</td>
</tr>
<tr>
<td>7. EPQ – Idealism</td>
<td>-.39</td>
</tr>
</tbody>
</table>

*NOTE.* N = 598.
Table H-3.

Principal Components Factor Analysis with Varimax Rotation for the Dilemmas in Athletic Training Questionnaire.

<table>
<thead>
<tr>
<th>Item</th>
<th>Factor Loadings</th>
</tr>
</thead>
<tbody>
<tr>
<td>15. I would report the athlete’s drug use</td>
<td>.86</td>
</tr>
<tr>
<td>13. Terry should report the athlete’s drug use</td>
<td>.86</td>
</tr>
<tr>
<td>14. Terry has an ethical responsibility ...</td>
<td>.85</td>
</tr>
<tr>
<td>16. I feel this scenario is important</td>
<td>.74</td>
</tr>
<tr>
<td>17. Morgan intervene and should prevent ...</td>
<td>.88</td>
</tr>
<tr>
<td>19. I would allow Kim to receive the shot</td>
<td>.87</td>
</tr>
<tr>
<td>18. Morgan has an ethical responsibility ...</td>
<td>.75 .37</td>
</tr>
<tr>
<td>20. I feel this scenario is important</td>
<td>.59 .45</td>
</tr>
<tr>
<td>7. I would perform the drug test on Chris</td>
<td>.80</td>
</tr>
<tr>
<td>5. Pat should select another player ...</td>
<td>.73</td>
</tr>
<tr>
<td>8. I feel that this scenario is important</td>
<td>.72</td>
</tr>
<tr>
<td>6. Pat has an ethical responsibility ...</td>
<td>.61</td>
</tr>
<tr>
<td>9. Lee should allow Mary to play</td>
<td>.82</td>
</tr>
<tr>
<td>11. I would prevent Mary from playing</td>
<td>.81</td>
</tr>
<tr>
<td>12. I feel that this scenario is a minor issue</td>
<td>.63</td>
</tr>
<tr>
<td>10. Lee has an ethical responsibility ...</td>
<td>.58 .36</td>
</tr>
<tr>
<td>1. Shannon should prevent James ...</td>
<td>.87</td>
</tr>
<tr>
<td>3. I would allow James to continue practicing</td>
<td>.86</td>
</tr>
<tr>
<td>2. Shannon has an ethical responsibility ...</td>
<td>.43 .66</td>
</tr>
<tr>
<td>4. I feel that this scenario is important</td>
<td>.33 .66</td>
</tr>
</tbody>
</table>

*Note. (N = 598)*
Figure H-4. Histogram of respondents’ reported idealism scores with normality curve superimposed.
Figure H-5. Normal probability of respondents’ reported idealism scores.
Figure H-6. Histogram of respondents’ reported relativism scores with normality curve superimposed.
Figure H-7. Normal probability of respondents’ reported relativism scores.
Ethical Decision-Making Score

Figure H-8. Histogram of respondents’ reported ethical decision-making scores with normality curve superimposed.
Figure H-9. Normal probability of respondents’ reported ethical decision-making scores.
Table H-10.

One-Way Analysis of Variance for Ethical Decision-Making Score.

<table>
<thead>
<tr>
<th>Source</th>
<th>df</th>
<th>SS</th>
<th>MS</th>
<th>F</th>
<th>$\eta^2$</th>
</tr>
</thead>
<tbody>
<tr>
<td>IMP</td>
<td>3</td>
<td>3662.46</td>
<td>1220.82</td>
<td>21.72**</td>
<td>.099</td>
</tr>
<tr>
<td>Error</td>
<td>594</td>
<td>33394.62</td>
<td>56.22</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>598</td>
<td>3937650.95</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Note. IMP = Individual Moral Philosophy.*

**$p<.001$.**
Table H-11.

Differences in Scores Between Respondents at Large Institutions and Respondents at Small Institutions.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Large Institution</th>
<th>Small Institution</th>
<th>t (596)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M</td>
<td>SD</td>
<td>M</td>
</tr>
<tr>
<td>EPQ-I</td>
<td>37.75</td>
<td>4.81</td>
<td>37.34</td>
</tr>
<tr>
<td>EPQ-R</td>
<td>31.87</td>
<td>4.94</td>
<td>31.51</td>
</tr>
<tr>
<td>DAT-Q</td>
<td>81.19</td>
<td>7.78</td>
<td>80.30</td>
</tr>
<tr>
<td>LOC</td>
<td>3.41</td>
<td>1.06</td>
<td>3.46</td>
</tr>
</tbody>
</table>

*Note.* EPQ-I = Idealism Score, EPQ-R = relativism score, DAT-Q = Ethical Decision Making Score, LOC = Locus of Control Score.
Table H-12.

Differences in Scores Between Respondent’s Who Took an Ethics Course and Those Who Did Not Take an Ethics Course.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Ethics Course</th>
<th></th>
<th>No Ethics Course</th>
<th></th>
<th>t (582)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M</td>
<td>SD</td>
<td>M</td>
<td>SD</td>
<td></td>
</tr>
<tr>
<td>EPQ-I</td>
<td>37.85</td>
<td>4.80</td>
<td>37.49</td>
<td>4.95</td>
<td>-.78</td>
</tr>
<tr>
<td>EPQ-R</td>
<td>37.60</td>
<td>4.68</td>
<td>31.69</td>
<td>4.84</td>
<td>.19</td>
</tr>
<tr>
<td>DAT-Q</td>
<td>81.79</td>
<td>7.83</td>
<td>80.46</td>
<td>7.93</td>
<td>-1.79</td>
</tr>
<tr>
<td>LOC</td>
<td>3.54</td>
<td>.99</td>
<td>3.40</td>
<td>1.99</td>
<td>-1.53</td>
</tr>
</tbody>
</table>

*Note. EPQ-I = Idealism Score, EPQ-R = Relativism score, DAT-Q = Ethical Decision Making Score, LOC = Locus of Control Score.*
Table H-13.

Differences in Scores Between Respondent’s Having Internal and External Loci of Control.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Internal LOC</th>
<th></th>
<th></th>
<th>External LOC</th>
<th></th>
<th></th>
<th>t (596)</th>
</tr>
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<tbody>
<tr>
<td></td>
<td>M</td>
<td>SD</td>
<td>M</td>
<td>SD</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>EPQ-I</td>
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<td>4.93</td>
<td>37.14</td>
<td>4.84</td>
<td>-2.02*</td>
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<tr>
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<td>4.87</td>
<td>31.60</td>
<td>4.73</td>
<td>-.44</td>
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<tr>
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<td>7.98</td>
<td>79.99</td>
<td>7.71</td>
<td>-2.35*</td>
<td></td>
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</tr>
</tbody>
</table>

*Note. EPQ-I = LOC = Locus of Control Score, Idealism Score, EPQ-R = relativism score, DAT-Q = Ethical Decision Making Score.

*p < .05.