

A Comparison of Gender Equity at Institutions with a Female Athletic Director versus
Institutions with a Male Athletic Director

Mary Ball

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Approved by
Advisor: Barbara Osborne, J.D.
Reader: Edgar W. Shields, Jr., Ph.D.
Reader: Beth Miller, D.A.

ABSTRACT

MARY BALL: A Comparison of Gender Equity at Institutions with a Female Athletic Director versus Institutions with a Male Athletic Director
(Under the direction of Barbara Osborne, J.D.)

The purpose of this study was to determine if there is a difference between gender equity at institutions with a female Athletic Director (AD) compared to a male Athletic Director across Divisions I, II and III and considering football sponsorship. For the purposes of this research, gender equity is defined as proportions of participation, operating budget, recruiting budget, scholarships budget, sport sponsorship, coaching salaries and full time coaching staff allotted to women's teams. One sample t-tests comparing the means for each gender of the Athletic Director in the eight components revealed that there were significant differences between the two groups in the Participation, Sport Sponsorship, and Coaching components of gender equity. 3 X 2 ANOVAs comparing means for the institutions that sponsor football with the means of those that do not in the eight components revealed that there were significant differences in the Participation and Operating Expenses variables.

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CHAPTER I

INTRODUCTION

Prior to 1972 and the passage of Title IX of the Educational Amendment, gender equity was not a major concern of institutions or their athletic departments. Title IX prohibits sex discrimination in educational programs within institutions receiving federal funding. After the passage of Title IX, growth in participation was almost immediate as the number of collegiate teams for women grew from an average of 2.5 per campus in 1972 to 6.48 by 1980 (Acosta & Carpenter, 2004). Progress faced a minor setback in 1984 with the decision of *Grove City College v. Bell* (465 U.S 555) declaring that athletic departments did not need to comply with Title IX. However, Congress enacted the Civil Rights Restoration Act, 20 U.S.C. s. 1687 (1988), over a veto by President Ronald Reagan. The Act adopted the broad view that Title IX should be interpreted through the institution-wide approach. All university departments, including intercollegiate athletics, were required to be Title IX compliant if any department of the university accepted federal funding. The spirit of Title IX aims to increase opportunities for the historically underrepresented gender, women, in all educational institutions, including athletics.

Over 30 years later, gender equity and compliance with Title IX is still a concern and often a challenge for institutions' athletic departments. In 1991 the National Collegiate Athletic Association (NCAA) conducted its first gender equity report studying its member institutions in Division I, II and III focusing on gender equity related issues and has

conducted a similar report each year since 1995. The most recent published study, conducted over 2002-2003, shows small gains from the previous year but stronger improvement over the last decade. The proportion of female student-athlete participation increased an average of 33 to 42 percent across the three divisions (NCAA, 2004).

As female student-athlete participation improves, the percentage of females working in athletic administration is not showing the same improvement. According to the study by Carpenter & Acosta, *Women in Intercollegiate Sport* (2006), in the past eight years, the number of female athletic directors has remained static while the number of programs for female athletes has increased. Currently, 18.6% of women's programs are directed by a female, down from 19.4% in 1998 and as high as 21% in 1994. Of these 18.6%, only 9.3% are represented in Division I.

In Vanessa Fuchs' Master's Thesis analyzing career paths of female Director of Athletics and Senior Women Administrators (2003), it was concluded that over 90% of the female Director of Athletics surveyed were former student-athletes. The study found that 77% are currently in their 40's or 50's, with an average age of 47. Their age implies they experienced their college athletic careers during the early years of Title IX, in a time when gender equity was not a priority of colleges and universities. As Athletic Directors, they are now in the position to make decisions to create a more equitable environment for the current female student-athletes.

Statement of the Problem

The purpose of the study was to determine if there is a difference between gender equity at institutions with a female Athletic Director (AD) compared to a male Athletic Director across Divisions I, II and III and considering football sponsorship. For the purposes

of this research, gender equity is defined as proportions of participation, operating budget, recruiting budget, scholarships budget, sport sponsorship, coaching salaries and full time coaching staff allotted to women's teams.

Research Questions

1. Is there a significant difference in overall gender equity between the institutions with a female Athletic Director and those with a male Athletic Director?
2. Is there a significant difference in gender equity between the institutions with a female Athletic Director and those with a male Athletic Director in the following seven areas:
 - a. Participation equity
 - b. Operating budget equity
 - c. Recruiting budget equity
 - d. Scholarship budget equity
 - e. Sport sponsorship equity
 - f. Coaching salaries equity
 - g. Full time coaching staff equity
3. Is there a significant difference in overall gender equity between the institutions in Division I, Division II, and Division III?
4. Is there a significant difference in each of the seven gender equity factors between the institutions in Division I, Division II, and Division III?
5. Is there a significant difference in overall gender equity between the institutions that sponsor football and those that do not?
6. Is there a significant difference in each of the seven gender equity factors between the institutions that sponsor football and those that do not?

7. Is there a significant difference in overall gender equity at an institution considering both the gender of the Athletic Director and the Division affiliation?
8. Is there a significant difference in each of the seven gender equity factors at an institution considering both the gender of the Athletic Director and the Division affiliation?
9. Is there a significant difference in overall gender equity at an institution considering both the gender of the Athletic Director and football sponsorship?
10. Is there a significant difference in each of the seven gender equity factors at an institution considering both the gender of the Athletic Director and football sponsorship?
11. Is there a significant difference in overall gender equity at an institution considering both the Division affiliation and football sponsorship?
12. Is there a significant difference in each of the seven gender equity factors at an institution considering both the Division affiliation and football sponsorship?
13. Is there a significant difference in overall gender equity at an institution considering the gender of the Athletic Director, the Division affiliation, and football sponsorship?
14. Is there a significant difference in each of the seven gender equity factors at an institution considering the gender of the Athletic Director, the Division affiliation, and football sponsorship?

Hypotheses

1. There is a significant difference in overall gender equity between the institutions with a female Athletic Director and those with a male Athletic Director.
2. There is a significant difference in gender equity between the institutions with a female Athletic Director and those with a male Athletic Director in the following eight areas:
 - a. Participation equity

- b. Operating budget equity
 - c. Recruiting budget equity
 - d. Scholarship budget equity
 - e. Sport sponsorship equity
 - f. Coaching salaries equity
 - g. Full time coaching staff equity
3. There is a significant difference in overall gender equity between the institutions in Division I, Division II, and Division III.
 4. There is a significant difference in each of the seven gender equity factors between the institutions in Division I, Division II, and Division III.
 5. There is a significant difference in overall gender equity between the institutions that sponsor football and those that do not.
 6. There is a significant difference in each of the seven gender equity factors between the institutions that sponsor football and those that do not.
 7. There is a significant difference in overall gender equity at an institution considering both the gender of the Athletic Director and the Division affiliation.
 8. There is a significant difference in each of the seven gender equity factors at an institution considering both the gender of the Athletic Director and the Division affiliation.
 9. There is a significant difference in overall gender equity at an institution considering both the gender of the Athletic Director and football sponsorship.
 10. There is a significant difference in each of the seven gender equity factors at an institution considering both the gender of the Athletic Director and football sponsorship.

11. There is a significant difference in overall gender equity at an institution considering both the Division affiliation and football sponsorship.
12. There is a significant difference in each of the seven gender equity factors at an institution considering both the Division affiliation and football sponsorship.
13. There is a significant difference in overall gender equity at an institution considering the gender of the Athletic Director, the Division affiliation, and football sponsorship.
14. There is a significant difference in each of the seven gender equity factors at an institution considering the gender of the Athletic Director, the Division affiliation, and football sponsorship.

Definition of Terms

For the purpose of this study, the following terms are operationally defined as follows:

1. Coaches Salaries – money paid to the athletic coaches by the institutions including all wages and bonuses the institution pays an individual as compensation attributable to coaching (NCAA, 2004)
2. DBP – Difference between proportionality in regards to the specified variable
3. DBP Coaching Salaries – the term used to define the difference between the female proportion of athletes and proportion of salaries allotted to coaches of women’s teams (Melchiorre, 2001)
4. DBP Coaching Staff - the term used to define the difference between the female proportion of athletes and the female proportion of the coaching staff
5. DBP Gender Equity – the term used to define the average difference in proportionality of the seven factors

6. DBP Operating Expenses – the term used to define the difference between the female proportion of athletes and the female proportion of the athletic department’s operating expenses (Melchiorre, 2001)
7. DBP Participation - the term used to define the difference between the female proportion of athletes and the female proportion of undergraduate students (Melchiorre, 2001)
8. DBP Recruiting Expenses - the term used to define the difference between the female proportion of athletes and the female proportion of the athletic department’s recruiting expenses (Melchiorre, 2001)
9. DBP Scholarship Budget – the term used to define the difference between the female proportion of athletes and the female proportion of the athletic department’s scholarship budget (Melchiorre, 2001)
10. DBP Sport Sponsorship - the term used to define the difference between the female proportion of athletes and the female proportion of athletic teams sponsored
11. Gender equity – exists when proportionality of benefits, opportunities, and resources for men’s and women’s teams are equal to the proportionality in enrollment of male and female undergraduates
12. Operating Expenses – also called “game-day expenses”, includes total expenditures for lodging, meals, transportation, officials, uniforms and equipment (NCAA, 2004)
13. Recruiting Expenses – include total expenditures for the purpose of athletic team recruiting including, but not limited to: transportation, lodging and meals for both recruits and institutional personnel involved with recruiting, and expenditures for on-site visits (NCAA, 2004)

14. Scholarship – aid awarded to a student that requires the student to participate in an intercollegiate athletics program (NCAA, 2004)

15. Undergraduates – full-time, baccalaureate degree-seeking students (NCAA, 2004)

Assumptions

This study was based on the following assumptions:

1. The information each institution submitted on the Equity in Athletics Disclosure Act (EADA) reports were accurate and true representation of what occurred at each institution.
2. The Director of Athletics at each institution is in the position to make and implement decisions affecting the eight variables related to gender equity.
3. A period of three years for one individual in the position of Director of Athletics is enough time for that individual's decisions and changes to take effect.

Delimitations

This study was delimited to:

1. Data submitted on the 2003-04 EADA reports, the most current available through *The Chronicle of Higher Education*.
2. The population of Division I, II, and III institutions that currently have a female Director of Athletics who has been in that position for a period of three years ending in 2004.
3. A sample of the population of the Division I, II, and III institutions that currently have a male Director of Athletics to be used as the comparison group.

Limitations

The study was limited by:

1. The sample size is small (n=15) for Division I institutions with a female Director of Athletics causing each institution's data to more strongly influence the overall averages.
2. The lack of consistent accounting standards makes it possible for data and information to be reported differently at each institution.
3. The different reporting methods at each institution make it possible for inconsistency in completing and submitting the EADA Forms.
4. Private institutions have less of an obligation to disclose financial information to the public making them less accountable for information submitted on reports such as the EADA Forms.

Significance of the Study

Gender equity issues will continue to be a major concern of collegiate athletic administrators throughout the foreseeable future as there is still progress to be made in achieving equity. With increased information regarding which variables affect gender equity and how they affect gender equity, administrators will be in better positions to make informed decisions. One of these variables could be the gender of the Athletic Director (AD), the individual with overall responsibility for the athletic department and all critical decision-making.

The knowledge of the impact of the gender of the AD on the equity of the institution will be important to both prospective student-athletes and athletic administrators. If the gender of the AD is determined to have an effect on gender equity, they can use this information to make informed decisions on the gender equity environment in which to work or participate. College presidents can also use this information when hiring a new AD or evaluating the AD currently in the position.

CHAPTER II

REVIEW OF LITERATURE

Title IX Background

Title IX of the Educational Amendments of 1972 to the 1964 Civil Rights Act states that “No person in the United States shall, on the basis of sex, be excluded from participation in, be denied benefits of, or be subjected to discrimination under any education program or activity receiving Federal financial assistance (US DOL, 2005).” The goal of the legislation was to provide equal opportunities for men and women in all educational programs, both academic and athletic. Although Title IX with regards to athletics has received the most publicity, there have been significant gains in education and academics as well. For example, in 1994 women received 38% of all medical degrees and 43% of all law degrees compared with 9% and 7%, respectively in 1972 (Gender Equity in Sports, 2004).

Focusing on intercollegiate athletics, there are three main areas that are examined to determine if an institution is in compliance with Title IX: athletic financial assistance, accommodation of athletic interests & abilities, and other program areas. In regards to athletic financial assistance, institutions need to pass what is referred to as financial proportionality. The total amount of athletics aid must be proportionate to the ratio of male and female athletes (Gender Equity in Sports, 2004).

The second part of Title IX compliance is more complicated and involves the institution choosing one of three prongs of effective accommodation with which to comply. The first of the three prongs is the substantial proportionality prong and examines the

percentage of male and female undergraduates enrolled as compared to the percentage of males and females participating in varsity athletics. In order to meet the first prong, an institution's athletic participation numbers must be substantially proportionate to the undergraduate enrollment. This prong is the easiest to calculate but the hardest to achieve as females increasingly constitute a larger proportion of the undergraduate population in institutions across the country (Gender Equity in Sports, 2004).

The second of the three prongs involves demonstrating a history and continuing practice of program expansion. When an institution has a history of underrepresentation of the members of one sex in regards to athletic opportunities, this prong can be used to demonstrate responsiveness to the interest and abilities of that sex. This prong is often used at first but is difficult to maintain over time due to budget constraints and the cost prohibitive nature of sponsoring additional varsity teams (Gender Equity in Sports, 2004).

The third of the three prongs involves demonstrating that the interests and abilities of the underrepresented sex are being met with the current athletic program. This prong is used by institutions that can not display a history of continuing program expansion and has seen recent controversy in how to comply with this prong (Gender Equity in Sports, 2004). On March 17, 2005, the Office of Civil Rights (OCR) issued a letter that has been titled *Additional Clarification of Intercollegiate Athletics Policy: Three-Part Test – Part Three* (2005). This Clarification letter included a new way in which institutions can comply with the third prong of effective accommodation by using a web-based survey of all full-time undergraduate students. If the results of the survey showed “insufficient interest to support an additional varsity team for the underrepresented sex will create a presumption of compliance” with the third prong (OCR, 2005).

This Clarification letter has created heated debate surrounding compliance with Title IX causing strong supporters of Title IX to urge the OCR to rescind their letter and the contained guidelines. Opponents of the new Clarification Letter include the NCAA Executive Committee and NCAA President Myles Brand. On April 28, 2005, the NCAA Executive Committee adopted a resolution urging the Department of Education to rescind the letter and also urged NCAA member institutions to decline use of the survey approach and to continue using an approach that employs numerous tools and analyses for measuring the interest of the student body (Brown, 2005).

The third main area of Title IX compliance with regards to intercollegiate athletics is in regards to “other program areas” and states that benefits, opportunities, and treatments provided to student-athletes are to be equivalent for both men and women. Title IX examines eleven program components: equipment and supplies, scheduling of games and practice time, travel and per diem allowance, academic tutoring, coaching (assignment & compensation), facilities (locker rooms, practice, & competitive), medical and training facilities and services, housing and dining facilities and services, publicity, support services, and recruitment resources and opportunities. (Gender Equity in Sports, 2004)

Progress since Title IX

Although Title IX of the Educational Amendment passed over thirty years ago, gender equity is still an issue that pervades college athletic departments. Since its inception Title IX has impacted college athletics as it was intended and has increased college athletic participation opportunities for women. For twenty-nine years, Linda Jean Carpenter and R. Vivian Acosta, Professors Emerita at Brooklyn College have produced *Women in Intercollegiate Sport, A Longitudinal National Study (2006)*. The most recent data, from

2006, shows there are more women's athletic teams than ever before. In the last six years an impressive 1,455 women's teams were added to NCAA member institutions providing women with a total of 8,702 teams on which to participate. In 1970, two years before Title IX, there was only an average of 2.50 teams per institution for women. In 2006, the average number of women's teams per institution was at 8.45 (Acosta & Carpenter, 2006).

In addition to increased participation opportunities for women, the status of women in positions on college athletic department staff, such as Head Coaches and Administrators, has changed since Title IX. In the thirty-three years since Title IX, women's sports have grown to a higher level and are now seen as a viable career path for men. Due to this effect, men represent more of the positions related to women's athletic teams than women. In 1972, over 90% of women's teams were coached by women as the Head Coach compared to just over 42% in 2006. Out of all Head Coaching positions at NCAA institutions, 82.3% are held by men (Acosta & Carpenter, 2006). This trend is not reversing as 143 of the new jobs created as of 2004 in NCAA teams were filled by men, 16 more than women received (Acosta & Carpenter, 2004).

In 1972, more than 90% of women's programs were directed by a female compared to only 18.6% in 2006. The 18.6% of women's programs is an increase from 2002, but lower than the 19.4% in 1998. A lack of female presence in the administrative structure exists in 14.5% of all women's athletic programs, an improvement from 17.8% in 2004. When comparing Divisions within the NCAA membership, Division I had the fewest programs without female presence at 3.8% compared to Division II at 24% and Division III at 17%. As with the total figure, these statistics show an improvement when compared to 2004. In 2004, 6.3% of Division I, 30.2% of Division II, and 18.8% of Division III programs lacked female

presence. The difference between Division I and the other two divisions could be attributed to size since there are more jobs in Division I to fill with women. However, size can not explain the large difference between Divisions II and III. Overall, women hold 35.2% of all administrative positions, a slight increase from 34.6% in 2004 (Acosta & Carpenter, 2006).

In regards to the Athletic Director position, men continue to dominate, however the percentages of AD positions held by women differ among the three NCAA Divisions. In Division I, the smallest percentage of programs is led by a female Athletic Director at 9.3%. In Division II, women occupy the Athletic Director position at 17.8% of the institutions compared with 26.6% in Division III. Over the last six years the number of female Athletic Directors has remained stagnant as the number of programs for female college athletes has increased. As a result, there has been a decrease in overall female presence in the athletic directors' offices at NCAA institutions (Acosta & Carpenter, 2006).

Although progress is slower at the Athletic Director position, improvement can be seen in intercollegiate athletic administration overall. The size of athletic departments has increased steadily in the last 18 years, with Division I almost doubling during that time period. The average number of administrators in 1988 was 2.32 for all Divisions and 2.77 for Division I. In 2006, the average number of administrators has increased to 3.44 for all Divisions and 5.26 for Division I. Thee increase in athletic administrator positions has increased opportunities for women, although not at the same rate. In 1988, the average number of female administrators was 0.67 for all Divisions and 0.75 for Division I. In 2006, the average number of female administrators is 1.21 for all Divisions and 1.63 for Division I (Acosta & Carpenter, 2006).

In complying with Title IX, football has often been cited as a major obstacle, especially when an institution focuses solely on the substantial proportionality prong, ignoring the two other possibilities. NCAA Division I-A football allows a maximum of 85 scholarships and many schools often carry more than 100 players on their roster. With a sport of that size on average using over 72% of the men's sport budget, institutions find it difficult to match those numbers on the women's side (Haglund, 2005). Many attempts to balance out the scholarships have resulted in a loss of men's Olympic sports such as wrestling.

Eric Bentley's article in the *Journal of Law and Education* (2004) seeks to explain why many institutions have decided to drop men's programs instead of adding additional women's teams. Athletic departments, on average, operate with a deficit of \$600,000 and therefore make the claim that they can not afford to add women's programs. Bentley believes that this deficit is due in large part to poor financial decisions such as the large coaching salaries, which are not essential to the operation of the department. When faced with a financial decision, most athletic departments choose not to address the financial giant that is a football program and instead decide they have no other option than to cut men's sports (Bentley, 2004). Those in the world of college football believe that football has been a friend to gender equity as it finances the operating budgets for the Olympic sports. However, most football programs do not make a profit as both revenues and expenses are high (Haglund, 2005).

Donna Lopiano, Executive Director of the Women's Sports Foundation, argues against those who blame Title IX for the men's program cuts. She points out that it is not the poorer NCAA Division II and III athletic departments that are making these cuts, but the

wealthier Division I athletic departments. She contends that there are plenty of new funds channeled into these athletic departments but the money is being used for football and men's basketball instead of funding existing men's Olympic sport programs or creating new women's programs. She believes that even though football and men's basketball programs are generating revenues at the gate, they should not be able to spend the money as they wish. Instead, they should be spending the additional revenue where it is most needed, maintaining existing programs and funding new women's programs to achieve compliance with Title IX (Lopiano, 2001).

In the early days of Title IX, proposals were submitted to keep revenue sports such as football and men's basketball out of the calculations. These actions implied that compliance by way of the proportionality prong would be impossible otherwise and that revenue generating sports were unique and should not be required to follow the same laws. On May 20, 1974, Senator John Tower of Texas proposed the "Tower Amendment." The goal of the amendment was to exempt revenue sports from Title IX compliance, however the amendment was rejected. Only three years later, Senator Tower along with Senator Dewey Bartlett of Oklahoma and Senator Roman Hruska of Nebraska submitted a Senate Bill to again exclude revenue sports from Title IX compliance. The bill died in committee before it was ever presented on the Senate floor (Women's Sport Foundation, 2005).

In his article in *Journal of Law and Education* (2005), Haglund proposes dramatic suggestions to assist institutions that sponsor football in complying with Title IX. His suggestions would change the way football currently shapes the athletic department and reduce the impact on Olympic sports. The suggestions include reducing the number of football scholarships, changing the tax status of college football from non-profit to semi-

professional, and creating a separate minor league for football partially subsidized by the National Football League (NFL) that would be owned by the universities (Haglund, 2005).

NCAA Division Structure

In 1973 the National Collegiate Athletic Association (NCAA) reorganized into three separate divisions for competitive and legislative purposes: Divisions I, II and III.

Membership for Division I is the most stringent as institutions must sponsor at least seven sports for men and seven sports for women (or six for men and eight for women). Recruiting is often done on a national level and the athletic department operates almost entirely independent from the rest of the institution; financially and otherwise. Division I is further divided into three subdivisions based on the institution's football program. Division I-A is considered the elite football division and requires the team to meet minimum attendance and scheduling requirements. Only Division I-A programs are eligible for the Bowl Championship Series that generates large revenues for the top conferences. Institutions in this classification are often largely influenced by the football program. Division I-AA is considered a second-tier football division and does not maintain minimum attendance or scheduling requirements. Institutions that are classified in Division I-AAA do not offer football and therefore none of the corresponding requirements (NCAA, 2005). In regards to participation opportunities for women, Division I institutions average 9.42 women's teams (Acosta & Carpenter, 2006).

Membership for Division II is more lenient as at least four sports for men and four sports for women are required. As with Division I, these requirements must include at least two team sports for each gender and must have each gender represented during each playing season: fall, winter, and spring. Division II programs often feature in-state or local student-

athletes as recruiting is more regionally based. This type of recruiting often lends the programs to strong regional rivalries. Fewer athletic scholarships are offered at this level due to smaller scholarship budgets than Division I programs. Division II athletic departments are included in the overall financial budget of the institution like all other academic departments (NCAA, 2005). On average, Division II institutions offer the fewest number of sports, averaging 7.16 women's teams per institution (Acosta & Carpenter, 2006).

The most unique feature of Division III athletic programs is that there are no athletic scholarships. Division III institutions are often stronger academically with a liberal arts focus and athletic rivalries develop out of these shared values. Membership in Division III requires sponsoring at least five sports for men and five for women with both genders represented in each playing season. Division III athletic departments are funded and staffed in a similar manner to the other academic departments and the emphasis is on the student-athlete's experience, as opposed to the spectators or the revenue generation. Football is not a defining aspect of these athletic departments, and like Division II, some Division III programs do not include it as a sponsored sport (NCAA, 2005). In addition, Division III institutions sponsor on average 8.49 women's teams, slightly higher than Division II institutions (Acosta & Carpenter, 2006).

Related Studies

As gender equity is not yet achieved in most or almost all of NCAA member institutions, of interest are what institutional factors may contribute to the likelihood that an institution would receive a better gender equity score. In a study by Rachel Melchiorre of the University of North Carolina at Chapel Hill (2001) gender equity was compared at institutions with separate versus merged men's and women's athletic departments. This

study focused solely on NCAA Division I athletic programs. Her study group included the five institutions with separate men's and women's athletic departments as of 2001 which were the University of Arkansas, the University of Iowa, the University of Minnesota, the University of Tennessee, and the University of Texas. In addition, the control group included the thirty remaining schools from the conferences represented by the first five subjects: the Big Twelve, the Big Ten, and the Southeastern Conference.

Melchiorre defined gender equity in terms of five components: participation, scholarship budgets, recruiting expenses, coaches' salaries, and operating expenses. The study calculated the difference between the proportion of male/female student-athletes and the proportion of these five factors allocated to male/female athletic teams. The differences were compared between the two groups of subjects. Independent t-tests were used to compare the means from the two groups in each of the five categories (Melchiorre, 2001).

Overall, no significant differences were found between the two groups. However, the mean values in each of the five categories provided insight into the gender equity at these thirty-five institutions. In regards to participation, the mean values showed a lack of participation opportunities for female athletes based on the undergraduate enrollment. In regards to scholarship budgets, the findings showed that on average women receive an equivalent portion of the scholarship budget to their participation rates. In regards to recruiting budgets, women receive a smaller portion of the recruiting budget relative to their participation rates. The same result holds true for the remaining factors; coaches' salaries and operating expenses. Women receive a smaller portion of coaching salaries and operating expenses relative their participation rates (Melchiorre, 2001).

Another study, conducted by Vanessa Fuchs of the University of North Carolina at Chapel Hill (2003), looked at career paths of NCAA Division I, II, and III female Athletic Directors. This study surveyed sixty-five of the current female Athletic Directors; 13 from Division I, 14 from Division II, and 38 from Division III. The mean age of the respondents was 47.2 years old and ranged from 33 to 65. The demographic findings showed that 98% of female Athletic Directors are Caucasian and 53.1% are married. In regards to highest educational degree obtained, 75% have a master's or graduate degree while 16.9% have obtained a Doctorate. Physical Education/Health was the most common Bachelor's degree as cited by 55.9% of the respondents. Physical Education/Health was also the most common Master's degree as cited by 37.9% followed closely by Athletic Administration or Sport Management at 34.5% (Fuchs, 2003).

In their current positions as Athletic Directors, the mean for number of years of experience was 8.02 with a range from 1 to 23 years. A majority of the respondents cited ten or fewer years in the position while only three have been in her current position for over twenty years. On average the respondents reported salaries of \$73,656 with a wide range from \$40,000 to \$169,000. The findings also included number of hours worked per week during the academic year and during the summer. The mean was just over 60 hours per week during the academic year and dropped to 40 hours per week over the summer months (Fuchs, 2003).

According to the study, 90% of the respondents played on a collegiate athletic team in Division I, III or "other". The larger percentage played at the Division III level at 41.8% compared with 18.2% at Division I. This data correspond with the Division affiliation of the institution at which they currently worked since 58%, or 38, of the respondents worked at a

Division III institution. Just under half of the respondents, at 40%, played two sports in college. Of those who played just one sport in college, softball and basketball were the most common (Fuchs, 2003).

In addition to playing experience, coaching experience was common among respondents at 95.4% with over 42% coaching more than three sports. Of the 95.4%, 88% were head coaches of collegiate teams with an average of 12.2 years of experience as head coach. The survey data showed that a majority of the respondents were student-athletes (90%) and began their career in athletics as collegiate coaches (95.4%) (Fuchs, 2003). Based on these statistics, the pool of women available for athletic administrative positions such as the Director of Athletics continues to decrease as the number of women in coaching declines.

Various research strategies have been used to explain the decline of female coaches. One such strategy asked female and male athletic directors to list what they believed to be the causes behind the decline. The research concluded that male athletic directors held the belief that there were four main explanations: lack of qualified female coaches, failure of women to apply for job openings, lack of qualified female administrators, and time constraints due to family obligations (Stangl & Kane, 1991). After these findings were published, a study by Hasbrook, Hart, Mathes, & True (1990) tested the validity of two of these beliefs: that fewer women are hired because they are less qualified and that women have more time constraints due to family obligations. They found that these two beliefs were not based on objective data and more on gender stereotypes since the study concluded female coaches were in fact more qualified for the coaching positions to which they applied and male coaches experienced more constraints due to family responsibilities (Hasbrook et al, 1990).

Additional research was still needed to explain the decline in female coaches in intercollegiate athletics. The influence that a Director Athletics may have on the gender of his or her coaching staff is presented in a study by Jane Stangl and Mary Jo Kane entitled, *Structural Variables That Offer Explanatory Power for the Underrepresentation of Women Coaches Since Title IX: The Case of Homologous Reproduction* (1991). Homologous reproduction is “a process whereby dominants reproduce themselves based on social and/or physical characteristics” (Stangl & Kane, 1991). Their study related the theory of homologous reproduction to the employment relationship between the gender of the AD and the gender of the various head coaches a possible explanation to the decline of female coaches. The main conclusion from their research was that significantly more women were hired under a female AD versus a male AD. Although the conclusions are based on interscholastic data, many of these conclusions can be inferred to intercollegiate athletics as well (Stangl & Kane, 1991).

Their research sought to provide empirical evidence to back the theory of homologous reproduction as well as the commonly held beliefs in the success of the old boys’ network and the weakness of the old girls’ network. Focusing on three time periods surrounding Title IX (before, during, and after), 937 public high schools in Ohio were selected. Data were gathered on the gender of the athletic director and the gender of the head coach for each of the women’s sports offered. Their data coincided with previous research demonstrating a decline in female coaches while the number of sports offered for females increased during the period following Title IX (Stangl & Kane, 1991).

Results from the data support the theory of homologous reproduction as the percentage of female head coaches was significantly greater under a female athletic director

than under a male demonstrating a direct relationship between the gender of the person doing the hiring and the gender of those being hired. Female athletic directors were significantly more likely than male athletic directors to hire women as head coaches. This pattern was significant over all three time periods studied (Stangl & Kane, 1991).

One difference that appeared between the time periods was the gap between the percentage of women head coaches hired under female ADs and the percentage hired under male ADs. The gap increased from 3% in 1974-75 to 11% ten years later demonstrating a conscious effort on the part of female athletic directors to hire females as head coaches. Since the failure of the old girl's network is a commonly held explanation for the decline of female head coaches, female athletic directors may be trying to combat this issue by recruiting, hiring, and retaining women (Stangl & Kane, 1991).

A similar study was conducted by Dorothy J. Lovett and Carla D. Lowry (1994), entitled "*Good Old Boys*" and "*Good Old Girls*" Clubs: *Myth or Reality?* focusing on various administrative models within interscholastic athletics in the state of Texas. Their study used the underlying assumption that homologous reproduction is the base for the good old boys and good old girls clubs and expanded it to include the gender of the high school principal. Their research question was to identify the types of administrative structures that oversee athletic programs and to determine if a significant difference exists between the type of structures and the number of head coaches by gender (Lovett & Lowry, 1994).

Lovett and Lowry randomly selected 25% of the 1,106 public high schools in Texas from which to gather data. Two administrative structures were found: a two person structure with a principal and one athletic director overseeing both male and female athletics and a three person structure with a principal and then two athletic directors, one for the male

athletics program and one for the female athletics program. Within the two person structure the following four combinations were found: male principal/male AD, female principal/male AD, male principal/female AD, and female principle/female AD. Within the three person structure the following four combinations were found: male principal/male AD for boys/male AD for girls, male principal/male AD for boys/female AD for girls, female principal/male AD for boys/female AD for girls, female principal/male AD for boys/male AD for girls (Lovett & Lowry, 1994).

There was a significant difference in the numbers of coaches by gender in both the two person and three person structures possibly reinforcing the evidence to support homologous reproduction and the effectiveness of the 'old girls club'. In regards to the two person structure, the two of the four combinations with the highest percentage of female coaches were the models with the female AD. The combination with the third highest percentage of female coaches was the model with the female principal/male AD. In regards to the three person structure, there was a higher percentage of female coaches in the models that had female athletics directors. The opposite was also true as there was a higher percentage of male coaches in the models that had male athletic directors (Lovett & Lowry, 1994).

Carpenter and Acosta's study also supports the theory of homologous reproduction and demonstrated its existence in intercollegiate athletics. In NCAA Division I, 43.3% of the coaches for women's teams are female when the athletic director is male. A higher percentage of the coaches for women's teams are female when the athletic director is also female at 48.5%. The percentage of coaches for women's teams that are female shrinks to

38.5% when there is no female presence in the administrative structure. This pattern is found to exist in both Division II and Division III institutions as well (Acosta & Carpenter, 2006).

These three studies show the direct relationship between the gender of the athletic director or other hiring personnel and the gender of the head coaches. This current research seeks to determine if there is a direct relationship between the gender of the athletic director and other gender equity factors in intercollegiate athletics.

CHAPTER III

METHODOLOGY

The purpose of this study was to determine if there is a difference between gender equity at institutions with a female Athletic Director (AD) compared to those with a male Athletic Director across Divisions I, II and III and considering football sponsorship. Gender equity is defined as proportions of participation, operating budget, recruiting budget, scholarships budget, sport sponsorship, coaching salaries and full time coaching staff allotted to women's teams.

Units of Analysis

NCAA Member Institutions across Divisions I, II, and III were possible subjects for this study. The subjects were divided into two groups. The male group consisted of a random sample of institutions with a male AD while the female group consisted of all institutions with a female AD. In order for an institution to be included in the female group, the female AD must have been in that position for a minimum of three (3) years ending in June 2004. The sample size for each of the two groups is 89 (n=89) for a total sample size of 178. Only coeducational institutions were considered for this study and institutions with separate men's and women's athletic departments were not included. The total applicable population from Divisions I, II, and III is 1,002 NCAA institutions.

Out of the 323 Division I institutions applicable to this study, 15, or 5%, have a female AD who have been in that position for three or more years. In Division II, 25 of the

280 institutions, or 9%, have a female AD with three years or more in the position. For Division III the number of female Athletic Directors increases to 50 out of 399, or 13% of applicable institutions. However, one of the Division III institutions with a female Athletic Director does not have a published EADA report available to the public. For purposes of this study, 49 Division III institutions were included. The total number of subjects for the female group is 89 with 17% from Division I, 28% from Division II, and 55% from Division III. To maintain equal sample sizes in the two groups, 89 randomly selected institutions with a male AD were chosen to make up the male group. Proportions from each Division were kept the same in both groups. A complete listing of the institutions used in this study is included in the Appendix.

Instrumentation

The data for this study were collected from a compilation of the information submitted on the Equity in Athletics Disclosure Act (EADA) reports. This compilation is found in a database provided by *The Chronicle of Higher Education* located online at <http://chronicle.com/stats/genderequity/>. The Equity in Athletics Disclosure Act of 1994 requires all coeducational institutions that receive any Federal student financial aid to complete and submit the forms by October 31st of each year. The EADA report contains financial and statistical information on men's and women's intercollegiate sports at each institution. As of 1998, this information is made public online through the Office of Postsecondary Education at <http://ope.ed.gov/athletics/Search.asp>.

Procedure

Creating a formula for calculating gender equity is not a simple task and has been tried by the Office of Civil Rights (OCR) and individual institutions as they attempt to

comply with Title IX. With the onset of Title IX in 1972 many institutions were slow to change because the law did not include a clear definition on how to determine if an institution failed to comply with Title IX, nor did it include a clear method for measuring compliance. In 1979, the OCR released an Intercollegiate Athletics Policy Interpretation with three alternative methods to measuring compliance (Gender Equity in Sports, 2004). The first of the three methods is proportionality, which is the easiest to calculate but often the most difficult to meet. The proportionality test requires that the proportion of male and female students participating in intercollegiate athletics is equal to the proportion of male and female students enrolled in the institution.

This research study, modeled after Melchiorre's Master's Thesis (2001) uses the proportionality test and applies it to various factors that are believed to be important in determining if equitable treatment exists. These factors are part of the specific requirements of Title IX in an athletics application. Institutions with a male AD were compared with institutions with a female AD in the following factors: participation, operating budget, recruiting budget, scholarships budget, sport sponsorship, coaching salaries and full time coaching staff. More specifically, this study compared the female proportion of each of the seven factors with the proportion of female athletes.

Participation equity was calculated by subtracting the female proportion of all student-athletes from the female proportion of enrolled undergraduates. Equity for each of the remaining six factors was determined by subtracting the female proportion for each factor from the female proportion of student-athletes. For example, operating budget equity was calculated by subtracting the female proportion of the operating budget from the female proportion of student-athletes. This difference would become the "Difference Between

Proportionality” (DBP) for that factor, or for this example the DBP Operating Expenses. The DBP for each factor was calculated for each of the institutions in the study. A DBP Gender Equity was then calculated for each institution by averaging the seven separate DBPs.

Statistical Analysis

The data were inputted into the statistical program SPSS and coded by institution and by each of the three between-factor independent variables: gender of the AD, division affiliation, and football sponsorship. The gender of the AD variable is broken down into two levels, male and female. The division affiliation variable is broken down into three levels: I, II, and III. The football sponsorship variable is broken down into two levels: yes (football is sponsored) and no (football is not sponsored). The main dependent variable in this analysis was gender equity, or more specifically the eight DBP’s for each of the gender equity factors including an overall gender equity factor.

The data were analyzed to determine if there were any violations of the assumptions of normality. Assuming the data proved to be normally distributed, a three-way totally between ANOVA was run for each of the eight dependent variables to determine if a significant difference exists between the various groups of data, considering gender, division affiliation, and football sponsorship. If the data proved to be significantly skewed, one of several options would be chosen based on how the data deviated from normality. One option would be to use a non-parametric analysis which would not require the data to be normally distributed. Another option would be to use transformation in order to achieve normality. An alpha of .05 will be applied to all statistical analysis.

CHAPTER IV

RESULTS

The purpose of this study was to determine if there is a difference between gender equity at institutions with a female Athletic Director (AD) compared to those with a male Athletic Director across Divisions I, II and III and considering football sponsorship. Gender equity was defined as proportions of participation, operating budget, recruiting budget, scholarships budget, sport sponsorship, coaching salaries and full time coaching staff allotted to women's teams.

Data were collected for all 89 institutions with a female Athletic Director and 89 randomly selected institutions with a male Athletic Director. Scholarship data were only collected for schools in Division I and II ($n = 40$) since Division III institutions do not offer athletic scholarships. Based on an initial analysis of the normality of the data collected, several of the research questions will not be addressed in this study. Those questions include comparing gender equity at an institution considering the gender of the Athletic Director and the football sponsorship, as well as comparing gender equity considering all three independent variables: gender of the Athletic Director, Division affiliation, and football sponsorship.

The statistical analysis that was used varied depending on the research question being answered and the type of data involved. The first two research questions that were addressed were comparing overall gender equity and each of the seven factors between institutions with a female AD and institutions with a male AD. These questions required one sample t-tests to

test for significant differences as the tests compared the known population mean for the institutions with a female AD to the sample mean for the institutions with a male AD. The second two research questions that this study addressed involved comparing overall gender equity and each of the seven factors at institutions considering both the gender of the AD and the Division affiliation. These questions required one sample t-tests using a Bonferroni adjustment to account for the multiple comparisons.

The remaining four research questions involved comparing overall gender equity and each of the seven factors at institutions that sponsor football and those that do not sponsor football and then also comparing overall gender equity and each of the seven factors considering both football sponsorship and Division affiliation. These questions required a two way totally between subjects ANOVA for each of the eight dependent variables. An additional question that was addressed involved comparing the female percentage of coaches between institutions with a female AD and institutions with a male AD. A one sample t-test was used to answer this question and test for a significant difference. An alpha of .05 was applied to all statistical analysis. The t-tests that required a Bonferroni adjustment used an alpha level of .0167 (.05/3).

One sample t-tests were run to compare the population mean for the female group with the sample mean of the male group in overall gender equity and in each of the seven factors. The results are displayed in Table 1. A one sample t-test comparing the overall gender equity of the male group and the female group found no significant difference ($t_{(88)} = 0.631, p = .530$). The mean for the male group, 0.2%, was a mirror image of the female group which had a mean of -0.2%. These values reveal that in looking at a variable combining all seven factors that make up gender equity, both groups are within one percent. The male

group, with a positive mean value, provides these factors to women’s teams in a slightly greater percentage than the female proportion of student-athletes.

Table 1

Gender Equity Compared at Institutions with a Female AD and those with a Male AD

Gender Equity Factor	Male Group		Female Group		df	t	p
	Mean	Std. Dev.	Mean	Std. Dev.			
DBP Gender Equity	0.002	0.051	-0.002	0.055	88	0.631	.530
DBP Participation	-0.153	0.076	-0.129	0.093	88	-2.950	.004
DBP Scholarship	0.038	0.075	0.035	0.066	39	0.206	.838
DBP Operating	0.004	0.073	0.006	0.062	88	-0.332	.741
DBP Recruiting	-0.025	0.160	-0.037	0.163	88	0.699	.486
DBP Coaching Salaries	0.009	0.075	0.003	0.076	88	0.809	.421
DBP Sport Sponsorship	0.111	0.076	0.085	0.064	88	3.197	.002
DBP Coaching Staff	0.054	0.051	0.042	0.051	88	2.032	.045

Note: Data for the male group are based on sample statistics. Data for the female group are based on population parameters.

One sample t-tests were run for each component of the overall gender equity variable. There was a significant difference ($t_{(88)} = -2.950, p = .004$) between the DBP Participation of the male group and the female group. In both the male and female groups, the negative mean values demonstrate that fewer participation opportunities are available for women at these institutions based on the female proportion of undergraduate enrollment of the institutions. The female group had a smaller negative mean value and therefore comes closer to offering participation opportunities equal to the female undergraduate enrollment. All of the

institutions, except for three in the female group and five in the male group, resulted in a negative mean value for DBP Participation.

There was no significant difference ($t_{(39)} = 0.206, p = .838$) between the DBP Scholarship Budget at institutions in the male group with institutions in the female group. The results reveal that female student-athletes are receiving proportionally between 3 to 4% more of the scholarship budget compared to their participation rates, regardless of the gender of the Athletic Director. Only 11, or 28% of the institutions in the female group were found to provide a proportion of the scholarship budget to female student-athletes that is less than equivalent to the participation rates. In comparison, 14, or 35% of the institutions in the male group were providing less than equivalent proportions of the scholarship budget to female student-athletes.

Again, there was no significant difference ($t_{(88)} = -0.332, p = .741$) between the DBP Operating Expenses at institutions in the male group with institutions in the female group. Both the male and female groups resulted in positive mean values within one percentage point of an equitable distribution of the operating budget among male and female student-athletes. The individual institutions' DBP Operating Expenses values range from -19.1 to 16.4 for the female group and from -26.3 to 12.7 for the male group with at least 60% of each group boasting a positive value.

A one sample t-test comparing the DBP Recruiting Expenses of the male group and female group found no significant difference ($t_{(88)} = 0.699, p = .486$). In both the male and female groups, the negative mean values demonstrate that a smaller proportion of the recruiting budget is allocated to women's teams at these institutions when compared to the female proportion of undergraduates. Over 50% of each group had a negative value for DBP

Recruiting Expenses, with the female group at 58% and the male group at 52%. The individual institutions' values range from -54.2 to 31.9 for the female group with one extreme value at 62.2, and from -53.9 to 23.6 for the male group with one extreme value at 46.2.

There was no significant difference ($t_{(88)} = 0.809$, $p = .421$) between the DBP Coaching Salaries at institutions in the male group with institutions in the female group. Both the male and female groups resulted in positive mean values within one percentage point of an equitable distribution of the coaching salary budget among male and female student-athletes. Over 60% of the female group and over 62% of the male group had positive values, with about 52% of all the institutions having values within five percentage points of the undergraduate enrollment proportion.

There was a significant difference ($t_{(88)} = 3.197$, $p = .002$) found between the DBP Sport Sponsorship at institutions in the male group with institutions in the female group. Both groups reveal that female sports are sponsored in greater proportionality to their participation rates however the male group had a significantly higher positive mean value. Only seven of the institutions in the female group and four of the institutions in the male group scored a negative value for DBP Sport Sponsorship. The individual institutions' values range from -4.2 to 25.9 for the female group, and from -2.2 to 35 for the male group.

There was a significant difference ($t_{(88)} = 2.032$, $p = .045$) between the DBP Coaching Staff at institutions in the male group with institutions in the female group. The results reveal that women's teams are receiving proportionally 5.4% more of the coaching staff compared to their participation rates at institutions with a male Athletic Director compared to 4.2% more of the coaching staff at institutions with a female Athletic Director. Over 57% of

the female group and 49% of the male group have values within five percentage points of the undergraduate enrollment proportion. The individual institutions' values range from -10.8 to 14.9 for the female group, and from -6.0 to 24.8 for the male group.

One sample t-tests with Bonferroni adjustments were run to compare the population mean for the female group with the sample mean of the male group in overall gender equity and in each of the seven factors within NCAA Division I institutions. The results of the t-tests within Division I are displayed in Table 2. None of the eight t-tests produced significant findings and only a few produced results that differed from the previous analysis combining the three Divisions.

Table 2

Gender Equity Compared at Institutions with a Female AD and those with a Male AD –

Division I

Gender Equity Factor	Male Group		Female Group		df	t	p
	Mean	Std. Dev.	Mean	Std. Dev.			
DBP Gender Equity	-0.007	0.068	-0.013	0.041	14	0.305	.765
DBP Participation	-0.101	0.078	-0.075	0.077	14	-1.256	.230
DBP Scholarship	0.061	0.077	0.020	0.064	14	2.056	.059
DBP Operating	-0.050	0.110	-0.044	0.070	14	-0.195	.848
DBP Recruiting	-0.071	0.092	-0.052	0.076	14	-0.789	.443
DBP Coaching Salaries	-0.063	0.098	-0.059	0.067	14	-0.134	.895
DBP Sport Sponsorship	0.123	0.106	0.094	0.067	14	1.092	.293
DBP Coaching Staff	0.058	0.076	0.034	0.052	14	1.269	.225

Note: Data for the male group are based on sample statistics. Data for the female group are based on population parameters.

The DBP Participation for Division I institutions shows an improvement on inequality compared to the combined analysis. Division I institutions with a male Athletic Director, are within 10% and institutions with a female Athletic Director are within 7.5% of providing equitable participation opportunities for both genders. In the analysis of all Divisions, the institutions in the two groups are within 15% and 12%, respectively.

The DBP Operating Expenses for Division I shows greater inequality when compared to the combined analysis. In the combined analysis, both the male and female groups were within one percentage point of equitable allocations and produced positive mean values. The t-test for Division I institutions resulted in negative mean values that are between four and five percentage points away.

The DBP Coaching Salaries for Division I institutions also differs from the combined analysis. Both groups representing all divisions had a positive mean value within one percent. The Division I institutions with a male Athletic Director had a negative mean value greater than six percentage points from an equitable distribution. The Division I institutions with a female Athletic Director scored similar to the male group with a negative mean value of just under six percentage points.

One sample t-tests with Bonferroni adjustments were run to compare the population mean for the female group with the sample mean of the male group in overall gender equity and each of the seven factors within NCAA Division II institutions. The results of the t-tests within Division II are displayed in Table 3. In the analysis of Division II institutions, one of the eight t-tests produced significant findings and one was approaching significance.

There was a significant difference ($t_{(24)} = 5.462, p < .0005$) between the DBP Coaching Staff of the male group and the female group. The results reveal that women's

teams are receiving proportionally 5.4% more of the coaching staff compared to their participation rates at institutions with a male Athletic Director compared to 3.4% more of the coaching staff at institutions with a female Athletic Director. These results are very similar to those from the analysis of all three divisions however Division II had a smaller DBP Coaching Staff for institutions with a female Athletic Director. The difference between the DPB Sport Sponsorship of the male group and the female group was approaching significance ($t_{(24)} = 2.389$, $p = .025$). DBP Sport Sponsorship was one of the three significant factors in the analysis of institutions from all three divisions.

Table 3

*Gender Equity Compared at Institutions with a Female AD and those with a Male AD –
Division II*

Gender Equity Factor	Male Group		Female Group		df	t	p
	Mean	Std. Dev.	Mean	Std. Dev.			
DBP Gender Equity	0.015	0.045	0.000	0.041	24	1.587	.126
DBP Participation	-0.155	0.087	-0.141	0.083	24	-0.776	.445
DBP Scholarship	0.024	0.072	0.044	0.067	24	-1.379	.181
DBP Operating	0.014	0.073	0.004	0.057	24	0.725	.476
DBP Recruiting	0.029	0.164	-0.022	0.115	24	1.570	.130
DBP Coaching Salaries	0.030	0.062	0.004	0.067	24	2.125	.044
DBP Sport Sponsorship	0.113	0.083	0.073	0.053	24	2.389	.025
DBP Coaching Staff	0.054	0.049	0.034	0.044	24	5.462	.000

Note: Data for the male group are based on sample statistics. Data for the female group are based on population parameters.

Overall, the results of the analysis of Division II institutions are similar to the results from the analysis of all three divisions. DPB Recruiting is an exception as this varies slightly from the combined analysis and even more so from the Division I analysis. The DBP Recruiting Expenses for Division II institutions resulted in a positive mean value for the male group of almost three percent and a negative mean value for the female group of just over two percent. In both cases, this analysis is an improvement over the combined analysis and an even greater improvement over the Division I analysis with the male group. Division I institutions with a male Athletic Director had a negative mean DBP Recruiting Expenses over seven percentage points below an equitable distribution. Division I institutions with a female Athletic Director had the largest DBP Recruiting Expenses with a positive mean value of over nine percent.

One sample t-tests with Bonferroni adjustments were run to compare the population mean for the female group with the sample mean of the male group in overall gender equity and each of the six factors within NCAA Division III institutions. DBP Scholarship Budget was not analyzed for Division III institutions since this Division does not permit athletic scholarships. The results of the t-tests within Division III are displayed in Table 4.

The results for Division III were similar to the results for Division II institutions in that one of the eight t-tests produced significant findings. There was a significant difference ($t_{(48)} = -3.202, p = .002$) between the DBP Participation of the male group and the female group. As in the analysis of all three divisions, the negative mean values demonstrate that fewer participation opportunities are available for women at these institutions based on the female proportion of undergraduate enrollment of the institutions. The female population had a smaller negative mean value (-13.9%) -and therefore comes closer to offering

participation opportunities equal to the female undergraduate enrollment than the male group (-16.7%). The largest negative mean value for DBP Participation was found in the male group at Division III institutions.

Table 4

Gender Equity Compared at Institutions with a Female AD and those with a Male AD –

Division III

<u>Gender Equity Factor</u>	<u>Male Group</u>		<u>Female Group</u>		<u>df</u>	<u>t</u>	<u>p</u>
	<u>Mean</u>	<u>Std. Dev.</u>	<u>Mean</u>	<u>Std. Dev.</u>			
DBP Gender Equity	-0.002	0.047	0.001	0.064	48	-0.426	.672
DBP Participation	-0.167	0.062	-0.139	0.097	48	-3.202	.002
DBP Operating	0.015	0.050	0.023	0.054	48	-1.164	.250
DBP Recruiting	-0.038	0.170	-0.039	0.120	48	0.019	.985
DBP Coaching Salaries	0.021	0.061	0.022	0.074	48	-0.077	.939
DBP Sport Sponsorship	0.105	0.063	0.088	0.069	48	1.975	.054
DBP Coaching Staff	0.052	0.044	0.049	0.054	48	0.371	.713

Note: Data for the male group are based on sample statistics. Data for the female group are based on population parameters.

The mean values for each gender equity factor most closely resembled the results from the combined analysis. The DBP Operating Expenses and the DBP Coaching Salaries were the most different from the combined analysis. The DBP Operating Expenses for Division III institutions increased over the combined analysis with a positive mean value for the male group of 1.5% and a positive mean value for the female group of 2.3%. The DBP Coaching Salaries for Division III institutions decreased from the combined analysis to just

over two percentage points, down from over nine and increased from under one percent to over two percent for the female group.

A 3 X 2 totally between subjects ANOVA was used to compare the overall gender equity and each of the seven factors considering both football sponsorship and division affiliation. The marginal means of the main effects of football sponsorship and division affiliation from each of the eight ANOVAs are displayed in Table 5. The marginal means of the interaction effect from each of the eight ANOVAs are displayed in Table 6.

Table 5

3 X 2 ANOVA Marginal Means: Main Effects of Football and Division

Equity Factor	Football		Division		
	Yes	No	I	II	III
DBP Gender Equity	-0.002	-0.002	-0.011	0.006	-0.001
DBP Participation	-0.146	-0.112	-0.083	-0.151	-0.152
DBP Scholarship	0.027	0.050	0.045	0.032	N/A
DBP Operating	-0.015	0.006	-0.041	0.008	0.019
DBP Recruiting	-0.052	-0.014	-0.061	0.000	-0.039
DBP Coaching Salaries	-0.015	-0.001	-0.060	0.015	0.022
DBP Sport Sponsorship	0.141	0.046	0.089	0.098	0.093
DBP Coaching Staff	0.053	0.037	0.041	0.044	0.050

Table 6

3 X 2 ANOVA Marginal Means: Interaction Effect of Football and Division

Equity Factor	Division I		Division II		Division III	
	Yes	No	Yes	No	Yes	No
DBP Gender Equity	-0.008	-0.014	-0.003	0.016	0.004	-0.007
DBP Participation	-0.098	-0.068	-0.175	-0.127	-0.165	-0.140
DBP Scholarship	0.032	0.057	0.022	0.043	N/A	N/A
DBP Operating	-0.059	-0.024	0.003	0.014	0.013	0.026
DBP Recruiting	-0.064	-0.058	-0.057	0.057	-0.036	-0.042
DBP Coaching Salaries	-0.063	-0.058	-0.001	0.029	-0.018	-0.026
DBP Sport Sponsorship	0.147	0.032	0.141	0.055	0.135	0.052
DBP Coaching Staff	0.056	0.026	0.044	0.044	0.059	0.041

For DBP Gender Equity, there was no significant main effect of football sponsorship ($F_{(1,172)} = .004$, $p = .953$) as the mean for those institutions that sponsor football and those that do not were both within one percentage point of equitable distribution. There was no significant main effect of division affiliation ($F_{(2,172)} = .979$, $p = .378$) as all three divisions had a DBP Gender Equity of within 1.1%. There was also no significant interaction effect between football sponsorship and division affiliation ($F_{(2,172)} = 1.294$, $p = .277$).

For DBP Participation, a significant main effect of football sponsorship was found ($F_{(1,172)} = 5.838$, $p = .017$) with institutions that sponsor football at -14.6% compared to institutions that do not sponsor football at -11.2 percentage points away from providing equal opportunities when compared to the undergraduate enrollment. There was a significant main effect of division affiliation ($F_{(2,172)} = 8.094$, $p < .0005$). Post hoc analysis of the main effect

of division affiliation was needed since there were three possible pairwise comparisons within that independent variable. A Tukey post hoc test resulted in a significant difference between Division I and Division II ($p = .005$) and between Division I and Division III ($p < .0005$). There was no significant interaction effect between football sponsorship and division affiliation ($F_{(2,172)} = .335, p = .716$).

For DBP Scholarship Budget, there was no significant main effect of football sponsorship ($F_{(1,75)} = 1.793, p = .185$) as the mean for those institutions that sponsor football and those that do not were between 3.2 and 5.7 percentage points higher than equitable distribution. There was no significant main effect of division affiliation ($F_{(1,75)} = .520, p = .473$). This analysis only included two levels of the Division variable since Division III institutions do not offer athletic scholarships. There was also no significant interaction effect between football sponsorship and division affiliation ($F_{(1,75)} = .013, p = .909$). The ANOVA for DBP Scholarship Budget was determined to violate the homogeneity of variance assumption however since there were no significant findings, this violation does not affect the results.

The ANOVA for DBP Operating Expenses was determined to violate the homogeneity of variance assumption and therefore an alpha level of .001 was used to determine significance. For DBP Operating Expenses, there was no significant main effect of football sponsorship ($F_{(1,172)} = 3.317, p = .070$). There was a significant main effect of division affiliation ($F_{(2,172)} = 9.585, p < .0005$). Post hoc analysis of the main effect of division affiliation was needed since there were three possible pairwise comparisons within that independent variable. A Tukey post hoc test resulted in a significant difference between Division I and Division II ($p = .001$) and between Division I and Division III ($p < .0005$).

There was no significant interaction effect between football sponsorship and division affiliation ($F_{(2,172)} = .370$, $p = .692$). Since this ANOVA violated the homogeneity of variance assumption and the three divisions have unequal 'n', these results must be interpreted with caution.

For DBP Recruiting Expenses, there was no significant main effect of football sponsorship ($F_{(1,170)} = 1.862$, $p = .174$) although the institutions that did not sponsor football were with two percentage points away from equitable distribution whereas the institutions that did sponsor football were over five percentage points away. There was no significant main effect of division affiliation ($F_{(2,170)} = 1.466$, $p = .234$). There was also no significant interaction effect between football sponsorship and division affiliation ($F_{(2,170)} = 2.354$, $p = .098$). The ANOVA for DBP Recruiting Expenses was determined to violate the homogeneity of variance assumption however since there were no significant findings, this violation does not affect the results.

For DBP Coaching Salaries, there was no significant main effect of football sponsorship ($F_{(1,172)} = 1.243$, $p = .267$). A significant main effect of division affiliation was found ($F_{(2,172)} = 14.822$, $p < .0005$). Post hoc analysis of the main effect of division affiliation was needed to determine which of the three possible pairwise comparisons were significant. A Tukey post hoc test resulted in a significant difference between Division I and Division II ($p < .0005$) and between Division I and Division III ($p < .0005$). There was no significant interaction effect between football sponsorship and division affiliation ($F_{(2,172)} = .387$, $p = .680$).

The ANOVA for DBP Sport Sponsorship was determined to violate the homogeneity of variance assumption and therefore an alpha level of .001 was used to determine

significance. For DBP Sport Sponsorship, a significant main effect of football sponsorship was found ($F_{(1,172)} = 92.399, p < .0005$). Both groups had a positive mean value however institutions that sponsored football had a mean of 14.1 compared to 4.6 for institutions that did not sponsor football. There was no significant main effect of division affiliation ($F_{(2,172)} = .220, p = .803$) and there was no significant interaction effect between football sponsorship and division affiliation ($F_{(2,172)} = .814, p = .445$). Since this ANOVA violated the homogeneity of variance assumption and the two levels of football sponsorship have unequal 'n', these results must be interpreted with caution.

For DBP Coaching Staff, there was no significant main effect of division affiliation ($F_{(2,172)} = .417, p = .660$). The main effect of football sponsorship was approaching significance ($F_{(1,172)} = 3.173, p = .077$) with institutions that sponsor football at 5.3% compared to institutions that do not sponsor football at 3.7 percentage points higher than equitable distribution of the coaching staff to women's teams when compared to female athletic participation. There was no significant interaction effect between football sponsorship and division affiliation ($F_{(2,172)} = .871, p = .420$).

An additional dependent variable in this research was the female percentage of coaches at each institution. A one sample t-test was used to compare the female percentage of coaches at institutions with a female AD with the female percentage of coaches at a sample of institutions with a male AD. The results are displayed in Table 7. A significant difference was found ($t_{(88)} = -4.631, p < .0005$) in the percentage of female coaches. On average, 27.6% of the coaches are female at institutions with a female Athletic Director compared to 23.5% of the coaches at institutions with a male Athletic Director.

Table 7

Percentage of Female Coaches Compared at Institutions with a Female AD and those with a Male AD

Division	Male Group		Female Group		df	t	p
	Mean	Std. Dev.	Mean	Std. Dev.			
All Divisions	0.235	0.082	0.276	0.091	88	-4.631	.000
Division I	0.267	0.083	0.319	0.060	14	-2.446	.028
Division II	0.224	0.089	0.250	0.084	24	-1.473	.154
Division III	0.232	0.077	0.276	0.098	48	-3.966	.000

Note: Data for the male group are based on sample statistics. Data for the female group are based on population parameters.

One sample t-tests with Bonferroni adjustments were run to compare the female percentage of coaches at institutions with a female AD with the female percentage of coaches at a sample of institutions with a male AD within Division I, II, and III institutions. The results of the t-tests within each division are displayed in Table 5. There was a significant difference ($t_{(48)} = -3.966$, $p < .0005$) found between the percent of female coaches within Division III institutions. On average, 27.6% of the coaches are female at institutions with a female Athletic Director compared to 23.2% of the coaches at institutions with a male Athletic Director. These percentages are very similar to the results from the comparison at all three divisions combined.

The difference between percent of female coaches was approaching significance within Division I institutions ($t_{(14)} = -2.446$, $p = .028$). On average at Division I institutions, 31.9% of the coaches are female at institutions with a female Athletic Director compared to

26.7% of the coaches at institutions with a male Athletic Director. There were no significant differences within Division II institutions ($t_{(24)} = -1.473$, $p = .154$).

The largest percent of female coaches were found at Division I institutions with a female Athletic Director where on average 31.9% of the coaching staff is female. The smallest percent of female coaches were found at Division II institutions with a male Athletic Director where on average 25% of the coaching staff is female. The smallest difference between the institutions with a female Athletic Director and institutions with a male Athletic Director was found at Division II institutions.

CHAPTER V

DISCUSSION

This research was designed to determine if there is a difference between gender equity at institutions with a female Athletic Director (AD) compared to those with a male Athletic Director across Divisions I, II and III and considering football sponsorship. Gender equity was defined as proportions of participation, operating budget, recruiting budget, scholarships budget, sport sponsorship, coaching salaries and full time coaching staff allotted to women's teams.

Conclusions

The first set of analysis compared overall gender equity and the seven factors at institutions with a male AD to institutions with a female AD. For this analysis, institutions from each of the three divisions were grouped together. Three of the eight gender equity variables had significant differences between the two groups: Participation, Sport Sponsorship, and Coaching.

In regards to Participation, institutions with a female AD are doing a better job of providing athletic opportunities to female collegiate athletes in a proportion equal to the female undergraduate enrollment however only eight of the institutions studied provided equivalent participation opportunities. These eight institutions are evenly split among the three divisions with two from Division III and three each from Division I and II. The difference between the athletic participation rates and the female undergraduate enrollment is -15.3% at institutions with a male AD and -12.9% at institutions with a female AD. On

average institutions with a male AD offer 15.3% less opportunities to female athletes than their enrollment proportions and institutions with a female AD offer 12.9% less opportunities to female athletes. As mentioned earlier, substantial proportionality is one of the three prongs that an institution can choose to fulfill the second of the three components of Title IX compliance.

These results demonstrate the difficulty institutions have in meeting this prong and therefore seek out ways to comply with one of the two remaining alternatives. DBP Participation rates like the results of this study are what motivate schools to make decisions to add women's sports or even to cut men's Olympic sports. Over the next few years, this prong will become even more difficult to meet as women are making up an increasingly higher percentage of the undergraduate enrollment across the country. The institutions with a smaller DBP Participation seem to be those that have fewer female undergraduates, such as military academies and technological institutes instead of actually offering greater participation opportunities.

Increasing women's teams ties in with the next significant gender equity variable; Sport Sponsorship. Both groups of institutions offer a greater percentage of women's teams when compared to the proportion of female student-athletes. In DBP Sport Sponsorship, there is a significant difference between the institutions with a male AD and the institutions with a female AD however in regards to this variable the institutions with a male AD offer proportionally more women's teams (11.1%) than the institutions with a female AD (7.6%). All but 11 institutions in this study offer an equivalent proportion of women's teams compared to student-athlete participation. Only one of these 11 institutions are classified as Division I and none of the 11 sponsor football.

One reason why almost all of the institutions offer the equivalent number of women's teams is related to the attempt to satisfy the proportionality prong referenced above. As institutions add women's teams or even cut men's teams, their DBP Sport Sponsorship would increase. As reported in Chapter 2, in the last six years 1,455 women's teams were added to NCAA member institutions (Acosta & Carpenter, 2006). Institutions without football may not have had as much of a need to add women's sports, which is often seen as an effort to combat football's large roster size, and therefore partially explain why the schools with negative DBP Sport Sponsorship scores do not sponsor football. This theory could also help explain why the DBP Sport Sponsorship was higher for institutions with a male AD. A majority of the institutions used in this study (59%) that do not sponsor football are led by a female AD, possibly increasing the average score for this group.

The third variable found to be significant in this analysis was DBP Coaching Staff which refers to the percentage of the coaching staff that is assigned to women's teams. Although there was a significant difference between institutions with a male AD and institutions with a female AD, the actual difference is small and both groups offer more than equivalent coaching staff proportional to female participation. As with Sport Sponsorship, institutions with a male AD have proportionally more coaches for their women's teams (5.4%) than the institutions with a female AD (4.2%) when compared to the student-athlete participation rates. This variable is related to Sport Sponsorship as it stands to reason that the greater the number of women's teams, the greater the number of coaches that will be allocated to women's teams.

DBP Coaching Staff was also found to be significant within Division II with a greater actual difference between the institutions with a male AD and institutions with a female AD.

Division II member institutions with a male AD scored the same as all three divisions combined, however institutions with a female AD had a slightly lower score (3.4%).

Division II institutions on average offer the smallest number of women's teams and therefore the smallest number of coaches for those teams. The Division II institutions with a male AD employ 19% fewer women's coaches than either Division I or Division III institutions. The difference is greater with institutions with a female AD with 25% fewer women's coaches than either Division.

Comparing gender equity at institutions with a male AD to those with a female AD within Division III produced significant findings with the Participation variable. As mentioned previously, only two out of the 98 Division III institutions included in this research provided equivalent participation opportunities when compared to the female undergraduate enrollment producing larger negative DBP Participation scores. These scores can be partially explained by the female participation rates as they have the smallest out of the three Divisions despite sponsoring more women's teams than Division II institutions.

Institutions with a female AD did not prove to afford a more equitable environment than their male-directed counterparts. Only with Participation rates overall and specifically at Division III institutions did the institutions with a female AD provide more equitable opportunities when compared to the female undergraduate enrollment and even then on average the institutions were still 12.9 and 13.9 percentage points away from a perfect score. Institutions with a male AD actually ended up providing a more equitable environment in terms of Sport Sponsorship and Coaching overall and also Coaching at the Division II level. A possible explanation could include increased pressure on male athletic directors to demonstrate a commitment to gender equity. Another possible explanation could be that

more of the larger athletic departments are directed by a male AD and therefore have more resources to put towards the women's teams.

Previous research has shown that institutions with a female athletic director are more likely to hire female coaches both on the collegiate and scholastic levels. This study supports the previous research. The percentage of coaches that are female at institutions with a female AD was found to be greater than the percentage of coaches that are female at institutions with a male AD, although both percentages are relatively low. On average, 27.6% of the coaches at institutions with a female AD are female compared to 23.5% at institutions with a male AD.

These low percentages show that there is still room for improvement in the development of the "old girl network." One simple explanation for these low percentages is that on average 47% of all coaches are coaches of women's teams and it is very unlikely that a woman will coach a men's team even though it is very common for a man to coach a women's team. Less than 2% of men's teams are coached by a woman compared to over 57% of women's teams coached by a man (Acosta & Carpenter, 2006).

Other non-tangible factors may help to explain why the female Athletic Directors have not significantly improved gender equity at their institutions, as defined in this study by the seven components. As mentioned previously, female Athletic Directors are still in the minority as they only direct 18.6% of women's athletic programs and it is seen as an impressive accomplishment for women to achieve. These women most likely worked very hard, fighting inequality along the way to accomplish that goal and are not as willing to risk that position with major changes or decisions, especially ones that affect the delicate financial state of intercollegiate athletics. Many times these women may not want to disrupt

working relationships in a male dominated environment by becoming a spokesperson for women's athletics and gender equity. This is not to say they will not work to achieve gender equity, but the results may not be as obvious in these variables and may come in smaller ways. Further research into this topic by way of a survey or questionnaire distributed to female athletic directors would be beneficial in understanding this more fully.

Overall, Division I institutions have the greatest room for improvement in terms of the gender equity variables researched in this study. They have negative mean values for five of the eight variables including participation, operating budget, recruiting budget, coaching salaries, and overall gender equity. It is important to note that the sample size (15 in each group) is the smallest for Division I and it is possible that with a larger sample size the results would change. Division III institutions came in second with negative mean values in three of the eight variables: participation, recruiting budget, and overall gender equity. Division II institutions performed the best in terms of gender equity with negative mean values in participation and in recruiting budgets for institutions with a female AD only.

Coaching salaries, operating expenses, and participation rates were determined to be significant when analyzed solely based on the division affiliation. Actual differences between the DBP Coaching Salaries were small and all divisions were either within one percent on the negative side or within 2.5% on the positive side. Division I was found to be providing salaries to women's teams (-0.6%) in a significantly smaller proportion than Division II (1.5%) and Division III (2.2%) when compared to participation rates.

As mentioned previously, significant results for differences in operating expenses as the three divisions must be interpreted with caution. However, there are differences between the divisions that are worth noting. Division I was found to be the only institution that did

not provide operating expenses in a proportion equivalent to or greater than participation rates (-4.1%). Both Division II and Division III institutions were within two percentage points on the positive side with means of 0.8% and 1.9%, respectively. On average, operating budgets are largest at Division I institutions at \$27.2 million for I-A, \$7.5 million for I-AA, and \$6.5 million for I-AAA (Fulks, 2005). Since participation rates among the three divisions are similar there doesn't seem to be a clear explanation for these differences. A possible explanation could be that athletic departments at Division I institutions are supposed to be self-sufficient and rely more heavily on revenues generated by the athletic programs. This structural difference could lead to the decisions to use more of the operating budget for the revenue sports with the hopes of increasing the overall departmental budget.

Actual differences in DBP Participation between institutions in the three divisions were greater even though once again the results confirmed that on average none of the institutions was offering equitable participation opportunities when compared to undergraduate enrollment proportions. Division I institutions perform the best overall and are significantly better than the other divisions with a negative mean value of 8.3 percentage points from equitable distribution. Division II and Division III differ only slightly with negative mean values of 15.1% and 15.2%, respectively.

There are various possibilities exist that may explain the difference between Division I and the other classifications in terms of participation rates. Division I athletics departments often are viewed in the national spotlight and are more susceptible to intense scrutiny resulting in Title IX claims. Athletics at these institutions often drive the majority of the publicity they receive and therefore are larger and more visible targets. This attention may motivate Division I institutions to more actively pursue Title IX compliance. Divisions II

and III operate more on a regional and local level and are not as likely to receive the same pressure and consideration. Athletic budgets at Division I institutions are also much greater than the other divisions and are able to better finance additional teams to boost participation rates.

On average all institutions, regardless of the division affiliation and gender of the AD, were found to be providing equitable allocation of the scholarship budget when compared to participation rates. This result is similar to what was found in Melchiorre's research comparing gender equity at institutions with merged versus separate men's and women's athletic departments and is a sign that institutions are attempting to comply with Title IX. Equal allocation of the scholarship budget is one of the three components of Title IX compliance. The largest DBP Scholarship Budget was found at Division I institutions with a male AD (6.1%) followed by Division II institutions with a female AD (4.4%).

Football has been cited as a significant obstacle to complying with Title IX. This study compared gender equity at institutions with football and those without football to determine if this is a legitimate claim. The analysis showed that equitable participation opportunities are not afforded to women when compared to undergraduate enrollment proportions, regardless of whether or not the institution sponsors football. However, a significant difference was found between the institutions that sponsor football and those that do not. Those institutions that do not sponsor football (-11.2%) were closer to offering equitable participation opportunities than those that do (-14.6%), which comes as no surprise considering again the large roster sizes associated with football.

Closely related to participation equity is the variable of sport sponsorship. Institutions that sponsor football were found to offer women's sports in significantly greater

proportions (14.1%) when compared to participation rates than institutions that do not sponsor football (4.6%). A possible explanation for this difference is that institutions with football have a greater need to sponsor more women's teams in an attempt to equal out the imbalance in participation numbers caused by the large rosters in football.

The presence of football at an institution was not found to be significant in regards to any of the other gender equity variables however coaching salaries were slightly in greater proportionality at institutions without football. This difference would be expected since football and men's basketball coaches tend to command larger salaries than any of the women's teams' coaches. Coaching salaries may be a controversial variable to include since past court decisions have stated that Title IX does not protect a coach from discrimination based on the gender of the team coached. However, this researcher claims that coaching salaries are a legitimate component of Title IX in determining if equal opportunities and benefits are provided to both genders.

Recommendations for Further Research

Although overall, institutions with a female AD were not found to be more equitable in terms of gender equity, further research could explore if significant differences in gender equity exist at each institution from the time a female became the Director of Athletics to the present. This research could be conducted as a case study or could include data from all institutions that currently have a female AD. This research would more accurately determine if a female AD significantly improves the gender equity situation at her institution.

Further research could include a repetition of this research in five or ten years. Due to the small numbers of women currently in the position of Director of Athletics, the population of the female group remained relatively small at 89 out of over 1,000 NCAA

member institutions. This research required that the female AD had been in that position for three or more years and therefore further limited the applicable population and corresponding sample size. The small sample size was more evident in research involving Division I institutions. In five or ten years, the population of female Athletic Directors may have grown to a greater percentage of all institutions.

Another area that can be explored more extensively is the perception of the Athletic Director in terms of his or her role in gender equity. This research would best be conducted via a survey or questionnaire of current Athletic Directors and could include only female Athletic Directors or both male and female. It would be interesting to determine if male and female Athletic Directors had different perspectives on their role in achieving gender equity and if they believed a female AD should have more of an obligation to work towards gender equity at her institution.

Thirty years after the passage of Title IX, gender equity is still difficult to quantify and difficult to realize as evidenced by this research. Further research could include a case study of various institutions that have been successful in achieving gender equity. The research could examine the different attributes of the institution to determine if there are any common variables among these institutions. The purpose of this research would be, if at all possible, to lay out a roadmap to gender equity that other institutions could attempt to emulate.

Appendix A:
Units of Analysis

Table A1

Institutions Included in the Female Group

Institution	Division	Football
Arcadia University	III	No
Bard College	III	No
Bates College	III	Yes
Belmont Abbey College	II	No
Bloomfield College	II	No
Bloomsburg University of Pennsylvania	II	Yes
Buena Vista University	III	Yes
California State University, East Bay	III	No
California State University, Los Angeles	II	No
California State University, San Bernardino	II	No
Carroll College (Wisconsin)	III	Yes
Castleton State College	III	No
Centenary College (New Jersey)	III	No
Central State University (OH)	II	Yes
Clark Atlanta University	II	Yes
Clark University (Massachusetts)	III	No
Colby-Sawyer College	III	No
College of Saint Rose	II	No

Institution	Division	Football
Concordia University at Austin	III	No
Dartmouth College	I-AA	Yes
Dominican University (Illinois)	III	No
Drew University	III	No
Eastern Connecticut State University	III	No
Eastern Nazarene College	III	No
Elizabethtown College	III	No
Elmira College	III	No
Florida Southern College	II	No
Grinnell College	III	Yes
Hanover College	III	Yes
Holy Family University	II	No
Howard University	I-AA	Yes
Hunter College	III	No
Indiana State University	I-AA	Yes
John Jay College of Criminal Justice	III	No
Johnson State College	III	No
Lake Forest College	III	Yes
Lakeland College	III	Yes
Lasell College	III	No
Lebanon Valley College	III	Yes
Lock Haven University of Pennsylvania	II	Yes

Institution	Division	Football
Marietta College	III	Yes
Marywood University	III	No
Massachusetts Institute of Technology	III	Yes
Metropolitan State College of Denver	II	No
Missouri Southern State University-Joplin	II	Yes
Monmouth University	I-AA	Yes
Montclair State University	III	Yes
Mount Ida College	III	Yes
Nichols College	III	Yes
North Greenville College	II	Yes
Northern Illinois University	I-A	Yes
Northern Kentucky University	II	No
Penn State Altoona	III	No
Polytechnic University (New York)	III	No
Principia College	III	No
Queens University of Charlotte	II	No
Regis University (Colorado)	II	No
Rivier College	III	No
Rockford College	III	Yes
Saint Michael's College	II	No
Santa Clara University	I-AAA	No
Shippensburg University of Pennsylvania	II	Yes

Institution	Division	Football
Southampton Campus of Long Island University	II	No
Southwestern University (Texas)	III	No
Springfield College	III	Yes
St. Lawrence University	III	Yes
State University College at Brockport	III	Yes
State University College at Geneseo	III	No
Stonehill College	II	Yes
Sul Ross State University	III	Yes
Tennessee State University	I-AA	Yes
U.S. Merchant Marine Academy	III	Yes
University of Hartford	I-AAA	No
University of Hawaii at Hilo	II	No
University of Maine, Farmington	III	No
University of Maryland, College Park	I-A	Yes
University of Missouri, St. Louis	II	No
University of New England	III	No
University of New Haven	II	No
University of North Carolina, Charlotte	I-AAA	No
University of North Carolina, Wilmington	I-AAA	No
University of Pittsburgh, Bradford	III	No
University of Texas at San Antonio	I-AAA	No
University of Tulsa	I-A	Yes

Institution	Division	Football
University of Washington	I-A	Yes
Western Michigan University	I-A	Yes
Western Washington University	II	Yes
Wilkes University	III	Yes
Worcester State College	III	Yes
York College (New York)	III	No

Table A2

Institutions Included in the Male Group

Institution	Division	Football
Albright College	III	Yes
Alvernia College	III	No
Austin Peay State University	I-AA	Yes
Barry University	II	No
C.W. Post Campus/Long Island University	II	Yes
Caldwell College	II	No
Carthage College	III	Yes
Clemson University	I-A	Yes
Colgate University	I-AA	Yes
College of Wooster	III	Yes
Curry College	III	Yes
D'Youville College	III	No
East Stroudsburg University of Pennsylvania	II	Yes
East Texas Baptist University	III	Yes
Edgewood College	III	No
Emory and Henry College	III	Yes
Emporia State University	II	Yes
Erskine College	II	No
Fontbonne University	III	No
Fort Hays State University	II	Yes

Institution	Division	Football
Francis Marion University	II	No
Frostburg State University	III	Yes
Goldey-Beacom College	II	No
Grand Valley State University	II	Yes
Green Mountain College	II	No
Greensboro College	III	Yes
Haverford College	III	No
Ithaca College	III	Yes
Kennesaw State University	II	No
Kentucky Wesleyan College	II	Yes
Keuka College	III	No
Knox College	III	Yes
Manchester College	III	Yes
Massachusetts College of Liberal Arts	III	No
McDaniel College	III	Yes
Mississippi College	III	Yes
Mount Aloysius College	III	No
Mount St. Mary College (New York)	III	No
North Carolina A&T State University	I-AA	Yes
Nyack College	II	No
Oakland University	I-AAA	No
Oberlin College	III	Yes

Institution	Division	Football
Occidental College	III	Yes
Oglethorpe University	III	No
Olivet College	III	Yes
Pacific Lutheran University	III	Yes
Piedmont College	III	No
Pomona-Pitzer Colleges	III	Yes
Providence College	I-AAA	No
Ramapo College	III	No
Rhodes College	III	Yes
Rider University	I-AAA	No
Roanoke College	III	No
Saint Joseph's College (Indiana)	II	Yes
Salem State College	III	No
Salisbury University	III	Yes
Salve Regina University	III	Yes
San Francisco State University	II	No
Sonoma State University	II	No
Southeastern Oklahoma State University	II	Yes
Southern Arkansas University	II	Yes
Southern New Hampshire University	II	No
St. Mary's College of Maryland	III	No
St. Norbert College	III	Yes

Institution	Division	Football
State University College at New Paltz	III	No
Texas A&M University-Commerce	II	Yes
Texas Lutheran University	III	Yes
Troy University	I-A	Yes
Truman State University	II	Yes
Union College (New York)	III	Yes
University of Dayton	I-AA	Yes
University of Iowa	I-A	Yes
University of La Verne	III	Yes
University of Nevada, Las Vegas	I-A	Yes
University of North Dakota	II	Yes
University of Northern Iowa	I-AA	Yes
University of South Alabama	I-AAA	No
University of South Carolina Upstate	II	No
University of the South	III	Yes
University of Toledo	I-A	Yes
University of Wisconsin, Whitewater	III	Yes
Virginia Commonwealth University	I-AAA	No
Webster University	III	No
Wesleyan University	III	Yes
Western Oregon University	II	Yes
Wheaton College (Illinois)	III	Yes

Institution	Division	Football
Whittier College	III	Yes
Whitworth College	III	Yes
Wilmington College (Ohio)	III	Yes
Wisconsin Lutheran College	III	Yes

Appendix B:

Data

Table B1

DBP Gender Equity, DBP Participation, DBP Scholarship, and DBP Operating

Institution	DBP Gender Equity	DBP Participation	DBP Scholarship	DBP Operating
Arcadia University	-4.5%	-15.7%	N/A	-0.3%
Bard College	-2.3%	-13.75%	N/A	0.0%
Bates College	3.5%	-6.46%	N/A	6.8%
Belmont Abbey College	4.5%	-12.7%	10.0%	7.2%
Bloomfield College	0.3%	-22.8%	15.8%	3.9%
Bloomsburg University of PA	-1.4%	-20.0%	8.6%	3.7%
Buena Vista University	-4.0%	-27.18%	N/A	-0.6%
California State - East Bay (Hayward)	3.1%	-5.40%	N/A	3.3%
California State - LA	1.9%	-2.0%	7.1%	-0.5%
California State - San Bernardino	-1.9%	-7.2%	1.6%	-1.7%
Carroll College (Wisconsin)	-8.8%	-23.70%	N/A	-5.6%
Castleton State College	0.7%	-12.56%	N/A	-0.8%
Centenary College (New Jersey)	11.4%	-26.81%	N/A	16.4%
Central State University (OH)	-0.4%	-0.2%	-0.6%	-0.8%
Clark Atlanta University	-7.2%	-26.7%	3.3%	-8.8%
Clark University (Massachusetts)	-3.5%	-7.59%	N/A	3.9%
Colby-Sawyer College	-6.6%	-4.43%	N/A	-8.0%
College of Saint Rose	1.2%	-29.9%	6.5%	4.4%
Concordia University at Austin	8.9%	-20.37%	N/A	10.8%
Dartmouth College	-5.6%	-0.3%	N/A	-8.0%
Dominican University (Illinois)	-3.5%	-21.54%	N/A	8.7%
Drew University	0.4%	-7.82%	N/A	2.3%

Institution	DBP Gender Equity	DBP Participation	DBP Scholarship	DBP Operating
Eastern Connecticut State	3.4%	-2.41%	N/A	0.4%
Eastern Nazarene College	-1.7%	-10.39%	N/A	-1.1%
Elizabethtown College	-3.6%	-17.12%	N/A	-3.2%
Elmira College	-2.1%	-14.70%	N/A	2.4%
Florida Southern College	0.3%	-10.7%	1.5%	0.1%
Grinnell College	-0.7%	-10.78%	N/A	-2.9%
Hanover College	-3.3%	-20.84%	N/A	-1.9%
Holy Family University	-2.4%	-19.7%	3.9%	-5.5%
Howard University	-0.3%	-23.1%	2.5%	0.4%
Hunter College	-13.5%	-16.14%	N/A	-3.0%
Indiana State University	-2.0%	-6.3%	-1.7%	-3.7%
John Jay College of Criminal Justice	4.1%	-13.73%	N/A	5.0%
Johnson State College	-2.0%	-6.08%	N/A	11.3%
Lake Forest College	3.3%	-15.32%	N/A	4.3%
Lakeland College	6.0%	-25.96%	N/A	6.6%
Lasell College	-0.4%	-15.29%	N/A	4.9%
Lebanon Valley College	-8.3%	-13.57%	N/A	-9.2%
Lock Haven University of PA	5.9%	-16.1%	11.8%	6.8%
Marietta College	1.7%	-12.24%	N/A	1.2%
Marywood University	-4.9%	-9.89%	N/A	-2.1%
MIT	-7.2%	-3.15%	N/A	-0.6%
Metropolitan State College of Denver	6.6%	-13.4%	9.5%	7.4%
Missouri Southern State -Joplin	-2.1%	-24.0%	2.7%	2.8%
Monmouth University	1.7%	-14.6%	7.4%	1.8%
Montclair State University	-4.0%	-24.42%	N/A	1.8%
Mount Ida College	2.5%	-26.75%	N/A	11.0%

Institution	DBP Gender Equity	DBP Participation	DBP Scholarship	DBP Operating
Nichols College	9.5%	-7.25%	N/A	8.7%
North Greenville College	-2.2%	-16.9%	-5.4%	-5.1%
Northern Illinois University	8.4%	-9.4%	13.1%	3.0%
Northern Kentucky University	1.6%	-15.0%	7.8%	6.6%
Penn State Altoona	1.7%	-8.42%	N/A	-0.4%
Polytechnic University (New York)	22.6%	23.00%	N/A	5.5%
Queens University of Charlotte	-1.2%	-20.8%	2.2%	1.0%
Regis University (Colorado)	3.7%	-13.0%	4.5%	3.7%
Rivier College	-5.2%	-34.57%	N/A	-1.0%
Rockford College	4.3%	-27.90%	N/A	3.1%
Saint Michael's College	-3.9%	0.7%	-4.3%	-4.2%
Santa Clara University	0.9%	-7.3%	4.8%	1.9%
Shippensburg University of PA	1.9%	-8.8%	9.6%	2.4%
Southampton - Long Island University	-2.5%	-22.2%	3.3%	0.9%
Southwestern University (Texas)	1.8%	-13.69%	N/A	3.9%
Springfield College	-4.7%	-18.94%	N/A	-1.5%
St. Lawrence University	4.8%	-5.55%	N/A	6.5%
State University College at Brockport	-6.4%	-14.28%	N/A	-10.7%
State University College at Geneseo	-0.6%	-11.09%	N/A	1.8%
Stonehill College	-6.4%	-7.8%	-4.3%	-6.1%
Sul Ross State University	4.9%	-20.99%	N/A	6.1%
Tennessee State University	-4.2%	-25.5%	-6.5%	-8.5%
U.S. Merchant Marine Academy	9.0%	8.79%	N/A	8.9%
University of Hartford	2.9%	-3.7%	5.7%	4.4%
University of Hawaii at Hilo	1.9%	-20.9%	7.6%	3.0%
University of Maine, Farmington	5.9%	-11.53%	N/A	7.9%

Institution	DBP Gender Equity	DBP Participation	DBP Scholarship	DBP Operating
University of Maryland, College Park	-2.6%	-2.2%	-1.5%	-13.9%
University of Missouri, St. Louis	6.0%	-12.9%	15.6%	2.2%
University of New England	-3.5%	-17.72%	N/A	1.2%
University of New Haven	4.1%	-6.7%	4.5%	2.8%
UNC - Charlotte	-0.8%	-3.7%	8.0%	-4.1%
UNC - Wilmington	0.7%	-2.4%	4.8%	-1.0%
University of Pittsburgh, Bradford	3.0%	-10.96%	N/A	1.5%
University of Texas at San Antonio	0.4%	-1.2%	6.0%	1.0%
University of Tulsa	-4.1%	-4.7%	-2.2%	-9.7%
University of Washington	-7.4%	-4.4%	-1.9%	-19.1%
Western Michigan University	-7.1%	-4.2%	-10.7%	-11.2%
Western Washington University	-9.7%	-3.8%	-13.6%	-17.1%
Wilkes University	5.3%	-16.04%	N/A	6.8%
Worcester State College	-1.5%	-19.18%	N/A	1.1%
York College (New York)	-12.0%	-23.16%	N/A	2.0%
Albright College	-6.9%	-15.81%	N/A	-10.6%
Alvernia College	2.3%	-12.76%	N/A	5.1%
Austin Peay State University	9.8%	-21.12%	22.2%	9.7%
Barry University	-1.3%	-10.61%	1.0%	-0.4%
C.W. Post - Long Island University	8.2%	-20.99%	15.1%	10.6%
Caldwell College	-0.6%	-16.41%	-4.4%	0.0%
Carthage College	-0.8%	-16.11%	N/A	1.2%
Clemson University	-11.0%	0.75%	-8.5%	-23.8%
Colgate University	-3.9%	-5.44%	-4.7%	-5.8%
College of Wooster	2.2%	-10.91%	N/A	4.4%
Curry College	6.6%	-23.31%	N/A	4.3%

Institution	DBP Gender Equity	DBP Participation	DBP Scholarship	DBP Operating
D'Youville College	-0.2%	-28.49%	N/A	4.3%
East Stroudsburg University of PA	-4.0%	-9.81%	-2.7%	-3.6%
East Texas Baptist University	4.7%	-21.79%	N/A	4.1%
Edgewood College	0.9%	-20.86%	N/A	4.3%
Emory and Henry College	3.1%	-27.10%	N/A	5.7%
Emporia State University	1.5%	-26.89%	-0.9%	4.2%
Erskine College	1.4%	-15.54%	-4.3%	5.8%
Fontbonne University	-12.9%	-23.28%	N/A	-2.0%
Fort Hays State University	0.5%	-20.03%	-0.2%	2.0%
Francis Marion University	5.6%	-17.49%	6.4%	6.9%
Frostburg State University	6.6%	-13.74%	N/A	7.5%
Goldey-Beacom College	11.3%	-4.21%	14.1%	12.4%
Grand Valley State University	-3.8%	-17.37%	-2.7%	0.0%
Green Mountain College	3.6%	1.29%	-11.2%	-11.0%
Greensboro College	6.8%	-19.39%	N/A	6.8%
Haverford College	0.0%	-6.40%	N/A	5.1%
Ithaca College	-3.5%	-8.14%	N/A	-2.3%
Kennesaw State University	5.5%	-11.66%	8.0%	5.6%
Kentucky Wesleyan College	1.1%	-21.54%	11.8%	3.0%
Keuka College	2.9%	-20.80%	N/A	8.7%
Knox College	0.3%	-14.84%	N/A	2.9%
Manchester College	1.0%	-17.13%	N/A	-3.4%
Massachusetts College of Liberal Arts	3.2%	-14.00%	N/A	1.5%
McDaniel College	-1.9%	-16.24%	N/A	-1.4%
Mississippi College	5.5%	-32.40%	N/A	8.9%
Mount Aloysius College	-0.2%	-24.29%	N/A	4.1%

Institution	DBP Gender Equity	DBP Participation	DBP Scholarship	DBP Operating
Mount St. Mary College (New York)	-10.6%	-18.65%	N/A	3.6%
North Carolina A&T State University	2.4%	-16.84%	9.8%	2.1%
Nyack College	-2.4%	-16.10%	-8.5%	-9.7%
Oakland University	-0.9%	-11.86%	7.2%	1.5%
Oberlin College	-3.1%	-11.02%	N/A	-1.0%
Occidental College	-3.9%	-20.11%	N/A	-11.8%
Oglethorpe University	-9.6%	-18.43%	N/A	0.1%
Olivet College	11.2%	-16.72%	N/A	12.7%
Pacific Lutheran University	1.0%	-22.82%	N/A	2.7%
Piedmont College	-1.4%	-17.74%	N/A	1.6%
Pomona-Pitzer Colleges	4.6%	-7.60%	N/A	4.7%
Providence College	-10.0%	-5.71%	6.0%	-21.2%
Ramapo College	-1.3%	-17.58%	N/A	-1.9%
Rhodes College	0.3%	-19.50%	N/A	0.1%
Rider University	1.2%	-13.36%	4.9%	3.3%
Roanoke College	-0.1%	-7.80%	N/A	1.4%
Saint Joseph's College (Indiana)	-0.9%	-19.04%	-4.6%	3.6%
Salem State College	-0.5%	-17.82%	N/A	-0.7%
Salisbury University	1.0%	-17.54%	N/A	-0.5%
Salve Regina University	-2.9%	-19.81%	N/A	2.2%
San Francisco State University	2.2%	0.82%	7.2%	-1.8%
Sonoma State University	-8.7%	-4.46%	-3.8%	-12.7%
Southeastern Oklahoma State	5.6%	-23.18%	3.1%	7.2%
Southern Arkansas University	3.7%	-23.84%	2.8%	3.7%
Southern New Hampshire University	7.2%	-16.13%	13.2%	7.9%
St. Mary's College of Maryland	-2.1%	-8.12%	N/A	-0.2%

Institution	DBP Gender Equity	DBP Participation	DBP Scholarship	DBP Operating
St. Norbert College	-5.3%	-22.26%	N/A	-7.9%
State University College at New Paltz	1.4%	-9.12%	N/A	0.1%
Texas A&M University-Commerce	4.6%	-29.42%	9.3%	6.0%
Texas Lutheran University	-1.7%	-15.84%	N/A	0.2%
Troy University	1.3%	-19.26%	5.7%	-2.2%
Truman State University	-2.8%	-18.93%	-1.3%	0.6%
Union College (New York)	3.9%	-6.08%	N/A	3.9%
University of Dayton	4.0%	1.99%	13.9%	-4.4%
University of Iowa	-6.9%	-7.09%	2.8%	-26.3%
University of La Verne	-7.1%	-26.64%	N/A	3.7%
University of Nevada, Las Vegas	-3.8%	-15.87%	0.4%	-8.9%
University of North Dakota	-2.7%	-0.89%	-1.8%	-16.7%
University of Northern Iowa	2.2%	-20.14%	5.2%	2.2%
University of South Alabama	-4.0%	-7.90%	7.0%	-4.3%
University of South Carolina Upstate	0.1%	-16.23%	5.4%	4.6%
University of the South	-3.1%	-8.51%	N/A	-0.8%
University of Toledo	14.1%	1.68%	16.2%	8.1%
University of Wisconsin, Whitewater	-1.0%	-8.55%	N/A	-10.6%
Virginia Commonwealth University	-3.5%	-11.02%	2.8%	-5.0%
Webster University	3.3%	-13.38%	N/A	9.6%
Wesleyan University	2.6%	-13.10%	N/A	6.9%
Western Oregon University	4.1%	-28.94%	8.4%	7.4%
Wheaton College (Illinois)	-4.3%	-10.32%	N/A	0.1%
Whittier College	1.0%	-16.01%	N/A	-5.1%
Whitworth College	-3.8%	-20.80%	N/A	-0.9%
Wilmington College (Ohio)	1.2%	-21.03%	N/A	0.7%

Table B2

DBP Recruiting, DBP Coaching Salaries, DBP Sport Sponsorship, and DBP Coaching

Institution	DBP Recruiting	DBP Coaching Salaries	DBP Sport Sponsorship	DBP Coaching
Arcadia University	-16.8%	2.2%	0.4%	3.0%
Bard College	-1.1%	1.2%	-0.2%	-0.2%
Bates College	-8.9%	6.9%	14.2%	8.7%
Belmont Abbey College	4.6%	5.5%	6.9%	9.8%
Bloomfield College	4.0%	-1.3%	7.4%	-5.1%
Bloomsburg University of PA	-19.0%	0.9%	10.5%	5.7%
Buena Vista University	-8.2%	-2.8%	12.3%	2.7%
California State - East Bay (Hayward)	9.2%	3.6%	4.1%	3.7%
California State – LA	12.0%	-3.2%	2.8%	-2.8%
California State - San Bernardino	-7.0%	-4.0%	5.0%	-0.3%
Carroll College (Wisconsin)	-3.9%	-24.9%	6.9%	-1.6%
Castleton State College	4.4%	4.4%	4.4%	4.4%
Centenary College (New Jersey)	31.9%	19.0%	14.5%	13.6%
Central State University (OH)	-3.5%	-3.1%	2.0%	3.6%
Clark Atlanta University	-13.4%	-12.8%	8.9%	-0.9%
Clark University (Massachusetts)	-22.2%	0.3%	1.8%	2.7%
Colby-Sawyer College	-3.9%	-9.3%	-3.3%	-10.8%
College of Saint Rose	18.5%	-3.1%	6.2%	6.2%
Concordia University at Austin	23.9%	12.2%	13.0%	14.2%
Dartmouth College	-13.7%	-12.1%	5.3%	-4.5%
Dominican University (Illinois)	-28.6%	3.5%	12.7%	4.0%
Drew University	-8.2%	0.8%	8.3%	6.8%
Eastern Connecticut State	8.4%	3.5%	9.4%	1.2%
Eastern Nazarene College	-6.7%	2.0%	3.9%	2.3%

Institution	DBP Recruiting	DBP Coaching Salaries	DBP Sport Sponsorship	DBP Coaching
Elizabethtown College	1.7%	-3.6%	0.8%	-0.1%
Elmira College	-8.8%	0.1%	3.4%	4.9%
Florida Southern College	-4.8%	7.7%	4.0%	4.2%
Grinnell College	4.0%	2.1%	5.1%	-1.7%
Hanover College	-17.0%	-2.5%	16.6%	6.0%
Holy Family University	N/A	6.4%	0.9%	-0.5%
Howard University	0.0%	-7.1%	14.6%	10.5%
Hunter College	-54.2%	-1.8%	-4.2%	-1.6%
Indiana State University	-10.1%	-4.1%	11.0%	0.6%
John Jay College of Criminal Justice	1.2%	13.0%	5.9%	13.5%
Johnson State College	-42.7%	7.3%	7.3%	11.1%
Lake Forest College	7.0%	6.7%	12.3%	4.6%
Lakeland College	14.3%	6.9%	20.9%	13.1%
Lasell College	2.5%	4.6%	2.8%	-1.7%
Lebanon Valley College	-27.0%	-4.9%	4.0%	0.9%
Lock Haven University of PA	7.4%	10.3%	16.7%	4.3%
Marietta College	-4.6%	6.5%	14.2%	5.3%
Marywood University	-14.3%	-2.6%	-1.5%	1.0%
MIT	-39.2%	-3.2%	0.2%	3.0%
Metropolitan State College of Denver	13.1%	8.7%	8.5%	12.7%
Missouri Southern State -Joplin	-13.0%	1.1%	15.6%	-0.1%
Monmouth University	3.7%	-4.1%	11.6%	6.1%
Montclair State University	-23.8%	2.6%	16.1%	3.8%
Mount Ida College	15.1%	2.6%	16.2%	-2.9%
Nichols College	15.0%	6.5%	19.5%	14.5%
North Greenville College	-9.2%	1.7%	14.4%	4.9%

Institution	DBP Recruiting	DBP Coaching Salaries	DBP Sport Sponsorship	DBP Coaching
Northern Illinois University	3.9%	7.1%	25.9%	14.9%
Northern Kentucky University	-5.1%	3.3%	8.8%	5.0%
Penn State Altoona	9.5%	-6.3%	9.5%	6.2%
Polytechnic University (New York)	62.2%	13.1%	17.0%	14.8%
Queens University of Charlotte	2.2%	0.6%	3.6%	2.5%
Regis University (Colorado)	9.8%	6.6%	4.8%	9.4%
Rivier College	-3.6%	1.2%	4.8%	2.2%
Rockford College	7.4%	13.9%	20.3%	9.1%
Saint Michael's College	-11.0%	-6.1%	-2.2%	-0.2%
Santa Clara University	-4.4%	0.5%	5.1%	5.8%
Shippensburg University of PA	-2.5%	-3.0%	13.5%	2.0%
Southampton - Long Island University	-5.3%	2.7%	-1.0%	4.6%
Southwestern University (Texas)	6.1%	3.3%	6.3%	4.8%
Springfield College	-23.3%	0.8%	8.5%	5.9%
St. Lawrence University	-1.0%	5.5%	15.1%	8.3%
State University College at Brockport	-15.5%	-12.1%	11.6%	2.8%
State University College at Geneseo	-9.2%	-0.9%	8.6%	7.1%
Stonehill College	-22.5%	-9.4%	6.2%	-1.2%
Sul Ross State University	6.1%	3.5%	22.0%	12.9%
Tennessee State University	-1.3%	-10.5%	17.4%	5.3%
U.S. Merchant Marine Academy	-1.1%	11.4%	16.6%	9.2%
University of Hartford	5.7%	1.4%	5.4%	1.5%
University of Hawaii at Hilo	N/A	6.9%	6.2%	8.4%
University of Maine, Farmington	14.9%	8.4%	5.9%	9.7%
University of Maryland, College Park	-9.5%	-8.5%	11.6%	5.6%
University of Missouri, St. Louis	10.8% DBP	7.5% DBP Coaching	10.3% DBP Sport	8.4% DBP

Institution	Recruiting	Salaries	Sponsorship	Coaching
University of New England	-4.3%	0.8%	-0.3%	-0.3%
University of New Haven	4.6%	1.4%	17.6%	4.7%
UNC – Charlotte	1.4%	-10.4%	0.8%	2.2%
UNC – Wilmington	-0.7%	-1.9%	5.4%	1.0%
University of Pittsburgh, Bradford	1.1%	4.7%	10.6%	11.1%
University of Texas at San Antonio	-10.7%	1.6%	0.0%	6.0%
University of Tulsa	-10.0%	-14.4%	11.9%	0.6%
University of Washington	-14.9%	-16.0%	5.3%	-1.0%
Western Michigan University	-17.9%	-10.3%	9.1%	-4.3%
Western Washington University	-22.1%	-16.3%	5.0%	0.0%
Wilkes University	8.0%	9.1%	16.4%	7.8%
Worcester State College	-0.9%	-4.4%	14.0%	0.6%
York College (New York)	-45.2%	-8.7%	1.5%	1.9%
Albright College	-13.2%	-13.1%	8.7%	2.5%
Alvernia College	3.7%	9.5%	3.1%	5.0%
Austin Peay State University	11.5%	8.4%	21.8%	16.4%
Barry University	0.7%	0.5%	-0.3%	-0.1%
C.W. Post - Long Island University	15.4%	5.4%	21.9%	10.2%
Caldwell College	3.0%	2.8%	7.7%	3.1%
Carthage College	2.8%	-8.4%	13.5%	2.3%
Clemson University	-24.1%	-19.1%	1.3%	-3.7%
Colgate University	-14.8%	-5.8%	7.6%	1.3%
College of Wooster	-0.8%	2.7%	9.9%	8.2%
Curry College	23.6%	4.7%	19.8%	10.7%
D'Youville College	4.7%	5.1%	5.2%	7.8%
East Stroudsburg University of PA	-16.7%	-3.5%	7.0%	1.3%
East Texas Baptist University	12.7%	4.6%	23.4%	5.5%

Institution	DBP Recruiting	DBP Coaching Salaries	DBP Sport Sponsorship	DBP Coaching
Edgewood College	6.8%	4.7%	7.1%	3.3%
Emory and Henry College	0.8%	7.6%	21.7%	10.2%
Emporia State University	-2.1%	5.8%	20.0%	10.2%
Erskine College	7.2%	5.2%	7.2%	4.3%
Fontbonne University	-53.9%	-0.8%	0.6%	1.7%
Fort Hays State University	-7.0%	6.1%	18.1%	4.2%
Francis Marion University	14.9%	8.1%	10.2%	10.2%
Frostburg State University	0.3%	11.8%	20.6%	13.4%
Goldey-Beacom College	18.4%	13.8%	12.1%	12.6%
Grand Valley State University	-15.6%	-3.3%	11.2%	1.0%
Green Mountain College	46.2%	-4.5%	-0.5%	5.0%
Greensboro College	17.5%	5.2%	20.9%	10.0%
Haverford College	-8.5%	-2.1%	6.7%	5.2%
Ithaca College	-16.3%	0.8%	4.8%	0.0%
Kennesaw State University	22.2%	5.7%	4.2%	4.2%
Kentucky Wesleyan College	-2.2%	-6.4%	20.5%	2.5%
Keuka College	8.0%	8.6%	7.0%	5.8%
Knox College	-8.1%	7.2%	10.3%	4.2%
Manchester College	12.2%	-2.7%	9.5%	7.5%
Massachusetts College – Liberal Arts	10.2%	4.3%	10.9%	6.4%
McDaniel College	-7.9%	-0.9%	11.1%	3.9%
Mississippi College	5.2%	9.9%	25.8%	15.8%
Mount Aloysius College	5.4%	9.9%	1.7%	1.7%
Mount St. Mary College (New York)	-49.2%	0.5%	5.4%	-5.2%
North Carolina A&T State University	-3.9%	-3.0%	24.4%	3.9%
Nyack College	-3.6%	7.8%	6.5%	6.5%

Institution	DBP Recruiting	DBP Coaching Salaries	DBP Sport Sponsorship	DBP Coaching
Oakland University	-8.4%	-4.3%	5.9%	3.6%
Oberlin College	-13.1%	-1.1%	6.1%	1.4%
Occidental College	11.4%	-12.9%	8.4%	1.4%
Oglethorpe University	-45.7%	1.9%	4.3%	0.1%
Olivet College	18.2%	13.6%	24.0%	15.4%
Pacific Lutheran University	4.6%	2.2%	11.8%	7.7%
Piedmont College	-1.5%	1.1%	6.1%	2.2%
Pomona-Pitzer Colleges	7.7%	6.5%	7.7%	8.8%
Providence College	-21.8%	-24.1%	-2.2%	-0.5%
Ramapo College	3.8%	-14.6%	12.1%	10.3%
Rhodes College	-2.7%	-3.3%	15.1%	12.1%
Rider University	-1.8%	3.0%	7.2%	4.9%
Roanoke College	0.0%	0.1%	2.6%	2.9%
Saint Joseph's College (Indiana)	0.9%	3.6%	8.0%	0.9%
Salem State College	0.2%	5.3%	3.6%	6.2%
Salisbury University	4.6%	-1.4%	13.4%	7.8%
Salve Regina University	-13.1%	5.3%	10.2%	-2.0%
San Francisco State University	16.2%	-1.1%	0.3%	-6.0%
Sonoma State University	-33.5%	-5.8%	-1.1%	0.5%
Southeastern Oklahoma State	-5.6%	14.6%	26.9%	15.8%
Southern Arkansas University	14.5%	2.1%	19.7%	6.7%
Southern New Hampshire University	22.4%	7.7%	7.9%	7.6%
St. Mary's College of Maryland	-4.1%	-2.3%	3.5%	-1.7%
St. Norbert College	-18.3%	-1.9%	13.9%	4.8%
State University College at New Paltz	17.8%	0.4%	1.2%	-2.2%
Texas A&M University-Commerce	10.7%	4.6%	23.4%	7.8%

Institution	DBP Recruiting	DBP Coaching Salaries	DBP Sport Sponsorship	DBP Coaching
Texas Lutheran University	-17.0%	0.0%	17.9%	4.6%
Troy University	-4.2%	-6.1%	22.6%	12.7%
Truman State University	-7.9%	2.4%	6.5%	-0.6%
Union College (New York)	1.5%	5.0%	13.2%	5.6%
University of Dayton	-1.0%	-2.7%	14.2%	6.3%
University of Iowa	-10.6%	-16.4%	9.7%	-0.1%
University of La Verne	-34.6%	0.6%	9.9%	4.2%
University of Nevada, Las Vegas	-5.7%	-13.1%	11.9%	4.9%
University of North Dakota	-10.2%	-9.7%	11.7%	8.5%
University of Northern Iowa	-8.9%	4.6%	21.0%	11.2%
University of South Alabama	-12.0%	-11.9%	2.8%	-1.7%
University of South Carolina Upstate	-12.8%	1.5%	9.1%	8.8%
University of the South	-25.5%	1.0%	10.5%	4.9%
University of Toledo	4.5%	8.2%	35.0%	24.8%
University of Wisconsin, Whitewater	-7.6%	3.7%	12.7%	4.2%
Virginia Commonwealth University	-5.3%	-11.6%	1.9%	3.6%
Webster University	7.5%	7.8%	4.6%	3.8%
Wesleyan University	-4.8%	9.7%	11.6%	5.2%
Western Oregon University	-2.7%	11.6%	23.4%	9.7%
Wheaton College (Illinois)	-29.3%	1.8%	11.7%	0.6%
Whittier College	5.2%	9.2%	7.7%	5.3%
Whitworth College	-15.7%	-3.1%	11.6%	6.1%
Wilmington College (Ohio)	6.5%	-0.8%	13.8%	8.3%

Table B3

Percentage of Female Coaches

Institution	% Female Coaches
Arcadia University	38.2%
Bard College	22.7%
Bates College	15.0%
Belmont Abbey College	23.5%
Bloomfield College	8.3%
Bloomsburg University of PA	35.7%
Buena Vista University	20.0%
California State - East Bay (Hayward)	27.8%
California State - LA	27.3%
California State - San Bernardino	20.8%
Carroll College (Wisconsin)	22.0%
Castleton State College	18.2%
Centenary College (New Jersey)	32.3%
Central State University (OH)	28.6%
Clark Atlanta University	29.2%
Clark University (Massachusetts)	46.2%
Colby-Sawyer College	26.8%
College of Saint Rose	30.6%
Concordia University at Austin	33.3%
Dartmouth College	30.9%
Dominican University (Illinois)	20.8%
Drew University	48.6%
Eastern Connecticut State	40.0%
Eastern Nazarene College	17.6%
Elizabethtown College	18.9%

Institution	% Female Coaches
Elmira College	38.5%
Florida Southern College	32.1%
Grinnell College	31.8%
Hanover College	13.2%
Holy Family University	20.8%
Howard University	28.6%
Hunter College	33.3%
Indiana State University	27.9%
John Jay College of Criminal Justice	12.1%
Johnson State College	30.8%
Lake Forest College	43.5%
Lakeland College	19.4%
Lasell College	38.5%
Lebanon Valley College	34.0%
Lock Haven University of PA	27.7%
Marietta College	20.5%
Marywood University	30.4%
MIT	26.1%
Metropolitan State College of Denver	20.8%
Missouri Southern State -Joplin	21.1%
Monmouth University	34.8%
Montclair State University	33.3%
Mount Ida College	29.0%
Nichols College	24.1%
North Greenville College	6.7%
Northern Illinois University	26.9%
Northern Kentucky University	16.7%

Institution	% Female Coaches
Penn State Altoona	33.3%
Polytechnic University (New York)	4.0%
Queens University of Charlotte	32.0%
Regis University (Colorado)	40.9%
Rivier College	31.6%
Rockford College	14.3%
Saint Michael's College	31.6%
Santa Clara University	33.9%
Shippensburg University of PA	19.0%
Southampton - Long Island University	18.2%
Southwestern University (Texas)	34.3%
Springfield College	31.5%
St. Lawrence University	35.9%
State University College at Brockport	22.8%
State University College at Geneseo	39.0%
Stonehill College	34.9%
Sul Ross State University	22.7%
Tennessee State University	33.3%
U.S. Merchant Marine Academy	15.4%
University of Hartford	48.7%
University of Hawaii at Hilo	13.3%
University of Maine, Farmington	33.3%
University of Maryland, College Park	30.6%
University of Missouri, St. Louis	26.3%
University of New England	37.5%
University of New Haven	28.6%
UNC - Charlotte	29.7%

Institution	% Female Coaches
UNC - Wilmington	27.7%
University of Pittsburgh, Bradford	30.0%
University of Texas at San Antonio	40.0%
University of Tulsa	31.3%
University of Washington	30.4%
Western Michigan University	24.5%
Western Washington University	30.0%
Wilkes University	19.5%
Worcester State College	11.8%
York College (New York)	26.5%
Albright College	28.1%
Alvernia College	26.3%
Austin Peay State University	37.9%
Barry University	7.3%
C.W. Post - Long Island University	24.1%
Caldwell College	22.7%
Carthage College	16.7%
Clemson University	29.2%
Colgate University	34.9%
College of Wooster	31.0%
Curry College	25.9%
D'Youville College	36.8%
East Stroudsburg University of PA	34.5%
East Texas Baptist University	17.9%
Edgewood College	24.2%
Emory and Henry College	30.8%
Emporia State University	21.1%

Institution	% Female Coaches
Erskine College	29.4%
Fontbonne University	5.6%
Fort Hays State University	8.3%
Francis Marion University	16.7%
Frostburg State University	31.4%
Goldey-Beacom College	28.0%
Grand Valley State University	27.5%
Green Mountain College	44.4%
Greensboro College	17.4%
Haverford College	31.7%
Ithaca College	35.2%
Kennesaw State University	15.2%
Kentucky Wesleyan College	16.0%
Keuka College	6.7%
Knox College	25.0%
Manchester College	11.3%
Massachusetts College of Liberal Arts	15.0%
McDaniel College	20.0%
Mississippi College	15.0%
Mount Aloysius College	22.2%
Mount St. Mary College (New York)	16.0%
North Carolina A&T State University	13.5%
Nyack College	16.7%
Oakland University	33.3%
Oberlin College	24.5%
Occidental College	15.4%
Oglethorpe University	25.0%

Institution	% Female Coaches
Olivet College	19.5%
Pacific Lutheran University	29.7%
Piedmont College	16.7%
Pomona-Pitzer Colleges	34.7%
Providence College	31.9%
Ramapo College	19.1%
Rhodes College	17.5%
Rider University	22.7%
Roanoke College	29.4%
Saint Joseph's College (Indiana)	6.3%
Salem State College	18.4%
Salisbury University	28.9%
Salve Regina University	28.3%
San Francisco State University	32.8%
Sonoma State University	30.0%
Southeastern Oklahoma State	22.2%
Southern Arkansas University	22.2%
Southern New Hampshire University	26.8%
St. Mary's College of Maryland	29.6%
St. Norbert College	20.5%
State University College at New Paltz	31.6%
Texas A&M University-Commerce	13.3%
Texas Lutheran University	24.3%
Troy University	29.3%
Truman State University	20.0%
Union College (New York)	16.4%
University of Dayton	22.8%

Institution	% Female Coaches
University of Iowa	28.8%
University of La Verne	32.7%
University of Nevada, Las Vegas	26.8%
University of North Dakota	23.2%
University of Northern Iowa	20.0%
University of South Alabama	7.1%
University of South Carolina Upstate	29.2%
University of the South	28.6%
University of Toledo	27.3%
University of Wisconsin, Whitewater	27.0%
Virginia Commonwealth University	34.5%
Webster University	37.5%
Wesleyan University	26.9%
Western Oregon University	20.9%
Wheaton College (Illinois)	16.7%
Whittier College	14.3%
Whitworth College	17.5%
Wilmington College (Ohio)	15.1%

REFERENCES

- Acosta, R. Vivian and Carpenter, Linda J. (2004). "Women in Intercollegiate Sport: A Longitudinal Study – Twenty Seven Year Update, 1977-2004." Unpublished manuscript, Brooklyn College.
- Acosta, R. Vivian and Carpenter, Linda J. (2006). "Women in Intercollegiate Sport: A Longitudinal Study – Twenty Nine Year Update, 1977-2006." Unpublished manuscript, Brooklyn College.
- Bentley, Eric. (2004, April). Title IX: The Technical Knockout for Men's Non-Revenue Sports. *Journal of Law and Education*. Retrieved October 20, 2005, from LookSmart database.
- Brown, Gary, T. "Executive Committee urges against Title IX compliance option." *NCAA News Online* (9 May 2005). Retrieved 28 September 2005 from http://www2.ncaa.org/media_and_events/association_news/ncaa_news_online/2005/05_09_05/association_wide/4210n08.html
- Fuchs, V. J. (2003). *A comparison of the career paths of NCAA female directors of athletics at Division I, II and III Institutions and Senior Women Administrators*. Unpublished master's thesis, University of North Carolina at Chapel Hill, Chapel Hill, NC, Dept Exercise and Sport Science.
- Fulks, Daniel, L, Ph.D., CPA. (2005, February). "2002-03 NCAA Revenues and Expenses of Division I and II Intercollegiate Athletics Programs Report." Indianapolis, IN: NCAA.
- Gender Equity in Sports (2004, October). *About Title IX*. Retrieved September 26, 2005 from <http://bailiwick.lib.uiowa.edu/ge/aboutRE.html>.
- Haglund, Rich. (2005, July). Staring Down the Elephant: College Football and Title IX Compliance. *Journal of Law and Education*. Retrieved October 20, 2005, from LookSmart database.
- Hasbrook, C.A., Hart, B.A., Mathes, S.A., & True, S. (1990). Sex bias and the validity of believed differences between male and female interscholastic athletic coaches. *Research Quarterly for Exercise and Sport*, 63(3), 259-267.
- Lopiano, Donna, Ph.D. (2001, May 10). *The Real Culprit in the Cutting of Men's Olympic Sports*. Retrieved October 20, 2005, from Women's Sport Foundation Website: <http://www.womenssportsfoundation.org/cgi-bin/iowa/issues/opin/article.html?record=776>
- Lovett, Dorothy J. and Lowry, Carla D. (1994). "Good Old Boys" and "Good Old Girls" Clubs: Myth or Reality? *Journal of Sport Management*, 8, 27-35.

- Melchiorre, R. L. (2001). *A comparison of gender equity at universities with separate versus merged men's and women's athletic departments*. Unpublished master's thesis, University of North Carolina at Chapel Hill, Chapel Hill, NC, Dept Exercise and Sport Science.
- NCAA. (2004). 2002-03 NCAA Gender Equity Report. Indianapolis, IN: NCAA.
- NCAA. (n.d.). NCAA Division I, II and III Membership Criteria. Retrieved October 21, 2005 from http://www.ncaa.org/about/div_criteria.html
- Office of Civil Rights (OCR) (2005, March 17). *Additional Clarification of Intercollegiate Athletics Policy: Three-Part Test – Part Three*. Retrieved September 26, 2005 from <http://www.ed.gov/about/offices/list/ocr/docs/title9guidanceadditional.html>.
- Stangl, Jane M. and Kane, Mary Jo. (1991). Structural Variables That Offer Explanatory Power for the Underrepresentation of Women Coaches Since Title IX: The Case of Homologous Reproduction. *Sociology of Sport Journal*, 8, 47-60.
- U.S Department of Labor (DOL), Office of the Assistant Secretary for Administration and Management (September 2005). Retrieved September 26, 2005 from <http://www.dol.gov/oasam/regs/statutes/titleix.htm>
- Women's Sport Foundation. (n.d.). *Title IX Legislative Chronology*. Retrieved October 20, 2005, from <http://www.womenssportsfoundation.org/cgi-bin/iowa/issues/history/article.html?record=875>