

PERCEIVED GENDER BIAS AMONG HIGH SCHOOL AND COLLEGIATE
CERTIFIED ATHLETIC TRAINERS

A THESIS

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by
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INTRODUCTION

There are many factors that contribute to the creation of a positive work environment. Administrative, social, economic, time management, and other issues can affect workplace productivity.¹ Employers need to explore a wide variety of topics to help develop a comfortable and encouraging atmosphere that allows workers to be productive and successful.

One matter that may potentially be of concern is the relationship between colleagues. Personality conflicts and professional disagreements could create discord in the working environment. Arguably, among the more serious issues are relational problems surrounding gender, age, and ethnicity. Despite efforts on administrators' parts and contemporary progressive attitudes, research shows that there is still gender bias in the workplace in various professions.²⁻⁷

Included among these, are numerous health care professions. In nursing, research has exposed gender bias against women in management positions and against male nursing students during their education.^{2,4} Inequities have also been detected in collegiate athletic departments regarding differences in budgeting of female sports and

promotion of female faculty.^{5,6} Additionally, research has revealed the presence of gender bias against female physicians in various stages of training, from patients, and from colleagues.⁷

Athletic Training is another vocation that has been analyzed. Certified Athletic Trainers (ATs) are responsible for the prevention, treatment, and rehabilitation of injuries in the athletic population. The profession of athletic training started out as predominantly male but many women have joined over the years. As of March 2011, 51.98% of NATA members are women.⁸ As this transition has occurred, it is important to consider how women have been received and how that reception has changed over time. Are female ATs treated the same as male ATs?

Of further interest, ATs most commonly work within sports administrations, which notoriously have gender discrimination issues.^{5,6,9} Research has shown that women attribute the bias they perceive to factors such as an "old boys' club" mentality and lack of female mentorship.⁶ Furthermore, it has been found that organizational members may deny and even rationalize inequities that they see.⁵ Does this kind of mentality filter down to the athletic training departments?

While there has been some exploration into gender bias in athletic training, the researcher has not found any current survey data on how ATs perceive gender issues today.¹⁰⁻¹⁴ The purpose of this thesis is to examine the perceived gender bias of high school and collegiate ATs. The following research questions will be asked: 1) Is there a difference in the perception of gender bias between male and female ATs in the following constructs?: (A) gender bias of self and (B) gender bias of others? 2) Is there a difference in the perception of gender bias between the high school and collegiate job settings in the following constructs?: (A) gender bias of self and (B) gender bias of others? Gender bias of self refers to the perception of a biased attitude toward oneself as an individual. Gender bias of others refers to the perception of a biased attitude toward a group of people in general.

METHODS

The primary purpose of this study was to examine the perception of gender bias among Certified Athletic Trainers in the high school and collegiate job settings. This section will include the following subsections: Research Design, Subjects, Instruments, Procedures, Hypotheses, and Data Analysis.

Research Design

This research will be descriptive in design. The dependent variables were perceived gender bias of self and perceived gender bias of others measured on a five-point Likert scale. The independent variables were gender and job setting. A strength of this study is the reliability of the instrument being used. A limitation is selecting subjects only from the high school and collegiate settings because ATs working in a variety of other settings.

Subjects

As of the end of 2009, the total population of high school and collegiate ATs who were members of the NATA was 10,782 (4,401 high school; 6,381 college).¹⁵ For a population of this size, a sample size of over 370 was required.¹⁶ The researcher elected to use the largest sample size permitted by the NATA (1,000) in order to maximize results. For reference, as of 2009, the NATA had 26,565 total certified members, of which 16.6% worked in the high school setting and 24.0% worked in the collegiate setting.¹⁵

The subjects of this study were 339 Certified Athletic Trainers who were randomly selected from the National Athletic Trainers' Association database. The researcher utilized the NATA survey listserve for survey distribution. The NATA District II secretary contacted the subjects by email, which included the researcher's cover letter explaining the study and a link to the survey on the Survey Monkey website. Informed consent of the subjects was implied by voluntarily completing the survey.

Instruments

The Gender Issues Survey (Appendix C1) by Sipe et al,¹⁷ which was based on a survey by Carr et al,¹⁸ was used to examine perceived gender bias of each subject. The section regarding gender bias of self has a Cronbach's coefficient alpha of .72. The section dealing with gender bias of others has a Cronbach's coefficient alpha of .87. A section on sexual harassment was not used in this study; this section had no bearing in the reported Cronbach's coefficient alpha scores. It contained a total of 24 items pertaining to gender bias, eight pertaining to gender bias of self and 16 referring to gender bias of others. These items are based on a five-point Likert scale and, therefore, can result in a score of 8 to 40 for bias of self and 16 to 80 for bias of others. There are also eight items pertaining to demographic information. Two of the demographic items included were from the original survey, while the other six items were added to address ATs specifically.

Procedures

The researcher obtained Institutional Review Board approval (Appendix C2) at California University of Pennsylvania before beginning any data collection. Approval to have the survey sent to a random group of certified NATA members was sought from the NATA by filling out a Contact List Request Form and submitting it to the District II secretary. Once approved, the NATA District II secretary emailed each AT a cover letter (Appendix C3) with a survey link explaining the purpose of the study. Follow-up emails were sent three days and ten days later. The link was left open for a total of two weeks before it was closed. This timeframe was selected because research has shown that a majority of responses occur within the first three days after initial contact.¹⁹ A final reminder was sent one week later, which coincides with the timeline in other studies.^{20,21} The total duration of the survey was selected due to time restrictions. The data was anonymous and, once the information was collected, it was downloaded from Survey Monkey to the Predictive Analysis Software Statistics (PASW) program for data analysis.

Hypotheses

The following hypotheses were based on a review of the literature and the researcher's intuition:

1. Female ATs will perceive more gender bias than male ATs in the following constructs: (A) gender bias of self and (B) gender bias of others.
2. There will be no difference in perception of gender bias between the high school and collegiate job settings for (A) gender bias of self and (B) gender bias of others.

Data Analysis

All data was analyzed by PASW version 17.0 for Windows at an alpha level of 0.05. The research hypotheses were analyzed using a MANOVA.

RESULTS

The primary purpose of this study was to examine the perception of gender bias among certified athletic trainers in the high school and collegiate job settings. The following section contains the data collected through the study and is divided into three subsections: Demographic Information, Hypotheses Testing, and Additional Findings.

Demographic Data

The sample consisted of Certified Athletic Trainers who are in good standing with the National Athletic Trainers' Association and indicated that they are employed in either the high school or collegiate settings. The sample consisted of 1,000 members. Responses totaled 353, 14 of which were not completed and therefore omitted from the data analysis. This produced a total of 339 subjects and a response rate of 33.9%. Research has shown that email surveys receive a 25-30% response rate on average.²² The sample included 169 females and 170 males (Table 1).

	Gender	Frequency	Percent
	Female	169	49.9
	Male	170	50.1

Employment as an AT ranged from 1 to 44 years (12.83 ± 9.109). The population consisted of 148 ATs in the high school setting and 191 ATs in the collegiate setting (Table 2).

Table 2. Frequency Table for Job Setting

	Job Setting	Frequency	Percent
	High School	148	43.7
	College	191	56.3

The range of years working as an AT in the high school setting was 1 to 36 years (12.66 ± 8.830). The range of years working as an AT in the collegiate setting was 1 to 44 years (12.97 ± 9.940).

The distribution of survey respondents' home district varied as evidenced in Table 3. Responses were highest from Districts Two, Three, Four, and Eight, which coincides with NATA membership statistics; these four districts contain the most members.²⁴

Table 3. Frequency Table for NATA Districts

	NATA District	Frequency	Percent
	1	28	8.3
	2	56	16.5
	3	43	12.7
	4	51	15.0
	5	26	7.7
	6	30	8.8
	7	20	5.9
	8	39	11.5
	9	33	9.7
	10	13	3.8

Table 4 reports the frequency of ATs who work alone and those who work with one or more other ATs.

Table 4. Frequency Table for Number of AT Coworkers

Number of AT Coworkers	Frequency	Percent
Works alone	103	30.4
One or more other ATs	236	69.6

Table 5 reports the frequency of the subjects' ethnicities. One subject chose to identify his or herself as "Other," indicating that he or she is "Asian American."

Table 5. Frequency Table for Ethnicity

Ethnicity	Frequency	Percent
White, not Hispanic	319	94.1
Black, not Hispanic	8	2.4
Asian or Pacific Islander	6	1.8
Native American or Alaskan Native	1	0.3
Hispanic/ Latino/ Latina	4	1.2
Other	1	0.3

Hypotheses Testing

All hypotheses were tested with a level of significance set at $\alpha \leq 0.05$.

Hypothesis 1: Female ATCs will perceive more gender bias than male ATCs in the following constructs: (A) gender bias of self and (B) gender bias of others.

Null Hypothesis: Gender will not have an effect on perception of gender bias of self or others.

A one-way MANOVA was calculated examining the effect of gender on perception of gender bias of self and others.

Conclusion: A significant effect was found ($\Lambda(2,336) = .620, p < .001$). Follow-up univariate ANOVAs indicated that gender affected perceived gender bias of self ($F(1,337) = 168.470, p < .001$). Gender also affected perceived gender bias of others ($F(1,337) = 16.860, p < .001$). Analysis revealed that female ATs perceived more gender bias of self (20.82 ± 5.652) than male ATs (13.71 ± 4.365). Female ATs also perceived more gender bias of others (35.44 ± 7.013) than male ATs (32.08 ± 8.047). See Table 6 and Figures 1 and 2.

Hypothesis 2: There will be no difference in perception of gender bias between the high school and collegiate job settings for (A) gender bias of self and (B) gender bias of others.

A one-way MANOVA was calculated examining the effect of job setting (high school or collegiate) on perception of gender bias.

Conclusion: No significant effect was found ($\Lambda(3, 335) = .996, p > .05$). The Athletic Trainers' perceptions of gender bias of self, women, or men were not significantly influenced by job setting.

Table 6. A MANOVA for the Effect of Gender on Perceived Gender Bias of Self and Others

Source	Dependent Variable	Type III Sum of Squares	df	MS	F	P
Gender	ST	4292.21	1	4292.214	168.47	0.000
	OT	960.957	1	960.957	16.86	0.000
Setting	ST	33.112	1	33.112	0.869	0.352
	OT	30.904	1	30.904	0.517	0.473

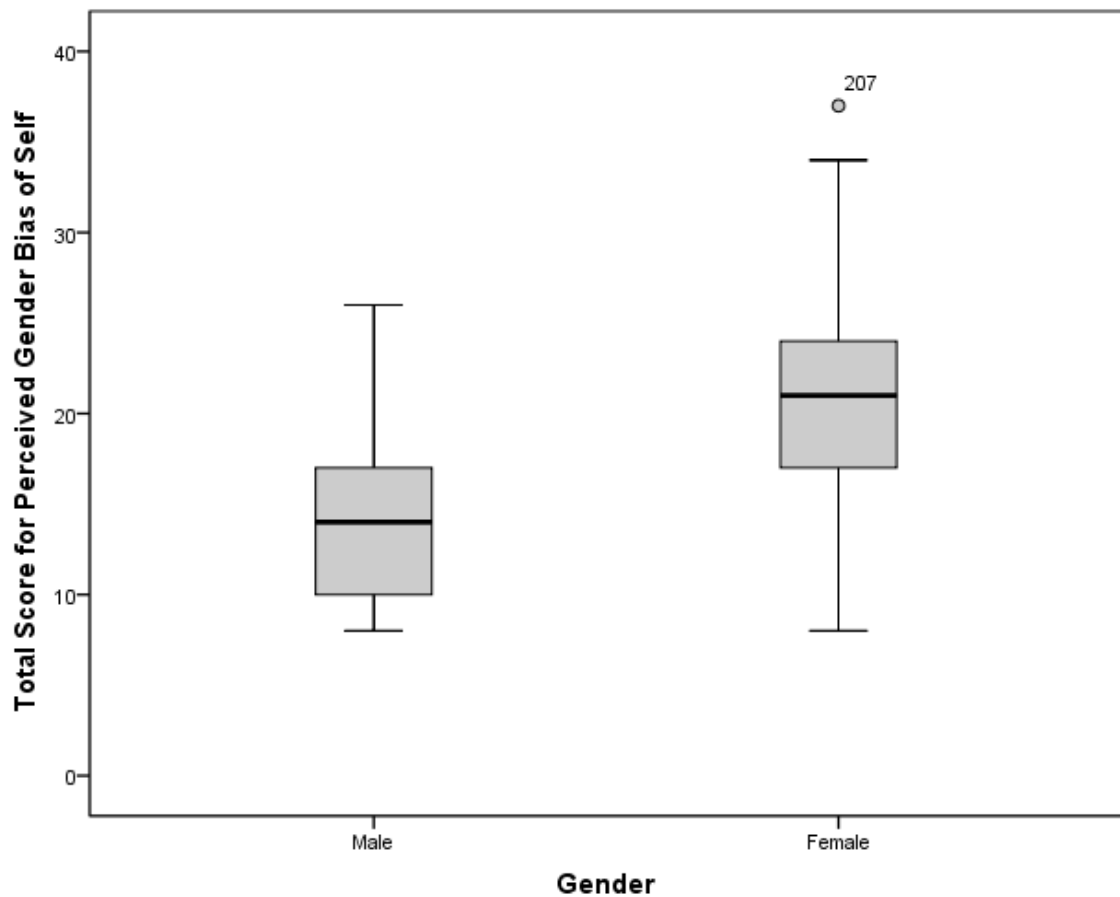


Figure 1. Perceived Gender Bias of Self Based on Gender

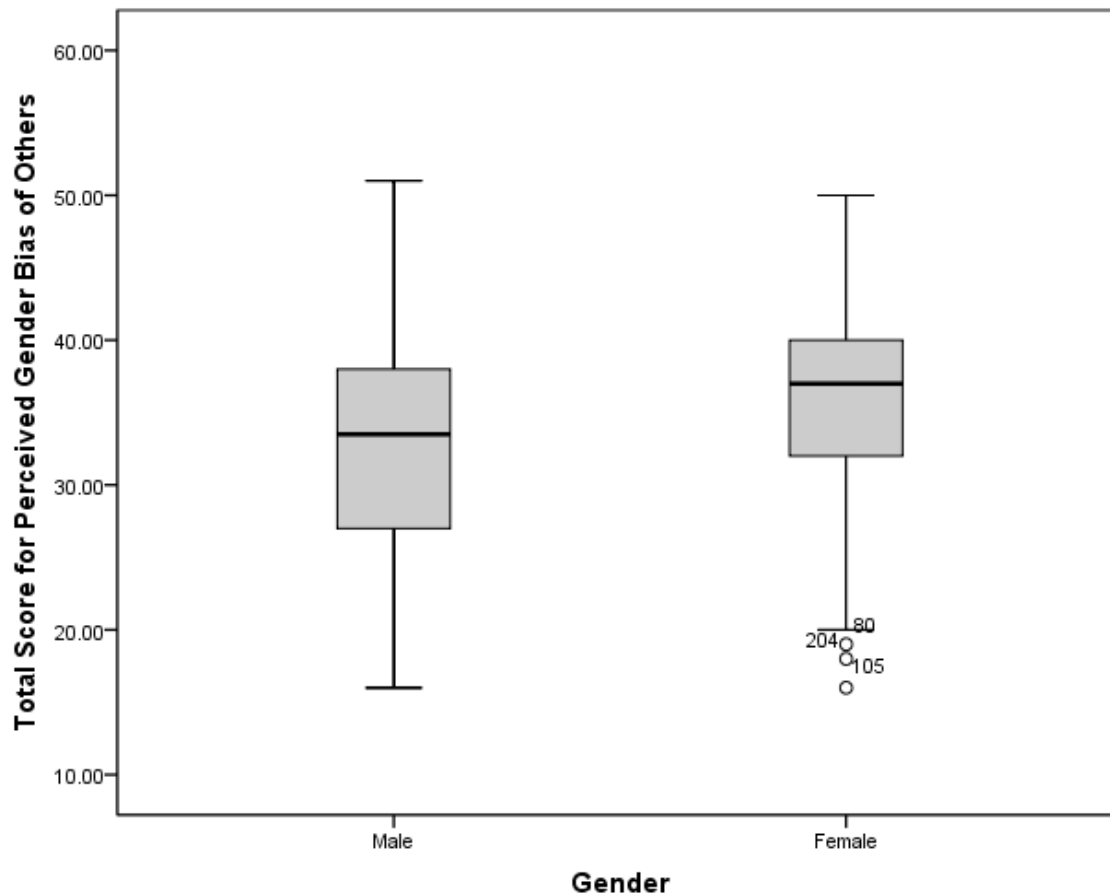


Figure 2. Perceived Gender Bias of Others Based on Gender

Additional Findings

A Pearson correlation coefficient was calculated for the relationship between years employed as a Certified Athletic Trainer, perceived gender bias of self, and perceived gender bias of others. A strong negative correlation was found ($r(337) = -.268, p < .001$) between years employed and perceived gender bias of self, indicating a significant linear relationship between the

two variables. This indicates that ATs with more years of experience tend to experience less gender bias. A strong positive correlation was found ($r(337) = .659, p < .001$) between perceived gender bias of self and perceived gender bias of others, indicating a significant linear relationship between the two variables. This indicates that ATs who perceive more gender bias of self also perceive more gender bias of others. See Table 7 and Figures 3 and 4.

Table 7. Pearson Correlation Between Years Experience (YE), Gender Bias of Self, and Gender Bias of Others						
			YE		Self	Others
YE						
	Pearson					
	Sig(2tail)					
	N					
Self						
	Pearson		-.268			
	Sig(2tail)		.000			
	N		339			
Others						
	Pearson				.659	
	Sig(2tail)				.000	
	N				339	

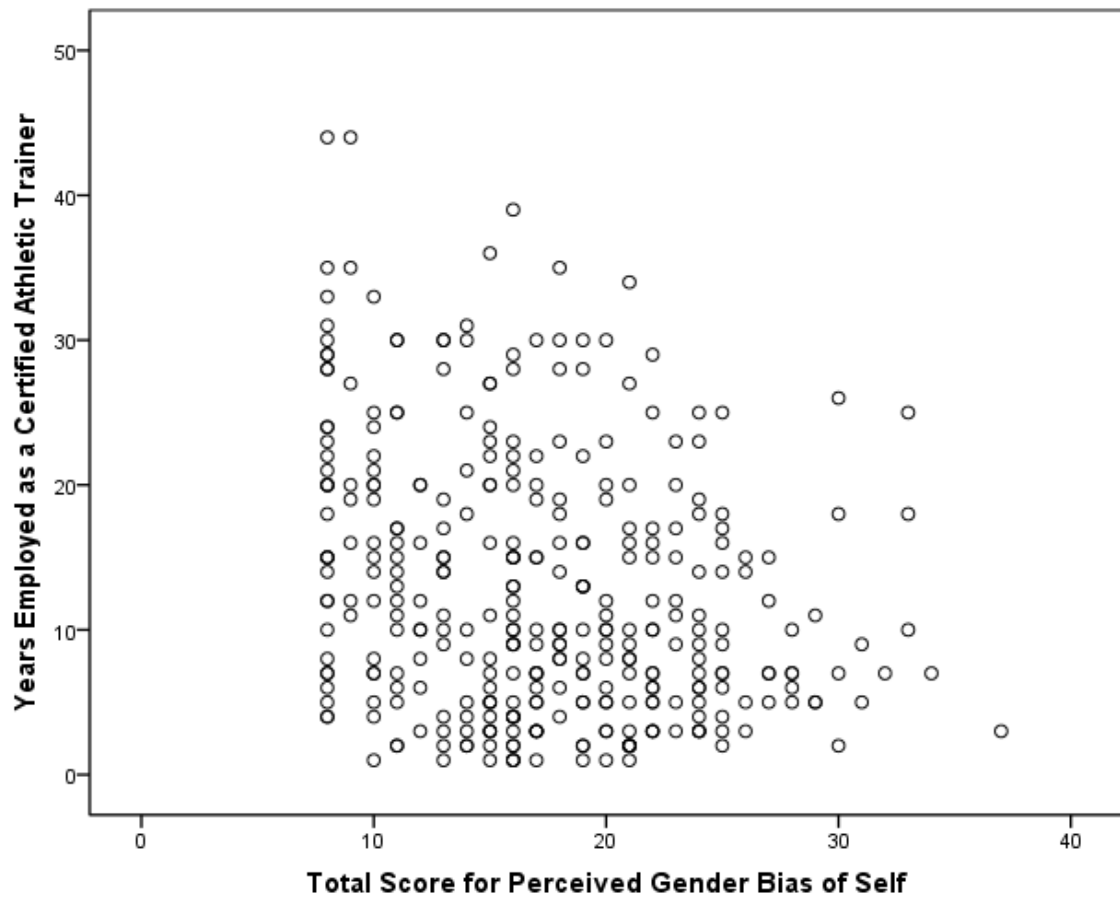


Figure 3. Scatterplot Comparing Years Employed with Perceived Gender Bias of Self



Figure 4. Scatterplot Comparing Perceived Gender Bias of Others with Perceived Gender Bias of Self

DISCUSSION

The following section will include: 1) Discussion of Results, 2) Conclusions, and 3) Recommendations.

Discussion of Results

This study focused on high school and collegiate Certified Athletic Trainers' perceptions of gender bias. Research has been done to examine others' perceptions of ATs,^{13,14} but there is no current research on the perceptions of the ATs themselves. It is important to investigate this issue because researchers have identified athletic training as a profession with "male-dominated attitudes,"¹¹ even though more than half of NATA members are women.¹⁵ Where exactly do women fit into the athletic training profession?

It is important to note that the results of the Gender Issues Survey (Appendix C1) are subjective; two ATs in the same situation may interpret circumstances differently. Gender bias may be more or less prevalent than subjects report. However, due to the strong reliability of the instrument, it can be assumed that accurate representations of each individual's perceptions were obtained.

This study found that female ATs perceive more gender bias of both self and others than male ATs. The researcher hypothesized this relationship based on the previous research. These results coincide with research by O'Connor et al¹⁴ that showed that athletes perceive female ATs differently than male ATs and that they demonstrate gender biased opinions. While these results cannot be generalized to the entire population of ATs, they may indicate that gender bias does exist specifically in the high school and collegiate settings. Additionally, there was no significant difference in the amount of perceived gender bias between the high school and collegiate settings. This was not a surprising finding as there is nothing in the current research to indicate that such a difference would be found. There is no current research comparing gender bias between job settings in athletic training.

Beyond the research hypotheses, additional correlations were identified. According to the data, as years of experience increase, perception of gender bias decreases. This may indicate that more experienced ATs are subjected to less gender bias than less experienced ATs. There is no current research on this topic in athletic training; however, Fischer²⁴ has found that egalitarian organizations and recently prosperous organizations are

more likely to reward seniority. Further research is needed to determine if this applies to athletic training workplaces. This data could also indicate that what ATs perceive as gender bias is in fact age discrimination toward the young. There is no current research exploring this issue in athletic training. In addition, as perceived gender bias of self increased, so did perceived gender bias of others. This may indicate that certain individuals are more perceptive or sensitive to gender bias.

The results of this study have some implications for the athletic training profession. Results justify the assertion that administrators should address gender bias through increased communication and social support, mentorship opportunities, and compliance with all discrimination laws. These recommendations are supported by Perez et al.¹¹ and Goodman et al.²⁵ Employers should create an open atmosphere that allows individuals to report violations and discuss any difficulties they encounter. In addition, gender bias from athletes must be addressed. Coaches should work together with ATs of the opposite sex to provide positive examples of gender equity. Administrators should consider promoting gender equity through meetings with athletes and implementing rules against discrimination into policies.

The results of this study also warrant further research into gender bias in athletic training. This study was limited to only two of the 16 settings recognized by the NATA. In addition, the sample was biased in ethnicity; A large majority of respondents (94.1%) selected "White, not Hispanic" as their ethnicity. Reviewing NATA statistics may give some insight into the degree this bias. It is important to note that the NATA does not differentiate certified and non-certified members in its ethnicity statistics; however, the NATA reports that as of March 2011 79.2% of all members select "White Not of Hispanic Origin" as their ethnicity.⁸ Therefore, while ethnicity bias was present in this research, it may not be as significant as it appears. Subsequent research should attempt to remedy these limitations.

Conclusions

The results of the study revealed the following major conclusions:

- 1) Female certified Athletic Trainers perceive more gender bias than male certified Athletic Trainers in both of the following constructs: (A) gender bias of self and (B) gender bias of others.

- 2) There is no difference in certified Athletic Trainers' perception of gender bias between the high school and collegiate job settings for (A) gender bias of self and (B) gender bias of others.
- 3) Certified Athletic Trainers with more years of work experience had a lower perception of gender bias.
- 4) Certified Athletic Trainers who perceived more gender bias of self also perceived more gender bias of others.

Recommendations

Based on the results of this study, the following research recommendations were made:

- 1) Future studies should develop a new reliable survey that is more specific to Athletic Trainers.
- 2) Future studies should include all possible job settings of Athletic Trainers, as listed on the NATA website.
- 3) Future studies should utilize a larger sample size to maximize results.
- 4) Future studies should obtain more subjects from minority ethnicities.

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APPENDICES

APPENDIX A

Review of Literature

REVIEW OF LITERATURE

Certified Athletic Trainers (ATs) are allied healthcare professionals that prevent, evaluate, treat, and rehabilitate both acute and chronic injuries in the athletic population.¹ At its inception, athletic training was a male-dominated field, but the representation of women has increased as the profession has developed. In fact, as of March 2011, 51.98% of NATA members are women.² While the face of athletic training may be changing, it is important to explore the effects of this change. This literature review will examine previous research on gender bias in healthcare and sport-related professions. This will be done in the following sections: Gender Bias in Healthcare Professions, Gender Bias in Sport-Related Professions, Gender Issues in Athletic Training, and Sexual Harassment. The review will conclude with a summary of the information.

Gender Bias in Healthcare Professions

Gender bias is an issue that has been explored in a variety of healthcare professions. Researchers have long been interested in whether equal treatment exists in the workforce. Some professions have earned a reputation as

masculine or feminine, which leaves one to wonder where the opposite gender fits in. Has equality been established or has gender bias been perpetuated?

Gender bias is dynamic; it can be affected by many things, including time. Shrier et al³ explored this idea by comparing the experiences of two generations of female physicians with regards to gender discrimination and harassment. The authors compared 136 dyads of mother and daughter pairs, who were surveyed regarding matters of gender bias and discrimination. It was shown that the second generation experienced higher rates of discrimination during medical school and dealt with more discrimination from patients than their mothers did. However, the first generation experienced higher rates of discrimination from their colleagues. Both mothers and daughters experienced similar rates of discrimination before medical school, in residency or fellowship, and in the work setting. Both generations also experienced similar levels of discrimination from teachers and supervisors. These results show that gender bias may be changing over time but it still endures in the workplace.

More gender bias research has been done in the medical field. Bucknall and Pynsent⁴ examined attitudes toward female orthopedic surgeons. The authors surveyed three

separate groups of subjects, including medical students, patients, and orthopedic surgeons respectively. Regarding students, results showed that significantly fewer female students would consider a career in orthopedic surgery. Only 24% showed interest in pursuing this career. The female students who rejected this specialty listed either lack of interest or male domination as their reasoning. Significantly more female students than male students encountered negative attitudes towards female surgeons. Fifteen percent of the subjects reported hearing senior professionals say that women should not be surgeons because they lacked the necessary skills and strength.

Additionally, Bucknall and Pynsent⁴ found that 89% of patients indicated that they had no gender preference for their orthopedic surgeon. Approximately 75% of patients did not believe that male orthopedic surgeons are more skilled than females, and 81% did not believe that females lacked the necessary strength to perform orthopedic surgeries. Ninety-four percent of the participating orthopedic surgeons indicated that they did not prefer male only surgical teams, and 75% believed that women have the necessary strength to operate. However, there were some subjects that revealed very biased opinions. Seven surgeons believed that women were incapable of operating, and three

believed that women should be pressured to leave the profession. While this represents a minority among subjects, these beliefs are very troubling. Also, while it is clear that many of the subjects hold positive opinions of female orthopedic surgeons, there are still many negative opinions out there. The authors hypothesize that, once lack of interest is accounted for, the negative opinions students do encounter affect the recruitment of women into the profession.

Blakemore et al⁵ have explored this recruiting issue within orthopedic surgery and have calculated some alarming statistics. The authors found that while the percentage of women in orthopedic surgery has increased, it has increased at a much slower rate than any other primary surgical specialty. Orthopedic residencies have the lowest percentage of females of any surgical specialty. The authors hypothesize that the failure to recruit more females is due to recruiter discrimination, perceived physical requirements, and perceived work-life balance issues. They go on to suggest that an active effort to recruit females should be made and that motherhood-friendly policies should be adopted.

As this phenomenon persists, it pervades multiple levels of authority. Pannowitz et al⁶ examined the

experiences of eight female nurses working in corporate or management positions in Western Australian public hospitals. The authors hoped to identify "experiences that empowered, disempowered, and/or oppressed" the nurses through interviews and observations. The authors detected three roles that the nurses fulfilled: values attributed to nursing, bureaucratic managerialism, and medical science. They found that the nurses' experiences under bureaucratic managerialism and medical science were generally biased. The research showed that the nurses weren't always aware of bias and that they used non-confrontational approaches to address conflict.

Gender bias is by no means exclusive to women, and we can see this by examining the male viewpoint in nursing. Anthony⁷ studied the impact gender bias has on the recruitment of males into nursing education. The author discussed the history of men in nursing and how their achievements have been overshadowed by the emerging stereotype of nursing as a woman's job. She asserts that nursing is rooted in the work of Florence Nightingale, which perpetuated a feminine bias; a stereotype began to emerge around nursing, making it appear as if the role of the nurse was to be caring, nurturing, and maternal in nature. This excluded males from the profession because

they were not seen as possessing these feminine virtues. However, Anthony asserts that in ancient civilizations men were the ones who assumed care giving roles, and male military nursing was common in the Middle Ages and American Civil War era. The author attributes today's gender bias against males to ignorance of males' historical contributions to the nursing profession. One can speculate that this feminine bias may discourage men from pursuing an education in the nursing field.

This research is backed-up by another study in a different region. Tzeng et al⁸ compared role strain between male and female obstetrics nursing students in Taiwan. A cross-sectional survey was administered to 95 female and 55 male students from two central Taiwan universities. The survey contained sections regarding demographics, personal attitudes, and role strain. Analysis showed that males experienced significantly higher role strain due to attitudes of clinical instructors, healthcare providers, and clients, as well as a lack of interest in nursing. The authors suggest that clinical instructors use should examine their own practice for gender bias and try to bridge the gap between male nursing students and other healthcare providers. This research further demonstrates gender stereotyping can affect the workplace negatively.

Gender Bias in Sport-Related Professions

Even since the inception of Title IX, athletics are typically thought of as masculine.⁹ Aggressive images often come to mind, such as two linemen clashing at the line of scrimmage or hockey players crashing into the Plexiglas. It is no surprise that gender bias has been studied in various careers in sports organizations to see how far this male-oriented attitude reaches.

Hoeber¹⁰ conducted research to analyze the explanations of sports organization members of the meaning and practice of gender equity. Data was collected from a Canadian university athletic department that claimed gender equity as an organizational value. Hoeber focused on the basketball, hockey, rugby, and swimming programs; these were selected because they met criteria regarding the following: availability to men and women, operational structure, history of coexistence, and institutional design. Analysis showed that the subjects had a thorough understanding of gender equity, yet it was revealed that subjects justified gender inequities. Justifications centered around two themes: denial and rationalization. This information suggests that there is a difference in the way we think about gender and the way we act. Even though

colleagues may be well-versed in the concepts of equality, their actions may not reflect this.

Failing to resolve the gender issues we see can have an effect on women in the workplace. Schneider et al¹¹ examined which factors of discrimination inhibit the advancement of women in National Collegiate Athletic Association (NCAA) athletic departments. Senior women administrators (n=406) were surveyed. Results showed that the major discrimination factors were the "old boys' club," wage discrimination, lack of female mentors, family commitments, and burnout. The authors propose that these are issues that can be remedied by administration. Instituting mentoring programs and support systems can help create equality. Refusing to address these issues will only perpetuate the stagnation of women's careers in NCAA athletic departments.

The issue of gender bias was further researched by Burton et al.¹² These researchers surveyed 158 female and 118 male administrators in NCAA Division I athletic departments. Each participant was provided with one of six scenarios in which a male or female candidate was recommended for a position with a large university. They were asked to evaluate the candidate's potential success and the likelihood that a male or female would be selected

to fill the role. They were also asked to rate the candidate based on stereotypical male and stereotypical female characteristics. A five-point Likert scale was used for each section. No significant difference was found in the ratings for success of male versus female candidates. However, female candidates were evaluated as significantly less likely to be considered for an athletic director position. These results may reveal something problematic; they may indicate that even though males and females are perceived to be equal in skill, females may still be less likely to be chosen for a typically masculine role.

This phenomenon does not appear to be localized, as evidenced by other research. Pfister¹³ conducted a gender bias study on Danish sports organizations. The population included current sports administrators. The current administrators were asked to complete a survey. It revealed that approximately 50% of subjects felt that men had more power in athletics; also, 41% felt that men and women had equal opportunities for employment, while 34% did not, and 24% were undecided on the issue. These opinions show that inequality still persists in administrative positions in various locations of the world.

Another region where gender issues in sports-related professions have been studied is Germany. Pfister and

Radtko¹⁴ surveyed both male and female administrators in German sports federations. The survey contained 103 items in the following categories: demographics, everyday life, profession, sports biography, and career as a leader in sports organizations. Of particular interest, both genders reported similar frequency of career barriers; however, women reported more gender-specific barriers. Approximately one-third of female respondents reported such obstacles. While perception is subjective, it is troublesome that women administrators detect gender bias even at the top ranks.

Leberman and Palmer¹⁵ studied women administrators in New Zealand, focusing specifically on motherhood. The subjects included nine women in leadership positions in national sports organizations. This included administrators, managers, and coaches. All of the subjects had children, ranging in ages from six weeks to 15 years. The researchers conducted interviews with each subject. The authors found that the women felt that motherhood had a positive impact on their work performance by helping them to become more tolerant and focused on the personal development of their athletes. However, they often felt guilt at the impact their work lives had on their ability to fulfill motherhood roles. The subjects also reported

experiencing social disapproval for taking on multiple roles in their lives, but they found support from their families. Even though the sample was quite small in this study, the findings provide an interesting insight on the issues women face when juggling personal and professional responsibilities.

Gender Issues in Athletic Training

Just as gender has been studied in a wide variety of occupations, researchers have investigated the role of gender in the athletic training profession. They have studied if and how gender affects the interactions between ATs and administrators, coaches, athletes, and colleagues. It is important to consider both daily exchanges and widespread policy issues. The advancement, perception, and equal treatment of women in the workplace are a few of the issues of concern for researchers.

Perez et al¹⁶ explored gender bias issues in athletic training using the muted group theory and attempted to offer strategies for dealing with these issues. Muted group theory focuses on the phenomenon of a dominant group silencing a minority group. The authors identify athletic training as a profession with "male-dominated attitudes"

that may cause women to be viewed as inferior. They propose that women are often forced to ignore demeaning remarks because these comments are accepted into the culture of athletics. The authors go on to suggest that networking, mentorship, and communication are the keys to overcoming gender bias. Employers should take responsibility by establishing programs such as childcare, parental leave, flexible scheduling, and workshops that address gender bias issues in the workplace. These types of programs may help female ATs feel more comfortable in their jobs and more resistant to gender bias.

This leads us to wonder why some female ATs remain in their jobs while others leave. Goodman et al¹⁷ examined the reasons that female ATs leave their jobs in the NCAA Division I Football Subdivision. This venue is often viewed as very desirable by Athletic Trainers, so it is important to consider what may be causing women to give up their jobs. The subjects included women currently employed at this setting (n=12) and women who had left their jobs (n=11). They were interviewed and the results were analyzed via the grounded theory method. Results showed that the following factors influenced decisions to stay: increased autonomy, increased social support, job enjoyment, and kinship responsibility. The following factors influenced

decisions to leave: life balance issues, role conflict and overload, and kinship responsibility. The authors assert that a social support system that includes coaches, colleagues, and administrators should be put in place to help with retention.

A large amount of research has focused on the life balance issue. Kahanov et al¹⁸ examined female ATs' perspectives on parenting. The researchers surveyed female ATs in the secondary school (n=167) and collegiate (n=106) settings. The subjects were asked to complete a survey that contained questions in the following categories: demographics, parents, nonparents who want no children, nonparents who want to have children, and general opinions on working mothers in the collegiate setting. Results showed that both parents and nonparents thought that the combination of working and parenting is challenging. Many of the subjects (45%) thought that this task was possible but that energy levels would probably be low if undertaken. Approximately 25% of subjects thought that family life may suffer due to professional obligations or that fulfilling professional responsibilities would be difficult due to family commitments. This information is important to consider because it may give a clue as to why females may suffer burnout in this profession.

As research by Giacobbi¹⁹ shows, women are suffering higher levels of burnout. The purpose of this study was to assess burnout and wellness of ATs and to compare results between the following groups: men and women, more post-certification experience versus less experience, and different occupational settings. Surveys were completed by randomly selected ATs who were employed full time in university, secondary school, youth, industrial, or clinical settings. Results showed that while 17.2% of subjects were in advanced stages of burnout, most subjects demonstrated low levels of burnout. It was also shown that women and ATs working in the university setting experienced more burnout. Particularly, women score significantly higher than men for emotional exhaustion, which the authors identify as the most powerful element of exhaustion. The authors recommend that more studies be done to examine why these differences in burnout levels are occurring.

Beyond retention and attrition issues, it is important to also consider daily occupational concerns. Wiese-Bjornstal²⁰ studied the differences between the genders and the effect of these differences on interactions in the athletic training room. The author notes that studies have shown that women's brains are neurologically wired to talk, while men's brains are wired to act. A stronger connection

between left and right hemispheres in females creates a better ability to articulate feelings. Wiese-Bjornstal suggests that ATs should attempt to employ listening and talking strategies that cater to the gender of the athlete they are interacting with. For example, the author notes that males are less likely to seek medical care than females. Therefore, the author suggests that ATs may need to coax males more to get them to seek medical care. The research implies that whether interacting with athletes, coaches, or colleagues, communication issues may exist between the genders. Being aware of differences in the genders does not need to lead to different treatment; in fact, being aware of these differences can lead to better communication and equality in care.

While ATs strive to deliver equal care, athletes' perceptions may play a large role in the overall quality of care received. Drummond et al²¹ examined athletes' comfort with care by same-sex and opposite-sex Athletic Trainers through cross-sectional survey design. Athletes (n=685) were asked to rate their comfort with scenarios that included sex-specific issues. The authors found that in general medical conditions, mid-body injuries, and gender-specific conditions, both male and female athletes felt more comfortable dealing with same-sex ATs. In

psychological conditions, upper body injuries, and lower body injuries, female athletes preferred same-sex ATs and male athletes showed no preference either way. The authors concluded that ATs of both sexes should be accessible whenever possible in order to create the most comfortable setting for athletes. This research shows that even if employers and coworkers make efforts to create gender equity in the workplace, gender bias may exist in other ways.

Furthering this research, O'Connor et al²² examined how athletes perceive female ATs in the athletic training room.¹¹ The researchers surveyed NCAA Division I football players (n=97) from two universities. Subjects were administered the male-oriented portion of the Gender Comfort With Athletic Trainer Questionnaire, originally authored by Drummond et al²¹ This questionnaire revealed statistically significant data that football players prefer male ATs for the care of general medical conditions and that they prefer male ATs for sex-specific conditions. There was no statistically significant evidence that football players were more comfortable with female ATs for the care of psychological conditions.

O'Connor et al²² also added an open-ended question asking the subject to describe the characteristics and

attributes of female ATs. Of the 97 subjects, 69 responses (71.1%) to the open-ended question were received. Content analysis was performed on the responses, coding them as evidence of gender-role stereotyping, the same or equal to male ATs, or other. Analysis showed that 58% (n=40) of the answers showed gender bias, 33.3% (n=23) found male and female ATs to be equal, and 8.7% (n=6) were classified as other. O'Connor et al. concluded that these results showed that the roles of woman and football Athletic Trainer were incongruent in the subjects' minds. They speculate that this is associated with the belief that women do not possess appropriate leadership qualities and that this is what leads to underrepresentation of women ATs in male sports.

This belief is unfounded, as evidenced in research by Laurent and Bradney.²³ They attempted to identify leadership behaviors of head Athletic Trainers and program directors in Commission on Accreditation of Allied Health Education Programs (CAAHEP) accredited institutions and to compare these behaviors to those of leaders in other fields. The subjects were 238 ATs in leadership positions, who completed the Leadership Practices Inventory. This instrument identifies five leadership practices: Model, Inspire, Challenge, Enable, and Encourage. Results showed

that female ATs reported using the Inspire, Challenge, Enable, and Encourage strategies more often than men. While it cannot be concluded that one style of leading is better than another, this data demonstrates that women AT leaders are diverse. The belief that female ATs lack leadership skills is unsubstantiated.

Summary

Gender bias is a phenomenon that has been studied in a wide range of professions. When present, this type of bias can affect the retention and advancement of professionals, typically women, which warrants the significant amount of research that has been done in this area. Gender bias has been detected against both genders, across generations, and at varying levels of authority. Researchers have examined which factors influence bias, who is perpetuating it, and how levels of gender bias have changed over time.

Researchers must continue to examine gender issues in athletic training. It is essential that women are able to achieve the same level of professional advancement as men, for example, by attaining employment in professional sports. Athletic training can no longer be the "old boys' club" it once was. Women have shown themselves to be a

valuable asset to the profession and should be able to reap the rewards of their hard work.

APPENDIX B

The Problem

THE PROBLEM

Statement of the Problem

The profession of athletic training has shifted from a male-dominated field to one that has nearly equal gender representation. Although athletic training has undergone a seemingly constant flow of changes since its inception, it is important to examine how professionals and their colleagues are adapting to these changes. While there are many female ATs in the field today, are attitudes toward women changing in the workplace accordingly? Are the experiences of female ATs comparable to those of male ATs? What does it mean to be a woman in athletic training?

These questions inspired the development of this research. The purpose of this study was to examine the perception of gender bias among collegiate and high school Certified Athletic Trainers. This study examined the perceptions of both male and female ATS in order to obtain an accurate comparison.

Definition of Terms

The following definitions of terms will be defined for this study:

- 1) Gender Bias - preferential treatment of one gender over another, either intentional or unintentional.²⁴
- 2) Gender Bias of Others - gender bias toward a group of people in general
- 3) Gender Bias of Self - gender bias toward oneself as an individual.
- 4) National Athletic Trainers' Association (NATA) - national professional organization for Certified Athletic Trainers and athletic training students.²⁵
- 5) Perception of Gender Bias - the degree to which gender bias is detected by an individual.²⁶

Basic Assumptions

The following are basic assumptions of this study:

- 1) All respondents are currently working as Certified Athletic Trainers at the collegiate or high school settings.
- 2) All respondents will answer the questionnaire honestly and to the best of their knowledge.
- 3) All respondents will be given adequate time to fill out the questionnaire.

Limitations of the Study

The following are possible limitations of the study:

- 1) The questionnaire was distributed only to high school and collegiate ATs.
- 2) A large enough sample for data analysis may not be collected due to low response rate.

Significance of the Study

The purpose of this study was to examine the perception of gender bias among high school and collegiate ATs. It is important to investigate this information because it will help gauge the current status of gender equality in the profession of athletic training. The results of this study should prompt the consideration of the role each person plays in the promotion of gender equality.

By considering the opinions of professionals in the workplace, administrators can address what must be done to either create equality or sustain it. They should consider the larger picture, including the roles of administration, coaches, athletes, and other ATs. Athletic Trainers should consider their interactions with colleagues of the opposite gender. They should also contemplate how their own actions affect the treatment they receive from others. Through this type of thinking and open communication about these issues, improvements in gender equality may be made.

APPENDIX C

Additional Methods

APPENDIX C1
Gender Issues Survey

Gender Issues Survey

Welcome!

Dear Fellow Certified Athletic Trainer:

My name is Amber Gach and I am currently a master's degree candidate at California University of Pennsylvania Graduate Athletic Training Education Program. In order to complete part of my degree requirements, I am requesting your participation in my research thesis. I am conducting survey research to examine high school and collegiate certified athletic trainers' perceptions of gender bias in the workplace. The results of this study (not including individual information) may be published in medical journals for the benefit of the medical community.

Certified athletic trainers in the high school and collegiate settings are being asked to participate in this research, entitled Perceived Gender Bias among High School and Collegiate Certified Athletic Trainers; however, your participation is voluntary and you have the right to choose not to participate or to discontinue participation at any time, causing your data to be discarded. The California University of Pennsylvania Institutional Review Board has reviewed and approved this project. The approval is effective 1/27/11 and expires 1/26/12.

The Gender Issues Survey consists of 32 questions, which will take about 5 to 10 minutes to complete. Minimal risk is posed by participating in this study as confidentiality will be maintained.

All survey responses are anonymous and upon submission, neither your name nor your email address will be attached to your answers. Informed consent to use the data collected will be assumed upon return of the survey. Aggregate survey responses will be housed in a password protected file on the CalU campus, which can only be accessed by the primary researcher. Upon completion of the study, all individual survey results will be deleted.

Thank you in advance for your participation. I greatly appreciate your time and effort.

Sincerely,

Amber Gach, ATC

Gender Issues Survey

Demographic Information

Select your gender:

- Male
- Female

What is your current employment setting?

- High School
- College/University

How many years have you been employed as a certified athletic trainer?

What is your ethnicity?

- White, not Hispanic
- Black, not Hispanic
- Asian or Pacific Islander
- Native American or Alaskan Native
- Hispanic/ Latin/ Latina
- Other (please specify)

Please select your NATA District:

- | | |
|--------------------------------------|--------------------------------------|
| <input type="radio"/> District One | <input type="radio"/> District Six |
| <input type="radio"/> District Two | <input type="radio"/> District Seven |
| <input type="radio"/> District Three | <input type="radio"/> District Eight |
| <input type="radio"/> District Four | <input type="radio"/> District Nine |
| <input type="radio"/> District Five | <input type="radio"/> District Ten |

What is your job title/role at your place of employment?

Please list the sports you provide coverage for.

Gender Issues Survey

Please select the most appropriate statement:

- I work alone. I am the only certified athletic trainer in my workplace.
- I work with one or more other certified athletic trainers. (Please specify number and gender.)

Gender Issues Survey

Gender Bias of Self

Answer the following questions while considering this definition:

Gender Bias - preferential treatment of one gender over another, either intentional or unintentional.

Using the scale below, indicate to what extent you believe the following will occur in your professional career.

	Never	Rarely	Possibly	Probably	Likely
1. There will be gender specific biases or obstacles to your career success.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2. You will have fewer opportunities for advancement because of your gender.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3. A parental leave will interfere with a future promotion or professional opportunity.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4. You will have fewer opportunities for networking because of your gender.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
5. You will have fewer opportunities for mentoring because of your gender.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
6. You will have less time to devote to your career because of your gender.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
7. You will be paid less because of your gender.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
8. Your colleagues will have lower expectations of you because of your gender.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Gender Issues Survey

Gender Bias of Women

Answer the following questions while considering this definition:

Gender Bias - preferential treatment of one gender over another, either intentional or unintentional.

Using the scale below, indicate to what extent you believe the following will occur in your professional career.

	Never	Rarely	Possibly	Probably	Likely
9. Women will face gender-specific biases or obstacles to their success.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
10. A parental leave will interfere with a woman's promotion or professional opportunity.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
11. Women will have fewer opportunities for networking because of their gender.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
12. Women will have fewer opportunities for mentoring because of their gender.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
13. Women will have fewer opportunities for advancement because of their gender.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
14. Women will have less time to devote to their careers because of their gender.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
15. Women will be paid less because of their gender.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
16. Women's colleagues will have low expectations of them because of their gender.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Gender Issues Survey

Gender Bias of Men

Answer the following questions while considering this definition:

Gender Bias – preferential treatment of one gender over another, either intentional or unintentional.

Using the scale below, indicate to what extent you believe the following will occur in your professional career.

	Never	Rarely	Possibly	Probably	Likely
17. Men will face gender-specific biases or obstacles to their career success.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
18. A parental leave will interfere with a man's promotion or professional opportunity.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
19. Men will have fewer opportunities for networking because of their gender.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
20. Men will have fewer opportunities for mentoring because of their gender.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
21. Men will have fewer opportunities for advancement because of their gender.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
22. Men will have less time to devote to their careers because of their gender.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
23. Men will be paid less because of their gender.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
24. Men's colleagues will have lower expectations of them because of their gender.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Gender Issues Survey

Survey complete!

Thank you for your participation! Your time and effort is appreciated! Please direct any questions to the primary researcher or faculty advisor:

Amber Gach, ATC
Primary Researcher
California University of Pennsylvania
250 University Ave
California, PA 15419
(570)956-9529
GAC0926@CALU.EDU

Shelly Fetchen DiCesaro, PhD, ATC, CSCS
Faculty Advisor
(724)938-4562
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APPENDIX C2

Institutional Review Board -
California University of Pennsylvania



California University
of Pennsylvania

Proposal Number

Date Received

PROTOCOL for Research
Involving Human Subjects

Institutional Review Board (IRB) approval is required before beginning
any research and/or data collection involving human subjects

(Reference IRB Policies and Procedures for clarification)

Project Title Perceived Gender Bias Among High School and Collegiate Certified Athletic Trainers

Researcher/Project Director Amber Gach, ATC

Phone # (570)956-9529

E-mail Address gac0926@calu.edu

Faculty Sponsor (if required) Shelly DiCesaro, PhD, ATC, CSCS

Department Health Science

Project Dates 1/15/11 to 1/15/12

Sponsoring Agent (if applicable) _____

Project to be Conducted at California University of Pennsylvania

Project Purpose: Thesis Research Class Project Other

Keep a copy of this form for your records.

Please attach a typed, detailed summary of your project AND complete items 2 through 6.

1. *Provide an overview of your project-proposal describing what you plan to do and how you will go about doing it. Include any hypothesis(es) or research questions that might be involved and explain how the information you gather will be analyzed. For a complete list of what should be included in your summary, please refer to Appendix B of the IRB Policies and Procedures Manual.*

The primary purpose of this study is to examine the perception of gender bias among Certified Athletic Trainers in the high school and collegiate job settings. This research will be descriptive in design. The dependent variables will be perceived gender bias of self and perceived gender bias of others measured on a five-point Likert scale. The independent variables will be gender and job setting. The subjects of this study will be 1000 male and 1000 female randomly selected Certified Athletic Trainers who will be randomly selected from the National Athletic Trainers' Association database. The researcher will utilize the NATA survey instrument to distribute the survey to participants. The subjects will be contacted by email via Survey Monkey and provided with a link the survey that will be administered to the subjects online. Informed consent of the subjects will be implied by voluntarily completing the survey. Results will be kept in electronic format only in a password protected file until entered into SPSS for analysis. The following hypotheses were based on a review of the literature and the researcher's intuition.

1. Female ATs will perceive more gender bias than male ATs in the following constructs: (A) gender bias of self and (B) gender bias of others.
 2. There will be no difference in perception of gender bias between the high school and collegiate job settings for (A) gender bias of self and (B) gender bias of others.
2. *Section 46.11 of the Federal Regulations state that research proposals involving human subjects must satisfy certain requirements before the IRB can grant approval. You should describe in detail how the following requirements will be satisfied. Be sure to address each area separately.*
 - a. *How will you insure that any risks to subjects are minimized? If there are potential risks, describe what will be done to minimize these risks. If there are risks, describe why the risks to participants are reasonable in relation to the anticipated benefits.*

Risks to subjects are minimal. The survey that will be administered will contain items pertaining to gender bias. Subjects may feel embarrassment or discomfort while answering this type of question. To minimize these risks, subjects will be informed that all collected information will be kept anonymous and confidential.

- b. *How will you insure that the selection of subjects is equitable? Take into account your purpose(s). Be sure you address research problems involving vulnerable populations such as children, prisoners, pregnant women, mentally disabled persons, and economically or educationally disadvantaged persons. If this is an in-class project describe how you will minimize the possibility that students will feel coerced.*

Subjects will be randomly selected from the National Athletic Trainers' Society membership base. This study will not use a vulnerable population; all subjects will be Certified Athletic Trainers who are members of the National Athletic Trainers' Association, and they will be employed in either the high school or collegiate job settings.

- c. *How will you obtain informed consent from each participant or the subject's legally authorized representative and ensure that all consent forms are appropriately documented? Be sure to attach a copy of your consent form to the project summary.*

Due to minimal risks in participating in this survey research, informed consent will be implied by voluntarily choosing to complete the provided survey.

- d. Show that the research plan makes provisions to monitor the data collected to insure the safety of all subjects. This includes the privacy of subjects' responses and provisions for maintaining the security and confidentiality of the data.

Subjects' names will not be included on the survey. Subjects' responses will be collected through the use of Survey Monkey. All data collected from the survey will be stored in password protected files.

3. Check the appropriate box(es) that describe the subjects you plan to use.

<input checked="" type="checkbox"/> Adult volunteers	<input type="checkbox"/> Mentally Disabled People
<input type="checkbox"/> CAL University Students	<input type="checkbox"/> Economically Disadvantaged People
<input type="checkbox"/> Other Students	<input type="checkbox"/> Educationally Disadvantaged People
<input type="checkbox"/> Prisoners	<input type="checkbox"/> Fetuses or fetal material
<input type="checkbox"/> Pregnant Women	<input type="checkbox"/> Children Under 18
<input type="checkbox"/> Physically Handicapped People	<input type="checkbox"/> Neonates

4. Is remuneration involved in your project? Yes or No. If yes, Explain here.

5. Is this project part of a grant? Yes or No If yes, provide the following information:

Title of the Grant Proposal _____

Name of the Funding Agency _____

Dates of the Project Period _____

6. Does your project involve the debriefing of those who participated? Yes or No

If Yes, explain the debriefing process here.

7. If your project involves a questionnaire interview, ensure that it meets the requirements of Appendix ___ in the Policies and Procedures Manual.

California University of Pennsylvania Institutional Review Board
Survey/Interview/Questionnaire Consent Checklist (v021209)

This form **MUST** accompany all IRB review requests

Does your research involve **ONLY** a survey, interview or questionnaire?

YES—Complete this form

NO—You **MUST** complete the “Informed Consent Checklist”—skip the remainder of this form

Does your survey/interview/questionnaire cover letter or explanatory statement include:

- (1) Statement about the general nature of the survey and how the data will be used?
- (2) Statement as to who the primary researcher is, including name, phone, and email address?
- (3) **FOR ALL STUDENTS:** Is the faculty advisor’s name and contact information provided?
- (4) Statement that participation is voluntary?
- (5) Statement that participation may be discontinued at any time without penalty and all data discarded?
- (6) Statement that the results are confidential?
- (7) Statement that results are anonymous?
- (8) Statement as to level of risk anticipated or that minimal risk is anticipated? (NOTE: If more than minimal risk is anticipated, a full consent form is required—and the Informed Consent Checklist must be completed)
- (9) Statement that returning the survey is an indication of consent to use the data?
- (10) Who to contact regarding the project and how to contact this person?
- (11) Statement as to where the results will be housed and how maintained? (unless otherwise approved by the IRB, must be a secure location on University premises)
- (12) Is there text equivalent to: “Approved by the California University of Pennsylvania Institutional Review Board. This approval is effective nn/nn/nn and expires mm/mm/mm”? (the actual dates will be specified in the approval notice from the IRB)?
- (13) **FOR ELECTRONIC/WEBSITE SURVEYS:** Does the text of the cover letter or explanatory statement appear before any data is requested from the participant?
- (14) **FOR ELECTONIC/WEBSITE SURVEYS:** Can the participant discontinue participation at any point in the process and all data is immediately discarded?

**California University of Pennsylvania Institutional Review Board
Informed Consent Checklist (v021209)**

This form **MUST** accompany all IRB review requests

Does your research involve **ONLY** a survey, interview, or questionnaire?

YES—DO NOT complete this form. You **MUST** complete the “Survey/Interview/Questionnaire Consent Checklist” instead.

NO—Complete the remainder of this form.

1. Introduction (check each)

(1.1) Is there a statement that the study involves research?

(1.2) Is there an explanation of the purpose of the research?

2. Is the participant. (check each)

(2.1) Given an invitation to participate?

(2.2) Told why he/she was selected.

(2.3) Told the expected duration of the participation.

(2.4) Informed that participation is voluntary?

(2.5) Informed that all records are confidential?

(2.6) Told that he/she may withdraw from the research at any time without penalty or loss of benefits?

(2.7) 18 years of age or older? (if not, see Section #9, Special Considerations below)

3. Procedures (check each).

(3.1) Are the procedures identified and explained?

(3.2) Are the procedures that are being investigated clearly identified?

(3.3) Are treatment conditions identified?

4. Risks and discomforts. (check each)

(4.1) Are foreseeable risks or discomforts identified?

(4.2) Is the likelihood of any risks or discomforts identified?

(4.3) Is there a description of the steps that will be taken to minimize any risks or discomforts?

(4.4) Is there an acknowledgement of potentially unforeseeable risks?

(4.5) Is the participant informed about what treatment or follow up courses of action are available should there be some physical, emotional, or psychological harm?

(4.6) Is there a description of the benefits, if any, to the participant or to others that may be reasonably expected from the research and an estimate of the likelihood of these benefits?

(4.7) Is there a disclosure of any appropriate alternative procedures or courses of treatment that might be advantageous to the participant?

5. Records and documentation. (check each)

(5.1) Is there a statement describing how records will be kept confidential?

(5.2) Is there a statement as to where the records will be kept and that this is a secure location?

(5.3) Is there a statement as to who will have access to the records?

6. For research involving more than minimal risk (check each),

- (6.1) Is there an explanation and description of any compensation and other medical or counseling treatments that are available if the participants are injured through participation?
- (6.2) Is there a statement where further information can be obtained regarding the treatments?
- (6.3) Is there information regarding who to contact in the event of research-related injury?

7. Contacts.(check each)

- (7.1) Is the participant given a list of contacts for answers to questions about the research and the participant's rights?
- (7.2) Is the principal researcher identified with name and phone number and email address?
- (7.3) FOR ALL STUDENTS: Is the faculty advisor's name and contact information provided?

8. General Considerations (check each)

- (8.1) Is there a statement indicating that the participant is making a decision whether or not to participate, and that his/her signature indicates that he/she has decided to participate having read and discussed the information in the informed consent?
- (8.2) Are all technical terms fully explained to the participant?
- (8.3) Is the informed consent written at a level that the participant can understand?
- (8.4) Is there text equivalent to: "Approved by the California University of Pennsylvania Institutional Review Board. This approval is effective nn/nn/nn and expires mm/mm/mm"? (the actual dates will be specified in the approval notice from the IRB)

9. Specific Considerations (check as appropriate)

- (9.1) If the participant is or may become pregnant is there a statement that the particular treatment or procedure may involve risks, foreseeable or currently unforeseeable, to the participant or to the embryo or fetus?
- (9.2) Is there a statement specifying the circumstances in which the participation may be terminated by the investigator without the participant's consent?
- (9.3) Are any costs to the participant clearly spelled out?
- (9.4) If the participant desires to withdraw from the research, are procedures for orderly termination spelled out?
- (9.5) Is there a statement that the Principal Investigator will inform the participant or any significant new findings developed during the research that may affect them and influence their willingness to continue participation?
- (9.6) Is the participant is less than 18 years of age? If so, a parent or guardian must sign the consent form and assent must be obtained from the child
 - Is the consent form written in such a manner that it is clear that the parent/guardian is giving permission for their child to participate?
 - Is a child assent form being used?
 - Does the assent form (if used) clearly indicate that the child can freely refuse to participate or discontinue participation at any time without penalty or coercion?
- (9.7) Are all consent and assent forms written at a level that the intended participant can understand? (generally, 8th grade level for adults, age-appropriate for children)

California University of Pennsylvania Institutional Review Board
Review Request Checklist (v021209)

This form **MUST** accompany all IRB review requests.
 Unless otherwise specified, **ALL** items must be present in your review request.

Have you:

(1.0) **FOR ALL STUDIES:** Completed **ALL** items on the Review Request Form?

Pay particular attention to:

- (1.1) Names and email addresses of all investigators
 - (1.1.1) **FOR ALL STUDENTS:** use only your CalU email address)
 - (1.1.2) **FOR ALL STUDENTS:** Name and email address of your faculty research advisor
- (1.2) Project dates (must be in the future—no studies will be approved which have already begun or scheduled to begin before final IRB approval—**NO EXCEPTIONS**)
- (1.3) Answered completely and in detail, the questions in items 2a through 2d?
 - 2a: **NOTE:** No studies can have zero risk, the lowest risk is “minimal risk”. If more than minimal risk is involved you **MUST**:
 - i. Delineate all anticipated risks in detail;
 - ii. Explain in detail how these risks will be minimized;
 - iii. Detail the procedures for dealing with adverse outcomes due to these risks.
 - iv. Cite peer reviewed references in support of your explanation.
 - 2b. Complete all items.
 - 2c. Describe informed consent procedures in detail.
 - 2d. **NOTE:** to maintain security and confidentiality of data, all study records must be housed in a secure (locked) location **ON UNIVERSITY PREMISES**. The actual location (department, office, etc.) must be specified in your explanation and be listed on any consent forms or cover letters.
- (1.4) Checked all appropriate boxes in Section 3? If participants under the age of 18 years are to be included (regardless of what the study involves) you **MUST**:
 - (1.4.1) Obtain informed consent from the parent or guardian—consent forms must be written so that it is clear that the parent/guardian is giving permission for their child to participate.
 - (1.4.2) Document how you will obtain assent from the child—This must be done in an age-appropriate manner. Regardless of whether the parent/guardian has given permission, a child is completely free to refuse to participate, so the investigator must document how the child indicated agreement to participate (“assent”).
- (1.5) Included all grant information in section 5?
- (1.6) Included **ALL** signatures?

(2.0) **FOR STUDIES INVOLVING MORE THAN JUST SURVEYS, INTERVIEWS, OR QUESTIONNAIRES:**

- (2.1) Attached a copy of all consent form(s)?
- (2.2) **FOR STUDIES INVOLVING INDIVIDUALS LESS THAN 18 YEARS OF AGE:** attached a copy of all assent forms (if such a form is used)?
- (2.3) Completed and attached a copy of the Consent Form Checklist? (as appropriate—see that checklist for instructions)

(3.0) **FOR STUDIES INVOLVING ONLY SURVEYS, INTERVIEWS, OR QUESTIONNAIRES:**

- (3.1) Attached a copy of the cover letter/information sheet?

- (3.2) Completed and attached a copy of the Survey/Interview/Questionnaire Consent Checklist? (see that checklist for instructions)
- (3.3) Attached a copy of the actual survey, interview, or questionnaire questions in their final form?

- (4.0) FOR ALL STUDENTS: Has your faculty research advisor:
 - (4.1) Thoroughly reviewed and approved your study?
 - (4.2) Thoroughly reviewed and approved your IRB paperwork? including:
 - (4.2.1) Review request form,
 - (4.2.2) All consent forms, (if used)
 - (4.2.3) All assent forms (if used)
 - (4.2.4) All Survey/Interview/Questionnaire cover letters (if used)
 - (4.2.5) All checklists
 - (4.3) IMPORTANT NOTE: Your advisor's signature on the review request form indicates that they have thoroughly reviewed your proposal and verified that it meets all IRB and University requirements.
- (5.0) Have you retained a copy of all submitted documentation for your records?

Project Director's Certification
Program Involving HUMAN SUBJECTS

The proposed investigation involves the use of human subjects and I am submitting the complete application form and project description to the Institutional Review Board for Research Involving Human Subjects.

I understand that Institutional Review Board (IRB) approval is required before beginning any research and/or data collection involving human subjects. If the Board grants approval of this application, I agree to:

1. Abide by any conditions or changes in the project required by the Board.
2. Report to the Board any change in the research plan that affects the method of using human subjects before such change is instituted.
3. Report to the Board any problems that arise in connection with the use of human subjects.
4. Seek advice of the Board whenever I believe such advice is necessary or would be helpful.
5. Secure the informed, written consent of all human subjects participating in the project.
6. Cooperate with the Board in its effort to provide a continuing review after investigations have been initiated.

I have reviewed the Federal and State regulations concerning the use of human subjects in research and training programs and the guidelines. I agree to abide by the regulations and guidelines aforementioned and will adhere to policies and procedures described in my application. I understand that changes to the research must be approved by the IRB before they are implemented.

Professional Research

Project Director's Signature

Department Chairperson's Signature

Student or Class Research

Amber Gauth

Student Researcher's Signature

Shirley DiSandro

Supervising Faculty Member's
Signature if required

Thomas J. White

Department Chairperson's Signature

ACTION OF REVIEW BOARD (IRB use only)

The Institutional Review Board for Research Involving Human Subjects has reviewed this application to ascertain whether or not the proposed project:

1. provides adequate safeguards of the rights and welfare of human subjects involved in the investigations;
2. uses appropriate methods to obtain informed, written consent;
3. indicates that the potential benefits of the investigation substantially outweigh the risk involved.
4. provides adequate debriefing of human participants.
5. provides adequate follow-up services to participants who may have incurred physical, mental, or emotional harm.

Approved [_____]

Disapproved

Chairperson, Institutional Review Board

Date

**Institutional Review Board
California University of Pennsylvania
Psychology Department LRC, Room 310
250 University Avenue
California, PA 15419
instreviewboard@cup.edu
instreviewboard@calu.edu
Robert Skwarecki, Ph.D., CCC-SLP, Chair**

Ms. Gach,

Please consider this email as official notification that your proposal titled " Perceived Gender Bias Among High School and Collegiate Certified Athletic Trainers" (Proposal #10-037) has been approved by the California University of Pennsylvania Institutional Review Board as submitted, with the following stipulations:

- (1) The title of the study must be included in the consent form.**
- (2) The consent form must appear after the survey link has been taken, rather than in the e-mail. Invite participants with an e-mail, but include the consent form as the first "page" of the survey.**

Once you have made this revision, you may immediately begin data collection. You do not need to wait for further IRB approval. [At your earliest convenience, you must forward a copy of the revised consent form for the Board's records].

The effective date of the approval is 01-27-2011 and the expiration date is 01-26-2012. These dates must appear on the consent form .

Please note that Federal Policy requires that you notify the IRB promptly regarding any of the following:

- (1) Any additions or changes in procedures you might wish for your study (additions or changes must be approved by the IRB before they are implemented)**
- (2) Any events that affect the safety or well-being of subjects**
- (3) Any modifications of your study or other responses that are necessitated by any events reported in (2).**
- (4) To continue your research beyond the approval expiration date of 01-26-2012 you must file additional information to be considered for continuing review. Please contact instreviewboard@cup.edu**
Please notify the Board when data collection is complete.

**Regards,
Robert Skwarecki, Ph.D., CCC-SLP
Chair, Institutional Review Board**

APPENDIX C3

Cover Letter



California University of Pennsylvania

February 17, 2011

Dear Fellow Certified Athletic Trainer:

My name is Amber Gach and I am currently a master's degree candidate at California University of Pennsylvania Graduate Athletic Training Education Program. In order to complete part of my degree requirements, I am requesting your participation in my research thesis. I am conducting survey research to examine high school and collegiate certified athletic trainers' perceptions of gender bias in the workplace. The results of this study (not including individual information) may be published in medical journals for the benefit of the medical community.

Certified athletic trainers in the high school and collegiate settings are being asked to participate in this research; however, your participation is voluntary and you have the right to choose not to participate or to discontinue participation at any time, causing your data to be discarded. The California University of Pennsylvania Institutional Review Board has reviewed and approved this project. The approval is effective 1/27/11 and expires 1/26/12.

The survey, entitled *Perceived Gender Bias among High School and Collegiate Certified Athletic Trainers*, consists of 32 questions, which will take about 5 to 10 minutes to complete. Minimal risk is posed by participating in this study as confidentiality will be maintained.

All survey responses are anonymous and upon submission, neither your name nor will your email address be attached to your answers. Informed consent to use the data collected will be assumed upon return of the survey. Aggregate survey responses will be housed in a password protected file on the CalU campus, which can only be accessed by the primary researcher. Upon completion of the study, all individual survey results will be deleted.

Please take this survey at your earliest convenience. If you have any questions regarding this project, please feel free to contact the primary researcher, Amber Gach at GAC0926@CALU.EDU. You can also contact the faculty advisor for this research, Shelly Fetchen DiCesaro, PhD, ATC, CSCS at DICESARO@CAL.EDU.

Please click the following link to access the survey:
<http://www.surveymonkey.com/s/genderissues>

Thank you in advance for your participation. I greatly appreciate your time and effort.

Sincerely,

Amber Gach, ATC
Primary Researcher
California University of Pennsylvania
250 University Ave, California, PA 15419
GAC0926@CALU.EDU

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ABSTRACT

TITLE: PERCEIVED GENDER BIAS AMONG HIGH SCHOOL AND COLLEGIATE CERTIFIED ATHLETIC TRAINERS

RESEARCHER: Amber Gach, ATC

ADVISOR: Dr. Shelly Fetchen DiCesaro

PURPOSE: To determine high school and collegiate certified Athletic Trainers' perceptions of gender bias in the workplace.

METHODS: Certified Athletic Trainers working in the high school and collegiate settings (N=339) were surveyed using SurveyMonkey.com. The survey consisted of 24 questions regarding perceived gender bias of self and perceived gender bias of others.

FINDINGS: Female certified Athletic Trainers encounter more gender bias than male certified Athletic Trainers. There is no significant difference in the amount of gender bias between the high school and collegiate job settings. Certified Athletic Trainers with more years of work experience have a lower perception of gender bias. Certified Athletic Trainers who perceive more bias of self also perceive more gender bias of others.

CONCLUSION: After review of the results, it is concluded that female and less experienced certified Athletic Trainers encounter more gender bias than male and more experienced certified Athletic Trainers in the high school and collegiate work settings.