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# DIVISION I ATHLETES' ATTITUDES TOWARD AND PREFERENCES FOR MALE AND FEMALE STRENGTH AND CONDITIONING COACHES

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## ABSTRACT

Magnusen, MJ and Rhea, DJ. Division I athletes' attitudes toward and preferences for male and female strength and conditioning coaches. *J Strength Cond Res* 23(4): 1084–1090, 2009—The purpose of this study was to examine whether male and female Division I team sport athletes prefer same-sex or opposite-sex strength and conditioning coaches. Participants included 476 (male = 275, female = 201) National Collegiate Athletic Association Division I collegiate football, soccer, and volleyball athletes; the men were from football programs and the women were from soccer and volleyball programs. The Attitudes of Athletes toward Male versus Female Coaches Questionnaire was used to assess the attitudes and feelings of male and female athletes toward the gender of their strength coach (29). The results of a 2 × 2 multivariate analysis of variance (athlete gender × coach gender) revealed that the male athletes (all football players) were less comfortable with a female strength coach in all regards and preferred to have a male strength coach ( $p < 0.05$ ). Female athletes did not have a gender preference, nor did they have any negative attitudes toward a strength coach. The women would be productive training with any qualified strength coach, whereas the men would prefer working with a male strength coach no matter how qualified the female coach might be. As a result of this study, one suggestion is for male athletes to be exposed to female strength coaches much earlier in their sport experience. This might help reduce gender bias later in their athletic careers.

**KEY WORDS** attitudes of athletes toward male versus female coaches questionnaire, gender bias, strength coach

## INTRODUCTION

Since Title IX was enacted in 1972, the number of female coaches and athletic directors/administrators has declined significantly at the high school and college levels (19). In 1972, more than 90% of the head women's sport coaches and about 2% of the head men's sport coaches were female. With the steady decline over the years, 2006 brought the worst year ever recorded for the number of women coaching girls and women's sports, at 42.2%; it was also the first time that the statistics showed fewer than 2% of male's teams being coached by women (1). Conversely, the number of paid assistant female coaches increased to the highest number in history. Of the 10,220 paid assistant coaches, 5,811 (56.7%) are female. The only sport to contradict these statistics is swimming, with a rise in the hiring of female coaches and a decline in the hiring of male coaches (21). Presently, the National Collegiate Athletic Association (NCAA) is conducting research to update its 1989 study, "Perceived barriers to women in intercollegiate athletics careers," in an effort to improve people's understanding of the barriers that inhibit the advancement of female coaches in our society today (7).

Previously, coaching barriers and the decline of female coaches at all levels have been examined. Burnout, lack of financial incentives, lack of experience, family conflicts, discrimination, and high expectations of success have been found as main reasons for women dropping out of coaching (8,22). Additionally, identifying the preferred styles of coaches and athlete preferences of coaches have been examined (18). In the 1980s, it was revealed that male athletes held negative attitudes toward female coaches (24,29) and that female athletes even preferred the prospect of an unsuccessful male coach to that of a female coach (30). In the 1990s, the studies began to find more contrasting results, particularly when considering female athletes. In one example, swimmers were shown to favor coaches of their own gender, with men preferring male coaches and women preferring female coaches (23), whereas in other instances, men preferred male coaches (18) and women preferred male coaches (2). However, in the most recent studies, gender was not the only reason cited for preference. Greater levels of

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knowledge and past success were also cited as reasons for women preferring a male coach (15).

Although a great deal is known about coaches in general and athlete preference of coaches, today coaches are hired for specific training specialties; strength and conditioning coaches have emerged as one of those distinctions. Much of the existing data pertaining to strength and conditioning coaches focus on demographics (i.e., salary, education, certifications), training methods, and/or strength and conditioning practices at the collegiate and professional levels (4,10–13,25–27). Because previous research involving athlete and coaching preferences has only focused on athletic head and assistant coaches and not on strength and conditioning coaches as a separate subgroup, the purpose of this study was to explore whether male and female Division I team sport athletes prefer same-sex or opposite-sex strength and conditioning coaches. The hypothesis was that male athletes would prefer male strength and conditioning coaches and that female athletes would prefer female strength and conditioning coaches.

## METHODS

### Experimental Approach to the Problem

A quantitative research design was used in which male and female athletes completed a modified Attitudes of Athletes toward Male Versus Female Coaches Questionnaire (AAMFC-Q) and a demographics information sheet before one of their required strength and conditioning workouts. The questionnaire was modified to reflect language that would identify a strength and conditioning coach instead of an athletic coach while maintaining the integrity of the questionnaire. This instrument is appropriate for the current study and addresses the researchers' hypothesis because it provides a gender-specific scenario in which the participants provide answers that reflect how, based on the gender of the strength coach, they would react to a particular strength and conditioning situation (i.e., "I might feel angry (mad) if he (she) yelled at me while I was training").

### Subjects

Participants included 476 (male = 275, female = 201) NCAA Division I collegiate football, soccer, and volleyball athletes. Male athletes ( $n = 275$ ) represented only football teams; female athletes represented 108 soccer athletes and 93 volleyball athletes. Male participants ranged from 18 to 24 years of age (mean = 20.14,  $SD = 1.42$ ), and 82% of the 157 who responded to that question had been trained under the supervision of a strength coach (not personal trainer) before college. One hundred fifty-one of the men were Caucasian, followed by 110 African American, 7 Hispanic, and 7 other. Female participants ranged from 17 to 24 years of age (mean = 19.72,  $SD = 1.23$ ), and 53% of the 103 who responded to that question had been trained under the supervision of a strength coach (not personal trainer) before college. One hundred sixty-eight of the

women were Caucasian, followed by 16 African American, 4 Hispanic, 3 Asian, and 10 other. Twenty-three male athletes had been supervised by a female strength and conditioning coach during their athletic experiences, whereas 113 female athletes had been supervised by a male strength and conditioning coach during their athletic experiences. Of the athletes participating in this study, 99.9% ( $N = 274$ ) of the male athletes currently have a male strength and conditioning coach, whereas 30% ( $N = 60$ ) of the female athletes currently have a female strength and conditioning coach. The investigation of the experimental risks was approved by the university's institutional review board for use of human subjects. Participants (student athletes over the age of 18, coaches of each sport, and strength and conditioning coaches) were informed of the experimental risks and signed an informed consent document before the investigation.

### Measures

The AAMFC-Q assesses the attitudes and feelings of male and female athletes toward having a male or female coach (29). This tool includes male and female versions, differing only in that they assess attitudes toward the respective coaches, be that a male or female. The original version (29) consisted of 11 items, wherein participants responded to a Likert-type scale from 1 (not at all) to 11 (very much); it was used to assess "current" attitudes toward male and female coaches in NCAA Division III basketball and volleyball players. Test-retest reliability coefficients were reported as 0.80 and 0.77 for male and female versions of AAMFC-Q. More recently, Habif et al. (18) added an item that would assess athletes' preferences for a coach of a particular gender. Item 12 states, "I would prefer it if my new coach were a man (or woman)." It is scored on the same Likert-type scale.

A modified version of the AAMFC-Q was used for the present study (Table 1). The reliability of this version in the present study was 0.76, which is considered fairly reliable. Instead of an athletic coach, the role of the coach was changed to represent a strength and conditioning coach. The introductory paragraph of the AAMFC-Q was modified to give the scenario of a strength and conditioning coach instead of an athletic coach. For example, the original scenario stated "David (Linda) was a 5'10" Division III collegiate volleyball player who graduated with a degree in Physical Education and Coaching. After college, David (Linda) went on to pursue a Masters degree while also serving as an assistant volleyball coach." The revised version was changed to be strength coach specific; it read, "David (Linda) has completed his (her) undergraduate bachelor's degree, getting a diploma in the field of Exercise and Sport Science.... While he (she) was completing his (her) Master's degree, David (Linda) was a graduate assistant (G.A.) for the strength and conditioning department where he (she) was involved in a mentoring relationship with the head strength coach."

**TABLE 1.** Modified Attitudes of Athletes toward Male versus Female Coaches Questionnaire.

**DIRECTIONS:** Please read the following strength coaching scenario. After you are done reading, respond by filling out the attached questionnaire.

**SCENARIO:** David (Linda) has completed his (her) undergraduate bachelor's degree, getting a diploma in the field of Exercise and Sport Science. David (Linda) made good grades in college and went on to receive a Master's degree in the field of Kinesiology, with a specialization in Applied Exercise Physiology. David (Linda) is certified by the *Collegiate Strength and Conditioning Coaches Association (CSCCa)* as a competent strength and conditioning coach and has several other strength and conditioning certifications from respectable organizations. David (Linda) played varsity sports at the collegiate level and is currently a competitive power lifter. While he (she) was completing his (her) Master's degree, David (Linda) was a graduate assistant (G.A.) for the strength and conditioning department where he (she) was involved in a mentoring relationship with the head strength coach. David (Linda) just got a job as an assistant strength and conditioning coach at your school and he (she) will be your strength coach next season. Please answer the questions below concerning your feelings about David (Linda) being your team's new strength coach. Please circle the number 1–12 that corresponds to your feelings for each question.

<b>1. I would like him (her) as a strength coach:</b>	1	2	3	4	5	6	7	8	9	10	11
<i>Not at All</i>											<i>Very Much</i>
<b>2. His (her) presence where we train might make it hard to concentrate:</b>	1	2	3	4	5	6	7	8	9	10	11
<i>Not at All</i>											<i>Very Much</i>
<b>3. He (she) could make me want to train with greater intensity and efficiency:</b>	1	2	3	4	5	6	7	8	9	10	11
<i>Not at All</i>											<i>Very Much</i>
<b>4. He (she) might be a head strength coach in 20 years:</b>	1	2	3	4	5	6	7	8	9	10	11
<i>Not at All</i>											<i>Very Much</i>
<b>5. I could take it when he (she) corrects me when I perform an exercise incorrectly:</b>	1	2	3	4	5	6	7	8	9	10	11
<i>Not at All</i>											<i>Very Much</i>
<b>6. I would have confidence that he (she) is a good strength coach:</b>	1	2	3	4	5	6	7	8	9	10	11
<i>Not at All</i>											<i>Very Much</i>
<b>7. I could take orders and instructions from him (her) easily:</b>	1	2	3	4	5	6	7	8	9	10	11
<i>Not at All</i>											<i>Very Much</i>
<b>8. I could <u>not</u> take punishment from him (her):</b>	1	2	3	4	5	6	7	8	9	10	11
<i>Not at All</i>											<i>Very Much</i>
<b>9. I could discuss things with him (her) easily before/during/after strength training:</b>	1	2	3	4	5	6	7	8	9	10	11
<i>Not at All</i>											<i>Very Much</i>
<b>10. I might expect him (her) to motivate and encourage me in my training easily:</b>	1	2	3	4	5	6	7	8	9	10	11
<i>Not at All</i>											<i>Very Much</i>
<b>11. I might feel angry (mad) if he (she) yelled at me while I was training:</b>	1	2	3	4	5	6	7	8	9	10	11
<i>Not at All</i>											<i>Very Much</i>
<b>12. I would prefer it if my new strength coach were a woman (man):</b>	1	2	3	4	5	6	7	8	9	10	11
<i>Not at All</i>											<i>Very Much</i>

The integrity of the questions within the AAMFC-Q was left unchanged. The only variation was that instead of “coach,” the term “strength coach” was used to distinguish a difference between an athletic coach and a strength and conditioning coach. For instance, for question #1, instead of

reading, “I would like him (her) as a coach,” the question was written as, “I would like him (her) as a strength coach.”

Also included were an informed consent page and a demographic questionnaire. For athlete demographics, questions were asked about the following information: age, gender,

ethnicity, current year in school, sport played, position, trained under a strength coach before college, gender of current strength coach, years with that strength coach, whether they had ever had a strength coach of the opposite gender before, and if so, at what level (junior high, high school, college).

**Procedures**

During the off-season (spring), strength coaches ( $N = 54$ ) were contacted via e-mail in a 2-part process. First, a head coach from each respective sport who was familiar with the researchers was asked to send introductory e-mails about the study to strength coaches in their respective sport (football, soccer, or volleyball). Second, the researchers then sent an e-mail explaining the study and asking whether they would be interested in distributing a 5-minute questionnaire to their athletes. Once consent was obtained from the strength and conditioning coach, a packet was sent to each of the strength coaches who had agreed to participate ( $N=26$ ). Each packet included informed consent forms, demographic questionnaires, and male and female versions of the revised AAMFC-Q (18). The questionnaire contained a hypothetical situation involving either a male strength and conditioning coach or a female strength and conditioning coach; these versions differed only in that they assessed attitudes toward male and female strength coaches, respectively. These were randomly distributed to the athletes so that a male or female athlete could receive either a male or a female strength coach version of the questionnaire.

When the athlete came in for strength and conditioning, each participating strength coach would ask the athlete whether he or she would take part in answering the

questionnaire. If the athlete agreed, he or she would sign the consent form, complete the questionnaire before his or her workout began that day, place the questionnaire and signed consent form in an envelope, and seal the envelope; then, the strength coach would send the collective group of questionnaires in a large, self-addressed, stamped envelope to the researcher that day or the following day. At no time did the strength and conditioning coach monitor the athletes or see their responses as they completed the questionnaires.

**RESULTS**

The purpose of this study was to explore strength coach gender preferences of male and female athletes. It was hypothesized that male athletes would prefer male strength coaches and that women would prefer female strength coaches. A 2 (gender of athlete)  $\times$  2 (gender of the hypothetical coach) multivariate analysis of variance (MANOVA) was used to compare the independent variables (gender of athlete and hypothetical coach) with the 11 items on the AAMFC-Q (18,29). To control for issues related to qualifications in this study, the male and female strength coaches were presented as having identical skills and experiences. As a result of the MANOVA, significant mean differences were found for athlete gender,  $F(11, 462) = 7.42$ ,  $p < 0.0001$ , and for hypothetical coach gender,  $F(11, 462) = 8.44$ ,  $p < 0.0001$ . A significant interaction effect was also found between the 2 independent variables,  $F(11, 462) = 4.33$ ,  $p < 0.0001$ . Based on the follow-up univariate ANOVAs, all of the items were significant except item 11 ( $p < 0.01$  for each of the other items) (Table 2). The male athletes were less comfortable with a female strength coach. Specifically, the

**TABLE 2.** Mean (SD) of Attitudes of Athletes toward Male versus Female Coaches Questionnaire (AAMFC-Q) scores for male and female athletes.

Variable	Male athletes		Female athletes	
	Female hypothetical coach Mean (SD)	Male hypothetical coach Mean (SD)	Female hypothetical coach Mean (SD)	Male hypothetical coach Mean (SD)
Q1	5.46 (2.86)*	8.15 (2.10)†	7.83 (2.39)†	8.52 (1.66)†
Q2	5.81 (3.20)*	3.69 (2.71)†	3.32 (2.24)†	3.19 (2.25)†
Q3	4.75 (2.68)*	7.33 (2.53)†	7.09 (2.58)†	7.58 (2.28)†
Q4	5.47 (2.78)*	8.04 (2.35)†	7.37 (2.66)†	8.02 (2.34)†
Q5	6.50 (3.28)*	8.21 (2.22)†	8.56 (2.08)†	9.07 (1.81)†
Q6	6.57 (3.07)*	8.16 (2.12)†	8.23 (2.22)†	8.67 (1.97)†
Q7	6.47 (3.19)*	8.07 (2.18)†	7.99 (2.21)†	8.56 (1.86)†
Q8	5.49 (3.23)*	4.20 (2.77)†	3.81 (2.53)†	3.73 (2.57)†
Q9	5.49 (2.98)*	7.45 (2.58)†	7.62 (2.22)†	7.58 (2.21)†
Q10	5.64 (2.79)*	7.86 (2.24)†	7.69 (2.41)†	8.22 (2.28)†
Q11	5.72 (3.17)	4.76 (2.82)	4.85 (2.70)	4.43 (2.58)
Q12	3.11 (2.56)†	8.49 (2.65)*	3.43 (2.62)†	5.52 (3.43)†

\*:†Significant differences at 0.05 level.

responses were less favorable for a female strength coach than for a male strength coach, meaning that they would not like her as much as a male strength coach, that her presence would make it hard to concentrate, that she would not make them train with greater intensity and efficiency, that she would not be as likely to be a head strength coach in 20 years, that they would not be able to take it when she corrected their form, that they would have not have as much confidence that she was a good strength coach, that they would not receive orders and instructions from her as easily as from a male strength coach, that they would not be able to take punishment from her, that they would be less likely to discuss "things" with her before/during/after strength training, and that she would be less likely to motivate and encourage them as opposed to a male strength and conditioning coach. Female athletes did not report negative attitudes toward male or female strength coaches in any way.

A  $2 \times 2$  ANOVA was conducted on item 12, which assessed athletes' preferences for a strength and conditioning coach of a particular gender. A significant interaction was found,  $F(1, 472) = 39.95, p < 0.0001$ , and significant main effects were also found for gender,  $F(1, 472) = 25.78, p < 0.0001$ , and hypothetical coach gender,  $F(1, 472) = 206.38, p < 0.0001$ . To clarify the nature of the interaction, independent sample  $t$ -tests were conducted. The results of the athletes' responses to item 12 referring to whether they prefer a male or female coach suggests that male football players do have a gender preference for a strength and conditioning coach—they prefer male strength coaches (Table 2). Women do not have a gender preference for a strength coach.

## DISCUSSION

Past studies have examined athletes' attitudes and preferences of coaches in general (14,18), but, at present, no one has examined the attitudes and coaching preferences of an independent coaching group known as strength and conditioning coaches. These coaches have gained an increased presence within collegiate athletic departments during the past decade. Strength and conditioning coaches have been able to show athletic directors and head coaches that hiring them is essential to the effectiveness of an athletic program. These programs have contributed to competitive athletes making great improvements in strength, power, speed, agility, flexibility, and conditioning. As a result, strength and conditioning programs have been integrated into high school, collegiate, and professional athletic programs across the country. Therefore, this study sought to examine athletes' attitudes and coaching preferences with this subgroup of strength and conditioning coaches.

The most significant finding of this study was that male and female athletes had different attitudes toward male and female strength and conditioning coaches. Female athletes did not report a preference for a female strength coach; they reported having positive attitudes toward male and female strength and conditioning coaches, whereas men reported more negative

attitudes toward female strength coaches. The female athletes reported they could listen to and have confidence in a male or female strength coach, that neither gender would make it difficult for them to concentrate, that either gender could make them train with greater intensity, and that either gender would develop a good rapport with female athletes.

These responses are different than those of previous studies examining gender bias with head basketball, track, and swim coaches (14,18). Those studies revealed that male and female athletes were more receptive of being coached by a male than a female in team sports. The results of this study lead one to speculate that female athletes may have not been biased by the gender of their strength coach; rather, they may attach more importance to the coach's personality or to the experience/knowledge level of the strength coach. It is also possible that they have had effective male and female coaches in the past or that they are just glad to have someone, regardless of gender, sharing his or her expertise to maximize their athletic performance and prevent injury.

As for the men, a very similar picture was drawn to previous studies (24,29). The male athletes from this study not only had more negative attitudes toward female strength coaches but also preferred to receive strength workouts and feedback from male strength coaches. They felt that female strength coaches were a distraction to their workouts and had little impact on their training. This was communicated through the majority of the male athletes stating that if they had a female strength coach, 1) they would adhere to a workout but not really buy into it, 2) they would not be very willing to take criticism from a female strength coach, 3) they would not be very open to discuss their personal issues, and 4) they would be less motivated by a female than a male strength coach.

Male athletes may have had more negative attitudes toward female strength coaches for a variety of reasons. One, they have had greater exposure to male coaches in general. Two, from a strength and conditioning perspective, they have not seen nearly as many strength coach role models who are of the opposite gender (18). Three, football is a traditionally male sport, whereas soccer and volleyball are gender-neutral sports; this might have an effect on the respective athletes' perceptions of a female presence when a majority, if not all, of their athletic role models have been male.

In the past, when children from grades 5–9 have been asked to list the top 3 people whom they would like to emulate, 96% of boys selected role models of the same gender (9). In other research, men have exhibited a strong preference for male role models (3,16), whereas women are much more likely to select female or male role models (17). Therefore, it should come as no surprise that male athletes show a strong preference for a male strength coach (a potential role model) over a female strength coach. Conversely, female athletes seem to be more flexible with their acceptance of female or male strength coaches, similar to the role models research (17), which is in contrast to what has been reported in the

past about female athletes' preferences for their head coaches (2,30).

### PRACTICAL APPLICATIONS

This study lends support to the idea that when experience levels and knowledge of the field are held equal between the genders, male athletes still strongly prefer a male strength and conditioning coach over a female strength coach, whereas female athletes are more likely to accept either gender strength coach and give it their all with either gender coach. When considering a strength coach, female athletes want someone who is knowledgeable about strength and conditioning and best able to develop workouts that will be most beneficial for a woman, rather than a strength coach who works them as they work everyone else. Ultimately, the best strength coach fit with a sport should dictate team assignment, and this fit can be improved by a strength coach acknowledging and adapting to the uniqueness of every athlete's experience and role.

For instance, in one qualitative study on gender, a female athlete responded, "Women always fight for equal rights, but I don't think that wanting equal rights means I want somebody cursing in my face" (5). In addition to strength coaches being able to more effectively nuance their training methods, male athletes in male-dominant sports should also be further educated on how gender does not dictate expertise with strength and conditioning. Gender might help with initial relateability between the strength coach and athlete, but experience, education, and teaching ability are better variables to explain expertise and the capacity to maximize the athlete's athletic potential through strength and conditioning protocols.

The end goal of the competitive athlete is the same. Athletes desire to be the best they can possibly be and, regardless of their gender, helping the athlete achieve safe and healthy athletic optimization is a primary role of the strength coach. However, the aforementioned results have suggested that male athletes prefer working with a male strength coach regardless of whether a female strength coach has the same qualifications. Thus, this is one area in particular that may require more attention and examination in collegiate athletic programs.

Athletic departments have a responsibility to foster awareness and provide information to athletic coaches and student-athletes about the field of strength and conditioning. This may help to diminish the bias of athletes in traditionally male sports such as football, because the athletes will not equate the strength coach with an "extra" coach who is telling them yet another way to play their sport. Such an awareness by the athletes might be especially effective in helping athletes accept qualified female strength coaches as individuals whose main responsibility is not to coach them on football but to help prevent injuries and maximize athletic performance.

Future research should continue to explore athlete satisfaction with strength and conditioning coaches, considering

traditionally male or female sports as well as gender-neutral sports. The coach-athlete relationship is a reciprocal process (20); in other words, each influences the other. Additional areas of exploration are 1) the process by which a newly introduced strength and conditioning coach (both male and female) is accepted and respected by the athletes of their respective sport, 2) whether competency and personality overcome an initial bias by male athletes toward a female strength coach, and 3) the demand for and impact of strength and conditioning coaches as role models/mentors for their athletes. All of these areas of exploration could be accomplished through qualitative and quantitative studies.

With respect to the role models and mentor aspects of strength and conditioning coaches, one unique and important area of research would be exploring the experience of female athletes and coaches of color. Presently, very little research is available examining female African American experiences in quantity or quality (6). Therefore, this affords a significant opportunity for researchers to explore strength coach gender roles and a diversity voice within the field.

The ability of a strength coach to impact the lives of their athletes is especially relevant, considering Bruening's (5) report of how much a coach can influence an athlete and the fact that many female African American athletes feel they have a responsibility to give back to younger African American women by coaching and role modeling. Even though they may not have the same effect as their athletic coach counterparts, "a strength coach can have a significant influence on student-athletes, both psychologically and physiologically, as they mature" (5). Thus, the female African American strength coach provides a unique area of examination, especially in her potential ability to meaningfully impact the lives of other African American women.

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