

Differences in Male and Female Athletes and their Perceptions of an Ideal Coach with respect to  
Locus of Control, Competitiveness, Goal-orientation and Win-orientation

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For the final requirement of the partial completion of the  
Master of Science Degree in Applied Psychology  
with a concentration in Health Psychology

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## ABSTRACT

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Differences in Male and Female Athletes and their Perceptions of an Ideal Coach with respect to Locus of Control, Competitiveness, Goal-orientation and Win-orientation

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|----------------------------|--------------------|----------------|----------------|
| M.S. in Applied Psychology | Dr. James Byrd     | December, 2003 | 52 pages       |
| (Graduate Major)           | (Research Advisor) | (Month/Year)   | (No. of Pages) |

This report is submitted using the American Psychological Association Style Manual

(Name of Style Manual Used in this Study)

The current study examined differences between male and female athletes and their perceptions of an ideal coach. The study focused on internal vs. external locus of control, competitiveness, goal-orientation and win-orientation as a basis to determine possible differences in an ideal coach. An paired-samples t-test was run to test the similar-to-me effect that states that people will choose a leader or manager like themselves. 104 female and 98 male athletes participated in the study from track and field, baseball, softball and basketball. Results indicated that men preferred a more internal locus, competitive and win-oriented coach than women did. Analysis of the self-reports of the athletes reflected these same findings with men scoring significantly higher on internal locus of control, competitiveness and win-orientation. Analysis of the similar-to-me effect indicated that the athletes did not prefer a coach that is similar to themselves. Each variable in this analysis was significantly different at the .001 level from the ideal coach scale to the self-report scale. Findings thus indicate that men and women will prefer different coaches, but will not choose that ideal coach according to their own personality.

## ACKNOWLEDGEMENTS

First I would like to thank my committee. Without their help this project would be little more than a fantasy. I would like to thank all of the coaches and athletic directors who allowed me to address their athletes, especially those who were still in the final weeks of their championship seasons. I would like to thank the athletes who participated, especially those who did it out of their own time in weeks of championships and final exams as well. Finally, I would like to thank anyone close to me that had to put up with my mood swings during the pressure packed times during this project. Thank you all.

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## INTRODUCTION

The goal of many studies in early sport psychology research was to define what personality characteristics were associated with successful coaches (Hendry, 1969; Ogilvie, 1966; Patrow, 1971). Their studies involved qualitative personality assessments of swimming coaches and attempted to correlate these personality constructs with a measure of success (i.e., winning percentage). However, results indicated that coaches all seemed to possess similar personality characteristics (Hendry, 1969). A similar study attempted to correlate dogmatism and acceptance with coaching success with baseball and track coaches (Patrow, 1971). This study again yielded no significant differences in the personalities of the coaches involved. This result could be explained by the limitation inherent in using winning percentages as a criterion. Also, measures of success were loosely defined and one might argue that something like winning percentage is not the best measure of a coach's success. For example, the winning percentage of a new coach could be misleading if, for instance, they inherit a team with a losing record and help them to a winning record over a couple of years.

Although most would consider a coach more than just simply a leader, coaches carry many of the same roles and responsibilities of a leader. Early leadership research, just like coaching research, focused on identifying leadership traits. Early research on leadership traits was disappointing, finding that there was no single trait that consistently predicted leadership (Hendry, 1969). Some findings that have been found in general leadership literature are that leaders tend to be extroverted (Gibb, 1954; Holmes, Sholley & Walker, 1980; Martin, Gross & Darley, 1952), resistant to conformity pressure (Blake & Mouton, 1961), more trustworthy (Gordon, 1962), and adventurous (Cattell & Stice, 1953). However, Florin, Mednick and Wandersman (1986) point out that these characteristics are primarily related to situational

interests and demands. Because of this, research on leadership shifted to identifying more specific situational and dispositional personality traits (Bird, 1940; Stogdill, 1948). Similarly, Deaux and Wrightsman (1984) concluded that there is no evidence that any single variable distinguishes between leaders and followers.

Research in industrial and organizational psychology has investigated general leadership characteristics. In particular, a plethora of research has been conducted since the 1940s investigating whether certain personality characteristics are associated with great leaders (Bird, 1940; Greenblatt, 1984; Stogdill, 1948; Torbert, 1983). Although some may argue that coaches are not leaders, there is existing research that has framed coaches as “sports leaders” (Ogilvie and Tutko, 1966). These studies measured personality traits in observable, everyday moods and behaviors. Hendry (1974) also studied the similarities in personality dimensions of coaches and teachers. He found that coaches were similar in sociability, organizational abilities, and drive and aspirations. More recent research has argued that leadership instead lies in the perception of the followers (Lord & Maher, 1993).

Furthermore, in a recent review of literature, Mischel and Shoda (1995) pointed out that personality tends to be inconsistent across multiple situations, and therefore, inconsistent in predicting behavior. Their discussion points out that research has not supported the direct connection between traits and behaviors. There is some support for situational states and situational behavior, however they found that even this interaction will not produce the same result in another situation. Mischel and Shoda instead argue that psychological factors associated with each situation may be more applied to multiple situations. Further, they stress that informative, objective observations of traits and behaviors are more consistent across multiple situations, whether the evaluation be from an educated observer like a psychologist, or a peer,

friend or colleague. They point out that a psychologist or uneducated observer will use the same basic techniques to assess the person's traits. Therefore, it seems appropriate that coaches' personalities, when assessed by their athletes, would be an appropriate predictive measure for coaches.

*Some coaches are more successful*

In the modern age of coaching, the success of a coach has been primarily measured by wins and losses. Alumni, fans and administrators like winning programs. The more a program wins, the more money will roll in from the fans and alumni, which, in turn, helps the school.

The National Collegiate Athletic Association (NCAA) has tried to shift that sole emphasis on winning toward a more participatory direction with its three-division format. The creation of the NCAA Division III format with no scholarships or rewards in any fashion for its athletes has given schools, athletes and coaches a competitive sports environment that lacks the pitfalls of a scholarship program. Instead they place emphasis on participation, competitiveness and sportsmanship rather than gate receipts and alumni support (NCAA, 2002).

This has changed the emphasis on the coach as well. With winning less of an issue, coaches are expected to help enrollment by recruiting and retaining athletes in their programs. Since higher enrollments help smaller schools, coaches now help the universities by increasing their numbers.

In order to increase numbers and retain athletes, coaches must be more diverse in their skills and personality. The popular 1950's version of the "hard-nosed" coach might have won ball games for Vince Lombardi, but it does not always win friends. Coaches have now had to adapt their styles to be more "athlete-friendly" in order to keep more people happy. This may

also mean that the same personality traits of the coaches from the 1950's may not be as "successful" today.

### *Athletes' perception of coaches*

Recent research has found that self-report tests for personality have inconsistent results across multiple situations (Mischel & Shoda, 1995). Research attempting to fit self-reported traits with particular situations and behaviors have failed years ago in the late 1960's and early 1970's (Hendry, 1969; Ogilvie, 1966; Patrow, 1971). This means that measuring traits and correlating these with some type of success may be inconclusive and useless.

Research has found that the perception of traits by other people is fairly consistent over multiple situations (Lord & Maher, 1993; Mischel, 1973; Mischel & Shoda, 1995). This may hold true for athletes and coaches. Since we must now account for a coach's ability to relate to their athletes as a way of possibly recruiting and retaining athletes, it seems logical that an athlete's perception of their coach would be valuable in evaluating a coach's success. Furthermore, if one were to ask the athlete about the specific traits of their "ideal" coach, we may be able to better determine what an "ideal coach" would be.

Research that delineates the perceptions of athletes on their coaches is nearly non-existent. However, this type of research has been done when measuring perceptions of leadership in supervisor/worker relationships (Lord & Maher, 1993). Expecting similar replies, we should find that the athlete's perception of their "ideal" coach would be consistent with a successful coach.

*The attraction paradigm and the “similar-to-me” effect*

In the late 1960's and early 1970's, research on the attraction paradigm, also known as the “similar-to-me” effect (Byrne, 1971) found that, in general, people tend to choose to associate with people who have the same characteristics as themselves (Byrne, 1961, 1969, 1971; Byrne, London, & Reeves, 1968; Ettinger, Nowicki, & Nelson, 1970; Jackson & Masscaro, 1971). Studies indicated that people are attracted to those with similar attitudes because having one's attitudes validated may be reinforcing (Byrne, 1961, 1969, 1971; Griffitt, 1968a, b).

Some research in industrial and organizational psychology has investigated the similarity-attraction paradigm. For example, Allinson, Armstrong, and Hayes (2001) investigated the similarity-attraction paradigm in terms of leader-member exchange relationships. They found that the degree of difference between leader and member cognitive styles may influence the nature of the personal relationship or congruence between them. Similarly, Perry, Kulik, and Zhou (1999) investigated the similarity-attraction paradigm in terms of its effects on subordinate-supervisor age differences. They found that directional age effects were more significant than non-directional effects on work outcomes. This means that young employees were more likely to have work change behaviors when they had older bosses, and vice versa.

I argued that we can extend these findings to the relationship between athletes and coaches. If the similarity-attraction paradigm holds true for member/supervisory relationships, then I contend that we would find the same for the athlete/coach relationship. Therefore, if male and female athletes have tendencies toward certain traits, I contend that they will prefer a coach with the same traits.

H1: Male and female athletes will rate their ideal coaches similar to the way they will rate themselves.

### *Differences in male and female perceptions*

Men and women have generally scored differently on personality measures since the beginning of personality psychology (Bird, 1940; Stogdill, 1948). Research has found this to hold true for locus of control, competitiveness, goal-orientation and win-orientation as well.

#### *Locus of Control.*

Locus of control is a social-cognitive construct that views the probability of a behavior occurring based on a function of individual expectancies regarding the subjective values of an intended response (Rotter, 1966). According to Rotter, individuals can be differentiated between having an internal or external locus of control. Internal locus of control refers to an attribution of outcomes and causes to be based upon the person's own efforts. External locus of control bases its reinforcement as a function of external cues from the environment (i.e. luck, weather, etc.).

In a study of male and female volleyball captains, male athletes were found to be significantly more internal, and captains were found to be more internal in general (Aguglia & Sapienza, 1984). Also, in a study of college students, women tended to be significantly more external in their locus of control (Rao & Murthy, 1984). Thus, I expected that men would rate their ideal coaches toward an internal locus of control, higher than women. Women would also be expected to rate their ideal coach higher than men in external locus of control.

H2a: Male athletes will rate their ideal coaches as more internally-oriented.

H2b: Female athletes will rate their ideal coaches as more externally-oriented.

#### *Competitiveness.*

Martens (1976) defined competitiveness as a disposition to strive for satisfaction when making comparisons with some standard of excellence in the presence of evaluative others in sport. Competition has been deemed as the dominant achievements situation for sport (Gill & Deeter, 1988) and has been considered to be a sport-specific type of achievement motivation (Gill, 1993).

Helmreich and Spence (1978) found that both male and female athletes score higher on measures of competitiveness compared to non-athletes. However, male athletes tend to score higher on competitiveness than female athletes (Braathen & Svebak, 1992; Gill & Deeter, 1988; Hellandsig, 1998). From this evidence, I hypothesized that men will want more competitive coaches than females.

H3: Male athletes will rate their ideal coaches as more competitive than their female counterparts.

#### *Goal Orientation.*

A goal orientation may also be more specific to certain athletes. Goal orientations reflect individual differences in assigning subjective meaning to outcomes (Ames, 1984; Maehr & Braskamp, 1986). Svebak and Kerr (1989) found evidence of a correlation between goal orientation and endurance athletes. Therefore, it may be that athletes with a specific tendency toward a goal orientation may tend to want a coach that is more goal-oriented as well. Research by Gill and her associates (Gill, 1986; Gill & Deeter, 1988; Gill & Dzewaltowski, 1988; Kelley, Hoffman & Gill, 1990) have also found that female athletes are more goal-oriented than male athletes.

Duda and her associates (Chaumeton & Duda, 1988; Duda, 1988; Duda, 1989a; Duda, 1989b; Duda & Allison, 1990; Newton & Duda, 1993; White & Duda, 1994; Duda, 1995; Jagacinski & Duda, 2001) have separated goal-orientation into task-orientation and ego-orientation. In task-orientation, importance is placed on skill mastery and personal improvement in sport. Ego orientation involves enhancing oneself through a social-comparative perspective. They have revealed that intercollegiate athletes, in general, are more task-oriented than their high school, dropout and non-participant counterparts (Duda, 1989a). It was also found that female athletes were more task-oriented in their goals, which again means that their goals are oriented toward skills and improvement (White & Duda, 1994). Male athletes were found to be more ego-oriented, or were more concerned with social status and feeling good about themselves. Also, goal perspectives varied significantly as a function of sex and previous competitive sport involvement (Duda, 1988).

Research has thus shown that female athletes are generally more goal-oriented, particularly task oriented. Therefore, I expected that women would want more goal-oriented coaches, and that men will be less inclined to want a goal-oriented coach.

H4: Female athletes will rate their ideal coaches as more goal-oriented than male athletes.

#### *Win Orientation*

Win orientation is defined as a person's basis for success as dependent upon winning as an outcome. Win orientation is a fairly new concept in sport psychology, therefore not a lot of research has explored this construct. Win orientation has consistently separated athletes from non-athletes in that athletes are more win oriented than their non-athletic counterparts (Kang, Gill, Acevedo & Deeter, 1990; Gill, Kelley, Martin & Caruso, 1991).

Gender differences have also been found with respect to win orientation. Male athletes have scored higher on win orientation than female athletes (Gill, 1988; Gill & Dziewaltowski, 1988; Gill, Kelley, Martin & Caruso, 1991; Gill, Williams, Dowd, Beaudoin, 1996). This evidence has not been shown in all studies (Hayashi & Weiss, 1994; Skordilis, Koutsouki, Asonitou, Evans, Jensen & Wall, 2001). Hayashi and Weiss (1994) analyzed orientations among Anglo-American and Japanese marathon runners. They found no gender differences for win-orientation. Skordilis, et al. (2001) analyzed wheelchair adult athletes and gender differences in orientation. Again, no gender differences were found with respect to win-orientation. However, there is still a preponderance of evidence that men are more win-oriented than women.

It is important to note that Gill and Deeter (1988) found correlations between competitiveness and both win ( $r=.70$ ,  $p<.001$ ) and goal ( $r=.58$ ,  $p<.001$ ) orientation in their third sample ( $n=266$ ). Win and goal orientation were not correlated with each other. This suggests that win and goal orientation are independent constructs. Furthermore, because men are more win-oriented than women, I expected that men would want more win-oriented coaches than women.

H5: Male athletes will rate their ideal coaches as more win-oriented than female athletes.

### *Summary of hypotheses*

H1: Male and female athletes will rate their ideal coaches similar to the way they will rate themselves.

H2a: Male athletes will rate their ideal coaches as more internally-oriented.

H2b: Female athletes will rate their ideal coaches as more externally-oriented.

H3: Male athletes will rate their ideal coaches as more competitive than their female counterparts.

H4: Female athletes will rate their ideal coaches as more goal-oriented than male athletes.

H5: Male athletes will rate their ideal coaches as more win-oriented than female athletes.

## METHOD

### *Participants*

Participants in the study were 202 (98 male, 104 female) athletes from mid-sized NCAA Division III universities in the upper Midwest. Coaches from women's and men's basketball, women's and men's track and field, women's and men's cross country, baseball, and softball were contacted and personal meetings with the teams were set up for data collection with those teams who replied.

### *Materials*

The author constructed the Ideal Coach Scale based on previous measures in the sports psychology literature. Based upon the Sports Orientation Questionnaire (SOQ) developed by Gill and Deeter (1988) and Rotter's (1966) I/E Locus of Control (LOC) scale, an original scale was developed to measure the personality traits of an athlete's "ideal" coach. The questions were formatted to ask the athlete about their perception of an "ideal coach". They were asked to think of the qualities that they would like to have in an ideal coach. The questions were formatted as, "Your ideal coach would..." The items are all seven-point Likert questions ranging from strongly disagree (1) to strongly agree (7). The seven-point scale was chosen because it offers opportunities for more specific answers. The second portion of the survey switches the same questions around to measure self-perceptions of the same attributes. The same seven-point Likert scale will be used for the self-report scale as well. The measure used for data collection in the study can be found in Appendix A.

*The measure has the following subscales:*

Locus of Control - Rotter (1966) developed a 60-item locus of control questionnaire that measured internal vs. external locus of control. The scale was designed with six “filler” questions that were random questions, unrelated to locus of control. Also, Rotter’s focus on many of the items were based on government and world issues, asking how much control a person felt they had over the issues of the world. With college-level athletes, these questions might be taken out of context. These scale items are unrelated to sport and may confound the data if they are taken out of context. Therefore, it seems appropriate to leave out the filler questions, the questions related to world issues and those related to teaching. This leaves the questionnaire at an appropriate subject matter for sport. The scale, minus those thrown out, now has 30 questions, 15 related to an internal locus, 15 related to an external locus.

Competitiveness, Goal-orientation and Win-Orientation - Gill and Deeter (1988) developed a scale called the Sport Orientation Questionnaire (SOQ) to measure competitiveness, goal-orientation and win-orientation. The SOQ was developed to determine achievement motivation and predict achievement in athletes. The items are in Likert format ranging from “strongly agree” to “strongly disagree”. Each subscale of the SOQ has representation in the instrument for the current study. Cronbach’s Alpha on the scale were .94 for competitiveness, .85 for win orientation and .79 for goal orientation. The test-retest reliabilities for the three subscales were .89 for competitiveness, .82 for win orientation and .73 for goal orientation. The competitiveness subscale consists of 13 items, and both goal and win orientation subscales have six items.

### *Procedure*

Three institutions' athletic directors were originally contacted and asked for permission to visit their schools. Some coaches were then contacted via phone and follow-up emails and asked if the researcher would be able to visit their practices, workouts or team meetings. Then, specific times were set up according to availability of the team and the researcher, and also convenience.

The data were collected via paper in person by the researcher. Each athlete filled out the 100+ item survey and handed it to the researcher who had a basket for them to put the surveys in. Athletes were contacted in team meetings or in competitive environments such as meets or tournaments.

### *Data analysis*

Since I developed a new ideal coach scale, I used a factor analysis to identify and extract weak scale items and to realign the data in factors reflecting the personality constructs in question. I conducted an exploratory factor analysis with oblimin rotation to test the hypotheses that the scales reflect similar factors to the original scales. No items with Eigenvalues under .200 were accepted as part of my final scale. Only items that loaded on the original factors were used for the final analysis.

The Ideal Coach Scale items were made to be congruent with the scale items from the self-report LOC scale items to maintain cross comparison of the two separate scales. The original self-report scale items were used as a basis for the new factor comparison. I conducted separate factor analyses using the male and female athlete samples.

In order to test the first hypothesis, which compares the ideal coach vs. the athlete themselves, I selected paired-sample t-tests to determine any significant differences in the separate subscales. This analysis tested the “similar-to-me” effect from earlier research. My hypothesis was that:

H1: Male and female athletes will rate their ideal coaches similar to the way they will rate themselves.

To test the rest of the hypotheses, two analysis of variance (ANOVA) were run to test the hypotheses. Specifically, the first ANOVA was used to determine significant difference between male and female athletes and their perceptions of an ideal coach. The specific hypotheses are listed below:

H2a: Male athletes will rate their ideal coaches as more internally-oriented.

H2b: Female athletes will rate their ideal coaches as more externally-oriented.

H3: Male athletes will rate their ideal coaches as more competitive than their female counterparts.

H4: Female athletes will rate their ideal coaches as more goal-oriented than male athletes.

H5: Male athletes will rate their ideal coaches as more win-oriented than female athletes.

## RESULTS

### *Factor Analyses*

Due to the creation of new scales, a factor analysis was completed in order to take out poor items and create stronger, more useful data. One important point to remember is that analysis of the similar-to-me effect accounts for the variance between the athlete's perception of an ideal coach and their self-report. Therefore, the items must be consistent across both scales to maintain this relationship. Means, standard deviations and alpha scores for the scales for female and male athletes can be found in tables 1.1 and 1.2. The factor matrices and loadings for all participants, female athletes and male athletes can be found in Appendixes B1, B2 and B3, respectively.

Upon running the original factor analysis, it was discovered that the original self-report scales stayed fairly consistent with the original findings of the scale creators (Gill & Deeter, 1988; Rotter, 1966). However, the new scale developed to find the ideal coaching personalities was much less consistent. Therefore, three different factor analyses were run; male and female athletes combined (1), female athletes (2), and male athletes (3). Items that were weak or cross-loaded were then excluded for the final analyses.

### *Athlete's ideal coach scale - internal and external locus of control*

The factor analyses extracted two factors accounting for most of the variance. Consistently, five items were cross-loaded, loaded on the wrong factor or weaker than .200. Item numbers 7, 8, 9, 20 and 21 were not included for the final analyses. Items 7, 9 and 21 were originally external locus items and 8 and 20 were internal locus items. When removed, the scale

reliability for the external locus of control was .79 for ten items. The new scale items for internal locus of control had a reliability of .66 for 11 items.

*Athlete's ideal coach scale – Sport Orientation Questionnaire*

Consistently, the three factor analyses showed support for the original three-factor structure. Interestingly, analysis two with only female athletes had strong support for two factors, which combined competitiveness and goal-orientation, with the original win-orientation items remaining on the same factor. The third factor analysis with all male athletes also showed some support for two factors. However, the combined factors were competitiveness and win-orientation with the original goal-orientation items remaining separate. The first analysis with all athletes combined showed the original three-factor structure.

The coach's competitiveness scale had a reliability of .91 for 13 items. The coach's goal-orientation scale had a reliability of .73 for 6 items. The coach's win-orientation scale had a reliability of .86 for 6 items.

*Self-Report - internal and external locus of control*

The factor analyses extracted two factors. Again, five items were consistently weak in the analysis. Items 7, 9 and 21 were very weak items. However, to maintain consistency and continuity in the data analyses, the same items (7, 8, 9, 20, 21) were withdrawn from the original items. The new internal locus scale reliability is .82 for 10 items. The new internal locus scale had a reliability of .74 with 11 items.

*Self-Report – Sport Orientation Questionnaire*

The three factor analyses all extracted three factors. Just as with the ideal coach scale, the high inter-correlation between the variables created mixed factors. However, the original factors consistently loaded together. Therefore, the entire scale is used in the final analyses.

The competitiveness scale had a reliability of .94 for 13 items. The goal-orientation scale had a reliability of .87 for 6 items. The win-orientation scale had a reliability of .90 for 6 items. Factor loadings for all three factor analyses can be viewed in Appendixes B1, B2, and B3.

Table 1

Factor Descriptive Statistics for the Female Factors

| Factor Names     | IC/SR | Mean  | Standard Deviation | Alpha |
|------------------|-------|-------|--------------------|-------|
| Internal LOC     | IC    | 32.66 | 7.98               | .72   |
|                  | SR    | 37.58 | 9.67               | .72   |
| External LOC     | IC    | 53.49 | 6.72               | .63   |
|                  | SR    | 52.53 | 7.58               | .80   |
| Competitiveness  | IC    | 73.64 | 10.84              | .89   |
|                  | SR    | 75.21 | 11.42              | .92   |
| Goal-Orientation | IC    | 35.23 | 4.69               | .72   |
|                  | SR    | 36.92 | 4.23               | .81   |
| Win-Orientation  | IC    | 24.31 | 7.32               | .81   |
|                  | SR    | 26.55 | 7.81               | .89   |

Note: IC = Ideal Coach Scale, SR = Self-Report Scale

Table 2

## Factor Descriptive Statistics for the Final Male Factors

| Factor Names     | IC/SR | Mean  | Standard Deviation | Alpha |
|------------------|-------|-------|--------------------|-------|
| Internal LOC     | IC    | 38.79 | 9.06               | .79   |
|                  | SR    | 41.51 | 9.28               | .77   |
| External LOC     | IC    | 53.34 | 6.98               | .69   |
|                  | SR    | 51.75 | 7.62               | .83   |
| Competitiveness  | IC    | 77.84 | 10.19              | .92   |
|                  | SR    | 80.04 | 11.76              | .95   |
| Goal-Orientation | IC    | 34.79 | 4.89               | .75   |
|                  | SR    | 37.01 | 5.39               | .91   |
| Win-Orientation  | IC    | 30.68 | 6.99               | .86   |
|                  | SR    | 32.45 | 7.13               | .87   |

Note: IC = Ideal Coach Scale, SR = Self-Report Scale

### Descriptive Statistics

There were 202 total subjects (98 male, 104 female). The mean age of the subjects was 20.35 years old with a range of 18 to 24 years. There were 66 freshman, 44 sophomores, 46 juniors and 35 seniors for eligibility in their current sport. 26 of the athletes were baseball players (male), 19 softball players (female), 1 basketball player (female) and 151 track and field athletes (69 male, 82 female). When asked if they would play better for a coach they like, the mean response was 6.00 (males=5.90, females=6.09) on a 1 to 7 scale.

To simplify the results, the descriptive statistics, including means, standard deviations, standard errors, minimum and maximum responses as well as frequencies can be found in Appendix C. An Inter-item correlation Matrix can be found in Appendix D.

*Similarities in scores on the ideal coach scale and the self-report scale*

To test hypothesis 1, which stated that there would be no significant differences between the athlete's ideal coach rating and their self-reported score, two paired-samples t-tests were conducted. Male and female athletes were analyzed separately in the two t-tests. Results indicated that hypothesis 1 was not supported. This means that athletes do not necessarily choose an ideal coach according to their own traits.

For male athletes, internal locus of control,  $t(97) = -3.73$ ,  $p < .01$  and external locus of control,  $t(97) = 2.61$ ,  $p < .05$  were significantly different. Similarly, competitiveness,  $t(97) = -2.62$ ,  $p < .01$ , goal-orientation,  $t(97) = -5.35$ ,  $p < .01$ , and win-orientation,  $t(97) = -3.43$ ,  $p < .01$ , were also significantly different. This went against hypothesis 1, as well as previous research, which found that there should be no difference between the athlete and their ideal coach.

For female athletes, there were some similar results. For internal locus of control,  $t(103) = -7.38$ ,  $p < .01$ , goal-orientation,  $t(103) = -4.11$ ,  $p < .01$ , and win-orientation,  $t(103) = -3.50$ ,  $p < .01$  were all significantly different. However, for external locus of control,  $t(103) = 1.47$ , ns, and competitiveness,  $t(103) = -1.69$ , ns, were not different. This hypothesis was only partially supported for female athletes in this analysis.

*Gender differences in perceptions of an ideal coach*

To test the remaining hypotheses, which, in summary, stated that men would rate their ideal coach as having a more internal locus of control, more competitive, and more win-oriented than women and women would prefer an ideal coach with a higher external locus and more goal-oriented than men, an ANOVA was conducted. Results of this analysis are summarized in Table 2. The results indicated that Hypotheses 2a, 3 and 5 were supported. For internal locus of

control, men and women differed significantly at the .01 level. Men and women also differed significantly on the competitiveness and win-orientation scale at the .01 level. However, H2b and H4 were not supported in this analysis. For goal-orientation, there was no difference and the athletes also did not differ for external locus of control. This indicates that male athletes would prefer a coach who scores higher in competitiveness and win-orientation and internal locus of control than female athletes. However, with respect to external locus of control and goal-orientation, male and female athletes did not differ, indicating that male and female athletes prefer those traits equally as much. The ANOVA values are expressed in Table 3.

Table 3

## 2 X 2 Analysis of Variance for Gender Comparison for ideal coach scale variables

| Source           | <i>Between/<br/>Within</i> | <i>df</i> | <i>Mean<br/>Square</i> | <i>F</i> | <i>p</i> |
|------------------|----------------------------|-----------|------------------------|----------|----------|
| Internal LOC     | B                          | 1         | 1899.77                | 26.152** | .000     |
|                  | W                          | 200       | 72.64                  |          |          |
| External LOC     | B                          | 1         | 1.09                   | .023     | .879     |
|                  | W                          | 200       | 46.91                  |          |          |
| Competitiveness  | B                          | 1         | 887.37                 | 7.999**  | .005     |
|                  | W                          | 200       | 110.93                 |          |          |
| Goal-orientation | B                          | 1         | 9.55                   | .417     | .519     |
|                  | W                          | 200       | 22.90                  |          |          |
| Win-orientation  | B                          | 1         | 2047.45                | 39.941** | .000     |
|                  | W                          | 200       | 51.26                  |          |          |

Note. \* $p < .05$ , \*\* $p < .01$

Table 4

## Summary of Hypotheses Results

| <i>Hypothesis</i>   | <i>Supported</i> |
|---|------------------|
| H1: Male and female athletes will score similarly on their perceptions of an ideal coach and their self-reported traits | Partial          |
| H2a: An ideal coach for a male athlete will be higher in internal locus of control than a female athlete                | Yes              |
| H2b: An ideal coach for a female athlete will be higher in external locus of control than a male athlete                | No               |
| H3: An ideal coach for a male athlete will be higher in competitiveness than a female athlete                           | Yes              |
| H4: An ideal coach for a female athlete will be higher in Goal-orientation than a male athlete                          | No               |
| H5: An ideal coach for a male athlete will be higher in Win-orientation than a female athlete                           | Yes              |

## DISCUSSION

### *Factor analyses and scale building*

Due to the nature of the new scales, I was forced to create factors based upon a thorough data reduction. Therefore, factor analyses run with all athletes, as well as male and female athletes separate, to identify weak scale items. Also, I was able to write scale scores to help analyze the differences more extensively. One aspect to keep in mind was that there was a necessity to keep like items from the ideal coach scale and the self-report scales the same to maintain some of the cross-over effects that we were analyzing.

The most difficult scales to reduce were the locus of control subscales. The original scale by Rotter (1966) was old and outdated and more particularly not specific to sport. Therefore there were items extracted immediately to shorten the scale, and to take out items that addressed school settings. After the factors were compared, five more items were thrown out of the two scales. These items were consistently cross-loading and loading on the wrong factors. There were 11 internal items and 10 external items that came out the final scale for analysis. I then took the mean score for the internal items and the mean from the external items and added them to make two separate and distinct factors.

For the Sports Orientation Questionnaire (Gill & Deeter, 1988) subscales, I looked at the loadings of men and women and found some interesting information. When looking at the male athletes alone, two factors were taken from the analysis. They separated into the original competitiveness scale combined with the win-orientation items for one factor, and then the goal orientation items for the other. For the women, I found two factors again but this time the competitiveness items and the goal-orientation items were together, with the win-orientation as

the second factor. The original factors for the SOQ by Gill and Deeter (1988) were all highly correlated items, which make the factors difficult to tease out. In this case, the factors were so highly correlated that they looked very much alike. However, because the original factors were a good fit when men and women were separated, to not include factors, or create new factors, was not going to give a proper indication of the differences between men and women. Therefore, the original items were kept intact during the final analyses. The scale items were added to create scale total scores for ease of analysis.

#### *Analyzing the similar-to-me effect*

In order to test the first hypothesis, I used a paired-samples t-test to calculate differences between two variables within the same subject. My hypothesis was that male and female athletes will have similar personality scores to that of their ideal coach. In most instances, the actual personality of the athlete was significantly different from that of their ideal coach. In fact, only the women rated their ideal coach as similar to themselves for external locus of control and competitiveness. Therefore, hypothesis 1 was only partially supported.

This actually provided an interesting dynamic in the analysis. The theoretical bases for the hypotheses were supported for some of the constructs. This may prove the assumption that athletes would tend to choose an ideal coach that is similar to them, but not because they would rate themselves the same way. This could be that the stereotype of particular athletes is more true than the actual reported characteristics. However, the difference may be from a socially desirable context. Athletes may choose a coach that they want, but rate themselves differently due to what they assume they “should” be. On the contrary, athletes may rate an ideal coach according to what they feel a coach should be like, and then rate themselves according to their own feelings.

This analysis could not detect these differences and future analysis must provide more evidence to these unexpected variances.

*Differences between gender and their perception of an ideal coach*

An ANOVA was used to analyze the differences between male and female athletes and their perceptions of an ideal coach. My hypotheses, in summary, stated that men would want coaches with an internal locus of control, high in competitiveness and win-orientation and low in goal-orientation. Women, on the other hand, were hypothesized to want an ideal coach with a more external locus, lower in competitiveness and win-orientation than men and higher in goal-orientation than men. The analysis showed that there was a difference between men and women on all but goal-orientation. In fact, men scored higher on internal locus of control, competitiveness and win-orientation and all were different at the .001 level of significance. This supports all of my hypotheses except goal-orientation. In fact, women did score higher, however not significantly so. Therefore, I could not reject the null for goal-orientation.

This provided evidence that male and female athletes prefer coaches with different attitudes, personalities and traits. It may also mean that male and female athletes may react better to a coach with similar characteristics. Furthermore, an athlete that reacts better to a coach that they prefer, they may also perform better. This analysis did not cover the effects of the ideal coach-performance relationship, however this relationship could be researched in the future.

This may also provide evidence that certain coaching characteristics are more effective for certain athletes. This could have been pertaining to particular sports, or individual athletes. Further analysis should be done to determine whether this can be generalized to a particular

group, or if this is strictly an individual difference. A second analysis with these same data could indicate sport specific tendencies for male and female athletes.

### *Possible error*

Any problems that we had with my data may have been due to the data collection process. Although athletes are hard workers, being a former athlete has shown me that athletes are not very approachable when it comes to psychological research. Furthermore, I was unable to get the athletes outside of a team meeting, or competition, and therefore they may not have been that willing to concentrate on the task at hand.

Another reason that the data may have been skewed in data collection was the length of the survey. Many of the athletes complained of the lengthy survey. This may mean that the answers given were either influenced by other people around them, they may have lost their concentration when seeing the length of the survey, or they may have been hesitant to participate. They may have also failed to read certain items in order to go faster.

All of this may have attributed to the differences between the ideal coach scale and the self-report scale. Since the ideal coach scale was first, the athletes may have been more focused and may have been more interested. As the scale became longer, the athletes could have drifted off, which could have attributed to the differences in the scores on the similar scales.

### *Conclusions*

There is still much to learn about the differences between men and women in sport. This study, however, does support the idea that sport psychologists might begin to concentrate on the differences between male and female athletes, particularly with respect to coaching. This

information will also be important to athletic directors and hiring boards for coaches. Personality has not been an accurate predictor of performance in managers, but it may be more important to find out what type of coach would be compatible with the athletes that are already there. This may mean that current athletes may be an integral reference in the selection of a coach.

Still left undetermined is the reason for such a difference between men and women and the coach they prefer. It seems obvious that differences in personality would equate to the differences in the coach that an athlete would choose. However, this research clearly illustrates that this is not the case.

Furthermore, there are only five dimensions of personality addressed in this research. There is still a plethora of personality traits that may be addressed in this research. The field of sport psychology has not explored this area of research enough to rule out anything.

Finally, the aspects of female athletes and coaching need to be addressed in research more thoroughly. There are obvious differences between male and female athletes, and most certainly there are differences in the best approach to coaching these athletes. The most popular comment by coaches in passing when discussing this research was that men and women are completely different athletes to coach. Therefore, it only seems productive, if nothing else, to research those differences further. With the emergence of professional female sports becoming more mainstream, it also seems very lucrative to do this type of research as well.

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### **Appendix A: Consent Form and Measure**

This is the administered consent form and measure of the study. The Ideal Coach scales are first and were developed and modified from their original format by the author. The Self-Report scales are last and they are modified versions of the original IE Locus of Control Scale developed by Rotter (1966) and the Sport Orientation Questionnaire developed by Gill and Deeter (1988).

## Informed Consent

We are asking NCAA Division III athletes about their perceptions of an “ideal” coaching personality. The survey is designed to find out what you like in coaches with respect to their personality, and also, find out what your personality is like. There are no risks to participation, however, you may benefit in the future from this research in future coaching selection, coaching strategies, more personalized knowledge of Division III athletes. Your athletic director will receive a summary of the data if you so inquire. However, the data will not show your individual answers, nor will your coach or athletic director have access to your individual ratings. Your participation is completely voluntary and you may stop at any time. By filling this out and handing it in, you are giving your permission for us to use your data in the survey results. You will not be contacted further, nor will we be able to identify you in any way. Please do not write your name on any portion of the survey. For more information, you may contact the researcher directly at 715/232-9280 or by email at [johnsonjo@post.uwstout.edu](mailto:johnsonjo@post.uwstout.edu). You may also contact the Internal Review Board at UW-Stout and its director, Sue Foxwell, at 715/232-1126 or by email at [foxwells@uwstout.edu](mailto:foxwells@uwstout.edu).

Gender: Male\_\_\_\_\_ Female\_\_\_\_\_

Sport: \_\_\_\_\_

Age: \_\_\_\_\_

Year of eligibility: \_\_\_\_\_ (Sport you are currently in)

### **Would you say you play better for a coach that you like?**

|                      |   |   |         |   |   |   |                   |
|----------------------|---|---|---------|---|---|---|-------------------|
| Strongly<br>Disagree |   |   | Neutral |   |   |   | Strongly<br>Agree |
| 1                    | 2 | 3 | 4       | 5 | 6 | 7 |                   |

The first part of this survey is going to ask you, the athlete, what your perceptions are with respect to the **“perfect” or “ideal” coach**. Please fill out the survey with your first reaction or thought on a scale from one to seven. One stands for strongly disagree, seven stands for strongly agree.

The second portion of the survey asks questions about you. Fill out the scale with respect to **how you are** with the same scale as the first section.

**Modified Rotter's I-E Scale (Athlete's Perception Scale; Rotter, 1966)**

|   | <b>Strongly Disagree</b> |   | <b>Neutral</b> |   |   | <b>Strongly Agree</b> |   |
|---|--------------------------|---|----------------|---|---|-----------------------|---|
| 1. Your ideal coach would believe that many of the unhappy things in people's lives are partly due to bad luck.   | 1                        | 2 | 3              | 4 | 5 | 6                     | 7 |
| 2. Your ideal coach would believe that people's misfortunes result from the mistakes they make.   | 1                        | 2 | 3              | 4 | 5 | 6                     | 7 |
| 3. Your ideal coach would believe that in the long run people get the respect they deserve in this world.   | 1                        | 2 | 3              | 4 | 5 | 6                     | 7 |
| 4. Your ideal coach would believe that unfortunately, an individual's worth often passes unrecognized no matter how hard he or she tries.               | 1                        | 2 | 3              | 4 | 5 | 6                     | 7 |
| 5. Your ideal coach would believe that without the right breaks one cannot be an effective leader.  | 1                        | 2 | 3              | 4 | 5 | 6                     | 7 |
| 6. Your ideal coach would believe that capable people who fail to become leaders have not taken advantage of their opportunities.                       | 1                        | 2 | 3              | 4 | 5 | 6                     | 7 |
| 7. Your ideal coach would believe that no matter how hard you try some people just don't like you.  | 1                        | 2 | 3              | 4 | 5 | 6                     | 7 |
| 8. Your ideal coach would believe that people who can't get others to like them don't understand how to get along with others.                          | 1                        | 2 | 3              | 4 | 5 | 6                     | 7 |
| 9. Your ideal coach would believe that what is going to happen will happen.   | 1                        | 2 | 3              | 4 | 5 | 6                     | 7 |
| 10. Your ideal coach would believe that trusting to fate has never turned out as well as making a decision to take a definite course of action.         | 1                        | 2 | 3              | 4 | 5 | 6                     | 7 |
| 11. Your ideal coach would believe that becoming a success is a matter of hard work, luck has little or nothing to do with it.                          | 1                        | 2 | 3              | 4 | 5 | 6                     | 7 |
| 12. Your ideal coach would believe that getting a good job depends mainly on being in the right place at the right time.                                | 1                        | 2 | 3              | 4 | 5 | 6                     | 7 |
| 13. Your ideal coach would believe that when they make plans, they're almost certain that they can make them work.                                      | 1                        | 2 | 3              | 4 | 5 | 6                     | 7 |
| 14. Your ideal coach would believe that it is not wise to plan too far ahead because many things turn out to be a matter of good or bad fortune anyhow. | 1                        | 2 | 3              | 4 | 5 | 6                     | 7 |
| 15. Your ideal coach would believe that getting what they want has little or nothing to do with luck.   | 1                        | 2 | 3              | 4 | 5 | 6                     | 7 |
| 16. Your ideal coach would believe that many times we might as well decide what to do by flipping a coin.   | 1                        | 2 | 3              | 4 | 5 | 6                     | 7 |
| 17. Your ideal coach would believe that who gets to be the boss often depends on who was lucky enough to be in the right place first.                   | 1                        | 2 | 3              | 4 | 5 | 6                     | 7 |
| 18. Your ideal coach would believe that getting people to do the right thing depends upon ability, luck has little or nothing to do with it.            | 1                        | 2 | 3              | 4 | 5 | 6                     | 7 |
| 19. Your ideal coach would believe that most people don't realize the extent to which their lives are controlled by accidental happenings.              | 1                        | 2 | 3              | 4 | 5 | 6                     | 7 |
| 20. Your ideal coach would believe that there really is no such thing as luck.  | 1                        | 2 | 3              | 4 | 5 | 6                     | 7 |
| 21. Your ideal coach would believe that, in the long run the bad things that happen to us are balanced by the good ones.                                | 1                        | 2 | 3              | 4 | 5 | 6                     | 7 |
| 22. Your ideal coach would believe that most misfortunes are the result of lack of ability, ignorance, laziness or all three.                           | 1                        | 2 | 3              | 4 | 5 | 6                     | 7 |
| 23. Your ideal coach would believe that many times I feel that I have little influence over the things that happen to me.                               | 1                        | 2 | 3              | 4 | 5 | 6                     | 7 |

|  | <b>Strongly Disagree</b> |   | <b>Neutral</b> |   |   | <b>Strongly Agree</b> |   |
|--|--------------------------|---|----------------|---|---|-----------------------|---|
| 24. Your ideal coach would believe that it is impossible to believe that chance or luck plays an important role in their life. | 1                        | 2 | 3              | 4 | 5 | 6                     | 7 |
| 25. Your ideal coach would believe that what happens to them is their own doing.   | 1                        | 2 | 3              | 4 | 5 | 6                     | 7 |
| 26. Your ideal coach would believe that sometimes they don't have enough control over the direction their life is taking.      | 1                        | 2 | 3              | 4 | 5 | 6                     | 7 |
| <b>Modified Sports Orientation Questionnaire (Athlete's Perception Scale; Gill &amp; Deeter, 1988)</b>                         | <b>Strongly Disagree</b> |   | <b>Neutral</b> |   |   | <b>Strongly Agree</b> |   |
| 1. Your ideal coach is a competitive person.   | 1                        | 2 | 3              | 4 | 5 | 6                     | 7 |
| 2. Performing to the best of their ability is very important to your ideal coach.  | 1                        | 2 | 3              | 4 | 5 | 6                     | 7 |
| 3. The best way to determine your ideal coach's ability is when they set a goal and try to reach it.                           | 1                        | 2 | 3              | 4 | 5 | 6                     | 7 |
| 4. Your ideal coach tries their hardest to win.  | 1                        | 2 | 3              | 4 | 5 | 6                     | 7 |
| 5. Your ideal coach is a determined competitor.  | 1                        | 2 | 3              | 4 | 5 | 6                     | 7 |
| 6. Your ideal coach hates to lose.   | 1                        | 2 | 3              | 4 | 5 | 6                     | 7 |
| 7. Your ideal coach wants to be the best every time they compete.  | 1                        | 2 | 3              | 4 | 5 | 6                     | 7 |
| 8. Your ideal coach has most fun when they win.  | 1                        | 2 | 3              | 4 | 5 | 6                     | 7 |
| 9. Your ideal coach looks forward to competing.  | 1                        | 2 | 3              | 4 | 5 | 6                     | 7 |
| 10. Scoring more points than my opponent is very important to your ideal coach.  | 1                        | 2 | 3              | 4 | 5 | 6                     | 7 |
| 11. Your ideal coach is most competitive when they try to achieve personal goals.  | 1                        | 2 | 3              | 4 | 5 | 6                     | 7 |
| 12. Reaching personal performance goals is very important to your ideal coach.   | 1                        | 2 | 3              | 4 | 5 | 6                     | 7 |
| 13. Your ideal coach thrives on competing.   | 1                        | 2 | 3              | 4 | 5 | 6                     | 7 |
| 14. Your ideal coach's goal is to be the best coach possible.  | 1                        | 2 | 3              | 4 | 5 | 6                     | 7 |
| 15. Your ideal coach enjoys competing against others.  | 1                        | 2 | 3              | 4 | 5 | 6                     | 7 |
| 16. The only time your ideal coach is satisfied is when they win.  | 1                        | 2 | 3              | 4 | 5 | 6                     | 7 |
| 17. Your ideal coach wants to be successful in sports.   | 1                        | 2 | 3              | 4 | 5 | 6                     | 7 |
| 18. Losing upsets your ideal coach.  | 1                        | 2 | 3              | 4 | 5 | 6                     | 7 |
| 19. Your ideal coach tries hardest when they have a specific goal.   | 1                        | 2 | 3              | 4 | 5 | 6                     | 7 |
| 20. Winning is important to your ideal coach.  | 1                        | 2 | 3              | 4 | 5 | 6                     | 7 |
| 21. Your ideal coach works hard to be successful in sports.  | 1                        | 2 | 3              | 4 | 5 | 6                     | 7 |
| 22. The best test of your ideal coach's ability is competing against others.   | 1                        | 2 | 3              | 4 | 5 | 6                     | 7 |
| 23. Your ideal coach looks forward to the opportunity to test their skills in competition against others.                      | 1                        | 2 | 3              | 4 | 5 | 6                     | 7 |
| 24. Your ideal coach sets goals for themselves when they coach.  | 1                        | 2 | 3              | 4 | 5 | 6                     | 7 |
| 25. Your ideal coach performs best when they are competing against an opponent.  | 1                        | 2 | 3              | 4 | 5 | 6                     | 7 |

**Modified Rotter's I-E Scale (Athlete's Self-report Scale; Rotter, 1966)**

|   | <b>Strongly Disagree</b> |   | <b>Neutral</b> |   |   | <b>Strongly Agree</b> |   |
|---|--------------------------|---|----------------|---|---|-----------------------|---|
| 1. Many of the unhappy things in people's lives are partly due to bad luck.   | 1                        | 2 | 3              | 4 | 5 | 6                     | 7 |
| 2. People's misfortunes result from the mistakes they make.   | 1                        | 2 | 3              | 4 | 5 | 6                     | 7 |
| 3. In the long run people get the respect they deserve in this world.   | 1                        | 2 | 3              | 4 | 5 | 6                     | 7 |
| 4. Unfortunately, an individual's worth often passes unrecognized no matter how hard he or she tries.               | 1                        | 2 | 3              | 4 | 5 | 6                     | 7 |
| 5. Without the right breaks one cannot be an effective leader.  | 1                        | 2 | 3              | 4 | 5 | 6                     | 7 |
| 6. Capable people who fail to become leaders have not taken advantage of their opportunities.                       | 1                        | 2 | 3              | 4 | 5 | 6                     | 7 |
| 7. No matter how hard you try some people just don't like you.  | 1                        | 2 | 3              | 4 | 5 | 6                     | 7 |
| 8. People who can't get others to like them don't understand how to get along with others.                          | 1                        | 2 | 3              | 4 | 5 | 6                     | 7 |
| 9. I have often found that what is going to happen will happen.   | 1                        | 2 | 3              | 4 | 5 | 6                     | 7 |
| 10. Trusting to fate has never turned out as well for me as making a decision to take a definite course of action.  | 1                        | 2 | 3              | 4 | 5 | 6                     | 7 |
| 11. Becoming a success is a matter of hard work, luck has little or nothing to do with it.                          | 1                        | 2 | 3              | 4 | 5 | 6                     | 7 |
| 12. Getting a good job depends mainly on being in the right place at the right time.                                | 1                        | 2 | 3              | 4 | 5 | 6                     | 7 |
| 13. When I make plans, I am almost certain that I can make them work.   | 1                        | 2 | 3              | 4 | 5 | 6                     | 7 |
| 14. It is not wise to plan too far ahead because many things turn out to be a matter of good or bad fortune anyhow. | 1                        | 2 | 3              | 4 | 5 | 6                     | 7 |
| 15. In my case getting what I want has little or nothing to do with luck.   | 1                        | 2 | 3              | 4 | 5 | 6                     | 7 |
| 16. Many times we might as well decide what to do by flipping a coin.   | 1                        | 2 | 3              | 4 | 5 | 6                     | 7 |
| 17. Who gets to be the boss often depends on who was lucky enough to be in the right place first.                   | 1                        | 2 | 3              | 4 | 5 | 6                     | 7 |
| 18. Getting people to do the right thing depends upon ability, luck has little or nothing to do with it.            | 1                        | 2 | 3              | 4 | 5 | 6                     | 7 |
| 19. Most people don't realize the extent to which their lives are controlled by accidental happenings.              | 1                        | 2 | 3              | 4 | 5 | 6                     | 7 |
| 20. There really is no such thing as luck.  | 1                        | 2 | 3              | 4 | 5 | 6                     | 7 |
| 21. In the long run the bad things that happen to us are balanced by the good ones.                                 | 1                        | 2 | 3              | 4 | 5 | 6                     | 7 |
| 22. Most misfortunes are the result of lack of ability, ignorance, laziness or all three.                           | 1                        | 2 | 3              | 4 | 5 | 6                     | 7 |
| 23. Many times I feel that I have little influence over the things that happen to me.                               | 1                        | 2 | 3              | 4 | 5 | 6                     | 7 |
| 24. It is impossible for me to believe that chance or luck plays an important role in my life.                      | 1                        | 2 | 3              | 4 | 5 | 6                     | 7 |
| 25. What happens to me is my own doing.   | 1                        | 2 | 3              | 4 | 5 | 6                     | 7 |
| 26. Sometimes I feel that I don't have enough control over the direction my life is taking.                         | 1                        | 2 | 3              | 4 | 5 | 6                     | 7 |

**Sport Orientation Questionnaire (Self-Report Scale; Gill & Deeter, 1988)**

|  | <b>Strongly Disagree</b> |   | <b>Neutral</b> |   |   | <b>Strongly Agree</b> |   |
|--|--------------------------|---|----------------|---|---|-----------------------|---|
| 1. I am a competitive person.  | 1                        | 2 | 3              | 4 | 5 | 6                     | 7 |
| 2. I try hardest when I have a specific goal.  | 1                        | 2 | 3              | 4 | 5 | 6                     | 7 |
| 3. I try my hardest to win.  | 1                        | 2 | 3              | 4 | 5 | 6                     | 7 |
| 4. I am a determined competitor.   | 1                        | 2 | 3              | 4 | 5 | 6                     | 7 |
| 5. Winning is important  | 1                        | 2 | 3              | 4 | 5 | 6                     | 7 |
| 6. I have most fun when I win.   | 1                        | 2 | 3              | 4 | 5 | 6                     | 7 |
| 7. I want to be the best every time I compete.   | 1                        | 2 | 3              | 4 | 5 | 6                     | 7 |
| 8. I look forward to competing.  | 1                        | 2 | 3              | 4 | 5 | 6                     | 7 |
| 9. I hate to lose.   | 1                        | 2 | 3              | 4 | 5 | 6                     | 7 |
| 10. I set goals for myself when I compete.   | 1                        | 2 | 3              | 4 | 5 | 6                     | 7 |
| 11. The best way to determine my ability is to set a goal and try to reach it.         | 1                        | 2 | 3              | 4 | 5 | 6                     | 7 |
| 12. I thrive on competing.   | 1                        | 2 | 3              | 4 | 5 | 6                     | 7 |
| 13. I am most competitive when I try to achieve personal goals.                        | 1                        | 2 | 3              | 4 | 5 | 6                     | 7 |
| 14. My goal is to be the best athlete possible.  | 1                        | 2 | 3              | 4 | 5 | 6                     | 7 |
| 15. I enjoy competing against others.  | 1                        | 2 | 3              | 4 | 5 | 6                     | 7 |
| 16. I want to be successful in sports.   | 1                        | 2 | 3              | 4 | 5 | 6                     | 7 |
| 17. Reaching personal performance goals is very important to me.                       | 1                        | 2 | 3              | 4 | 5 | 6                     | 7 |
| 18. Scoring more points than my opponent is very important to me.                      | 1                        | 2 | 3              | 4 | 5 | 6                     | 7 |
| 19. I work hard to be successful in sports.  | 1                        | 2 | 3              | 4 | 5 | 6                     | 7 |
| 20. The only time I am satisfied is when I win.  | 1                        | 2 | 3              | 4 | 5 | 6                     | 7 |
| 21. Losing upsets me.  | 1                        | 2 | 3              | 4 | 5 | 6                     | 7 |
| 22. The best test of my ability is competing against others.                           | 1                        | 2 | 3              | 4 | 5 | 6                     | 7 |
| 23. Performing to the best of my ability is very important to me                       | 1                        | 2 | 3              | 4 | 5 | 6                     | 7 |
| 24. I look forward to the opportunity to test my skills in competition against others. | 1                        | 2 | 3              | 4 | 5 | 6                     | 7 |
| 25. I perform best when I am competing against an opponent.                            | 1                        | 2 | 3              | 4 | 5 | 6                     | 7 |

## Appendix B1: Original Factor Analysis

The original factor analysis included all subjects in the sample. Note that the extracted factors are labeled with their appropriate subscale headings. Bold scores indicate the original subscale item placements. Red boxes indicate rejected scale items.

## Ideal Coach Scales

| Modified Rotter's IE Locus of Control Scale (Coach) |                     |                     | Sport Orientation Questionnaire (Coach) |                            |                                |
|---|---------------------|---------------------|---|----------------------------|--------------------------------|
| Item  | Factor 1 (external) | Factor 2 (internal) | Item                                    | Factor 1 (competitiveness) | Factor 2 (win) Factor 3 (goal) |
| 16  | <b>.666</b>         |                     | 5                                       | <b>.780</b>                | -.564                          |
| 17  | <b>.645</b>         |                     | 15                                      | <b>.762</b>                |                                |
| 19  | <b>.573</b>         |                     | 9                                       | <b>.704</b>                |                                |
| 14  | <b>.543</b>         |                     | 13                                      | <b>.704</b>                | -.599                          |
| 12  | <b>.523</b>         |                     | 21                                      | <b>.698</b>                |                                |
| 23  | <b>.501</b>         |                     | 17                                      | <b>.681</b>                |                                |
| 5   | <b>.490</b>         |                     | 14                                      | <b>.658</b>                |                                |
| 26  | <b>.473</b>         |                     | 1                                       | <b>.644</b>                |                                |
| 8   | <b>.427</b>         |                     | 2                                       | .627                       | <b>.270</b>                    |
| 1   | <b>.393</b>         |                     | 23                                      | <b>.571</b>                |                                |
| 4   | <b>.315</b>         |                     | 4                                       | <b>.517</b>                |                                |
| 7   | <b>.312</b>         | .255                | 18                                      |                            | <b>-.762</b>                   |
| 21  | <b>***</b>          |                     | 10                                      |                            | <b>-.743</b>                   |
| 24  |                     | <b>.470</b>         | 6                                       | .502                       | <b>-.742</b>                   |
| 2   |                     | <b>.445</b>         | 20                                      | .650                       | <b>-.701</b>                   |
| 11  | -.310               | <b>.442</b>         | 16                                      |                            | <b>-.697</b>                   |
| 10  |                     | <b>.433</b>         | 8                                       |                            | <b>-.642</b>                   |
| 22  |                     | <b>.405</b>         | 22                                      | <b>.436</b>                | -.625                          |
| 6   | .246                | <b>.401</b>         | 7                                       | <b>.547</b>                | -.612                          |
| 25  |                     | <b>.375</b>         | 25                                      | <b>.426</b>                | -.571                          |
| 13  | -.274               | <b>.358</b>         | 11                                      |                            | <b>.706</b>                    |
| 15  |                     | <b>.358</b>         | 24                                      | .528                       | <b>.665</b>                    |
| 3   |                     | <b>.321</b>         | 12                                      |                            | <b>.609</b>                    |
| 18  | -.277               | <b>.313</b>         | 19                                      |                            | <b>.451</b>                    |
| 20  |                     | <b>.305</b>         | 3                                       |                            | <b>.431</b>                    |
| 9   | <b>.207</b>         | .212                |   |                            |                                |

**Alpha reliabilities:**

External LOC = .7610

External LOC (after deletion) = .7849

Internal LOC = .6546

Internal LOC (after deletion) = .6488

Competitiveness = .9050

Win-Orientation = .8576

Goal-Orientation = .7322

## Self-Report Scales

## Modified Rotter's IE Locus of Control Scale (Self-Report)

| Item | Factor 1 (external) | Factor 2 (internal) |
|------|---------------------|---------------------|
| 17   | <b>.814</b>         |                     |
| 16   | <b>.667</b>         |                     |
| 12   | <b>.595</b>         |                     |
| 5    | <b>.569</b>         |                     |
| 19   | <b>.537</b>         |                     |
| 26   | <b>.525</b>         |                     |
| 23   | <b>.517</b>         |                     |
| 1    | <b>.479</b>         |                     |
| 4    | <b>.446</b>         |                     |
| 14   | <b>.445</b>         |                     |
| 7    | <b>***</b>          |                     |
| 18   |                     | <b>.620</b>         |
| 15   |                     | <b>.572</b>         |
| 11   |                     | <b>.532</b>         |
| 6    |                     | <b>.525</b>         |
| 10   |                     | <b>.510</b>         |
| 22   |                     | <b>.478</b>         |
| 2    |                     | <b>.464</b>         |
| 20   |                     | <b>.462</b>         |
| 25   |                     | <b>.444</b>         |
| 8    | <b>.248</b>         | <b>.344</b>         |
| 9    | <b>.237</b>         | <b>.305</b>         |
| 24   |                     | <b>.304</b>         |
| 13   |                     | <b>.299</b>         |
| 21   | <b>***</b>          | <b>.287</b>         |
| 3    |                     | <b>.264</b>         |

## Sport Orientation Questionnaire (Self-Report)

| Item | Factor 1 (competitiveness) | Factor 2 (goal) | Factor 3 (win) |
|------|----------------------------|-----------------|----------------|
| 4    | <b>.907</b>                |                 |                |
| 15   | <b>.878</b>                |                 |                |
| 16   | <b>.813</b>                |                 |                |
| 1    | <b>.799</b>                |                 |                |
| 24   | <b>.797</b>                |                 | .568           |
| 8    | <b>.782</b>                |                 |                |
| 3    | <b>.770</b>                |                 | .553           |
| 12   | <b>.723</b>                | .569            | .554           |
| 19   | <b>.718</b>                | .513            |                |
| 7    | <b>.608</b>                |                 |                |
| 23   | .575                       | <b>.496</b>     |                |
| 14   | <b>.556</b>                |                 | .511           |
| 10   |                            | <b>.818</b>     |                |
| 13   |                            | <b>.788</b>     |                |
| 11   |                            | <b>.781</b>     |                |
| 17   | .515                       | <b>.740</b>     |                |
| 2    | .549                       | <b>.702</b>     |                |
| 21   |                            |                 | <b>.834</b>    |
| 9    |                            |                 | <b>.807</b>    |
| 5    | .661                       |                 | <b>.791</b>    |
| 20   |                            |                 | <b>.772</b>    |
| 18   | .501                       |                 | <b>.743</b>    |
| 22   | <b>.543</b>                |                 | .731           |
| 6    | .519                       |                 | <b>.694</b>    |
| 25   | <b>.604</b>                |                 | .640           |

**Alpha reliabilities:**

External LOC = .7774

External LOC (after deletion) = .8204

Internal LOC = .7641

Internal LOC (after deletion) = .7419

Competitiveness = .9361

Goal-Orientation = .8665

Win-Orientation = .8976

## Appendix B2: Female Athlete Factor Analysis

The female athlete factor analysis included all female subjects in the sample and excludes all male subjects. Note that the extracted factors are labeled with their appropriate subscale headings. Bold scores indicate the original subscale item placements. Red boxes indicate rejected scale items.

## Ideal Coach Scales

| Modified Rotter's IE Locus of Control Scale (Coach) |                     |                     | Sport Orientation Questionnaire (Coach) |                |                 |                            |
|---|---------------------|---------------------|---|----------------|-----------------|----------------------------|
| Item  | Factor 1 (external) | Factor 2 (internal) | Item                                    | Factor 1 (win) | Factor 2 (goal) | Factor 3 (competitiveness) |
| 12  | <b>.535</b>         |                     | 20                                      | <b>.758</b>    |                 | -.572                      |
| 18  | -.531               | ***                 | 4                                       | .738           |                 | <b>-.408</b>               |
| 26  | <b>.528</b>         |                     | 7                                       | .706           |                 | <b>-.346</b>               |
| 1   | <b>.517</b>         |                     | 5                                       | .705           |                 | <b>-.500</b>               |
| 19  | <b>.507</b>         |                     | 10                                      | <b>.694</b>    |                 |                            |
| 17  | <b>.478</b>         |                     | 18                                      | <b>.681</b>    |                 |                            |
| 16  | <b>.472</b>         |                     | 6                                       | <b>.676</b>    |                 |                            |
| 20  | <b>-.458</b>        | ***                 | 8                                       | <b>.542</b>    |                 |                            |
| 15  | -.397               | ***                 | 16                                      | <b>.512</b>    |                 |                            |
| 14  | <b>.353</b>         |                     | 11                                      |                | <b>.723</b>     |                            |
| 23  | <b>.349</b>         |                     | 24                                      |                | <b>.710</b>     |                            |
| 25  | -.304               | <b>.248</b>         | 12                                      |                | <b>.643</b>     |                            |
| 4   | <b>.293</b>         |                     | 19                                      |                | <b>.505</b>     |                            |
| 5   | <b>.273</b>         | .225                | 3                                       |                | <b>.439</b>     |                            |
| 6   |                     | <b>.641</b>         | 15                                      |                |                 | <b>-.858</b>               |
| 10  |                     | <b>.554</b>         | 21                                      |                |                 | <b>-.744</b>               |
| 11  | -.315               | <b>.417</b>         | 14                                      |                |                 | <b>-.730</b>               |
| 13  | -.203               | <b>.412</b>         | 17                                      |                |                 | <b>-.707</b>               |
| 22  |                     | <b>.396</b>         | 13                                      | .659           |                 | <b>-.693</b>               |
| 9   | ***                 | <b>.365</b>         | 9                                       | .529           |                 | <b>-.605</b>               |
| 24  |                     | <b>.363</b>         | 23                                      |                |                 | <b>-.599</b>               |
| 7   | <b>.261</b>         | <b>.344</b>         | 22                                      |                |                 | <b>-.504</b>               |
| 2   |                     | <b>.336</b>         | 1                                       |                |                 | <b>-.455</b>               |
| 3   |                     | ***                 | 25                                      |                |                 | <b>-.451</b>               |
| 8   |                     | ***                 | 2                                       |                | <b>.268</b>     |                            |
| 21  | ***                 |                     |   |                |                 |                            |

**Alpha reliabilities:**

External LOC = .6962

External LOC (after deletion) = .7193

Internal LOC = .6401

Internal LOC (after deletion) = .6266

Win-Orientedness = .8090

Goal-Orientedness = .7151

Competitiveness = .8893

## Self-Report Scales

| Modified Rotter's IE Locus of Control Scale (Self-Report) |                     |                     | Sport Orientation Questionnaire (Self-Report) |                            |                 |                |
|---|---------------------|---------------------|---|----------------------------|-----------------|----------------|
| Item  | Factor 1 (external) | Factor 2 (internal) | Item  | Factor 1 (competitiveness) | Factor 2 (goal) | Factor 3 (win) |
| 17  | <b>.855</b>         |                     | 4   | <b>.843</b>                |                 | .515           |
| 12  | <b>.674</b>         |                     | 15  | <b>.833</b>                |                 |                |
| 16  | <b>.663</b>         |                     | 8   | <b>.805</b>                |                 |                |
| 19  | <b>.574</b>         |                     | 24  | <b>.782</b>                |                 |                |
| 26  | <b>.553</b>         |                     | 16  | <b>.776</b>                |                 |                |
| 5   | <b>.491</b>         | .221                | 12  | <b>.740</b>                |                 |                |
| 23  | <b>.489</b>         |                     | 1   | <b>.732</b>                |                 |                |
| 14  | <b>.450</b>         | <b>-.263</b>        | 10  | <b>.714</b>                |                 |                |
| 1   | <b>.417</b>         |                     | 3   | <b>.699</b>                |                 | .586           |
| 4   | <b>.400</b>         |                     | 14  | <b>.655</b>                |                 |                |
| 7   | <b>.207</b>         |                     | 7   | <b>.536</b>                |                 |                |
| 6   | .265                | <b>.652</b>         | 23  | .445                       | <b>.299</b>     |                |
| 18  | -.360               | <b>.586</b>         | 10  |                            | <b>.812</b>     |                |
| 15  |                     | <b>.562</b>         | 13  |                            | <b>.756</b>     |                |
| 11  | -.266               | <b>.555</b>         | 11  |                            | <b>.742</b>     |                |
| 22  |                     | <b>.477</b>         | 17  |                            | <b>.678</b>     |                |
| 24  |                     | <b>.476</b>         | 2   | .511                       | <b>.555</b>     |                |
| 25  |                     | <b>.457</b>         | 21  |                            |                 | <b>.850</b>    |
| 20  | <b>-.277</b>        | <b>.397</b>         | 5   | .578                       |                 | <b>.797</b>    |
| 10  |                     | <b>.380</b>         | 20  |                            |                 | <b>.767</b>    |
| 8   |                     | <b>.369</b>         | 18  | .510                       |                 | <b>.766</b>    |
| 9   | <b>***</b>          | <b>.343</b>         | 9   |                            |                 | <b>.763</b>    |
| 13  |                     | <b>.336</b>         | 22  | <b>.518</b>                |                 | .682           |
| 2   |                     | <b>.305</b>         | 6   |                            |                 | <b>.669</b>    |
| 21  | <b>***</b>          | <b>.218</b>         | 25  | <b>.548</b>                |                 | .599           |
| 3   |                     | <b>.203</b>         |   |                            |                 |                |

**Alpha reliabilities:**

External LOC = .7414

External LOC (after deletion) = .8039

Internal LOC = .7439

Internal LOC (after deletion) = .7220

Competitiveness = .9235

Goal-Orientation = .8094

Win-Orientation = .8944

## Appendix B3: Male Athlete Factor Analysis

The male athlete factor analysis included all male subjects in the sample and excludes all female subjects. Note that the extracted factors are labeled with their appropriate subscale headings. Bold scores indicate the original subscale item placements. Red boxes indicate rejected scale items.

## Ideal Coach Scales

| Modified Rotter's IE Locus of Control Scale (Coach) |                     |                     | Sport Orientation Questionnaire (Coach) |                            |                                |
|---|---------------------|---------------------|---|----------------------------|--------------------------------|
| Item  | Factor 1 (external) | Factor 2 (internal) | Item                                    | Factor 1 (Competitiveness) | Factor 2 (win) Factor 3 (goal) |
| 16  | <b>.741</b>         |                     | 5                                       | <b>.911</b>                | .558                           |
| 17  | <b>.678</b>         |                     | 2                                       | .841                       | <b>.389</b>                    |
| 19  | <b>.671</b>         |                     | 4                                       | <b>.822</b>                | .507                           |
| 5   | <b>.543</b>         |                     | 15                                      | <b>.778</b>                |                                |
| 14  | <b>.542</b>         |                     | 1                                       | <b>.744</b>                |                                |
| 23  | <b>.538</b>         | -.220               | 9                                       | <b>.691</b>                | .517                           |
| 12  | <b>.521</b>         |                     | 13                                      | <b>.668</b>                |                                |
| 26  | <b>.501</b>         |                     | 20                                      | .645                       | <b>.594</b>                    |
| 8   | <b>.483</b>         | <b>***</b>          | 7                                       | <b>.645</b>                | .539                           |
| 9   | <b>.352</b>         |                     | 17                                      | <b>.636</b>                | .551                           |
| 21  | <b>.305</b>         |                     | 3                                       | .510                       | <b>.507</b>                    |
| 4   | <b>.292</b>         |                     | 6                                       | .550                       | <b>.754</b>                    |
| 1   | <b>.260</b>         |                     | 18                                      | .512                       | <b>.748</b>                    |
| 20  | <b>.212</b>         | <b>.208</b>         | 10                                      |                            | <b>.731</b>                    |
| 2   |                     | <b>.601</b>         | 16                                      |                            | <b>.709</b>                    |
| 3   |                     | <b>.507</b>         | 22                                      | <b>.396</b>                | .674                           |
| 25  |                     | <b>.466</b>         | 8                                       |                            | <b>.655</b>                    |
| 24  | .368                | <b>.449</b>         | 25                                      | <b>.437</b>                | .615                           |
| 11  | -.219               | <b>.421</b>         | 24                                      | .531                       | <b>.707</b>                    |
| 10  |                     | <b>.414</b>         | 21                                      | <b>.623</b>                | .671                           |
| 15  |                     | <b>.387</b>         | 11                                      |                            | <b>.635</b>                    |
| 18  |                     | <b>.360</b>         | 23                                      | <b>.458</b>                | .549                           |
| 22  |                     | <b>.351</b>         | 14                                      | <b>.598</b>                | .609                           |
| 6   | .210                | <b>.343</b>         | 12                                      |                            | <b>.571</b>                    |
| 13  | -.274               | <b>.335</b>         | 19                                      |                            | <b>.422</b>                    |
| 7   | <b>***</b>          | <b>.298</b>         |   |                            |                                |

**Alpha reliabilities:**

External LOC = .7819

External LOC (after deletion) = .7916

Internal LOC = .6896

Internal LOC (after deletion) = .6887

Competitiveness = .9227

Win-Oriented = .8581

Goal-Oriented = .7515

## Self-Report Scales

## Modified Rotter's IE Locus of Control Scale (Self-Report)

| Item | Factor 1 (external) | Factor 2 (internal) |
|------|---------------------|---------------------|
| 17   | <b>.750</b>         |                     |
| 16   | <b>.674</b>         |                     |
| 26   | <b>.604</b>         |                     |
| 19   | <b>.572</b>         |                     |
| 5    | <b>.551</b>         |                     |
| 23   | <b>.538</b>         |                     |
| 1    | <b>.517</b>         |                     |
| 4    | <b>.495</b>         |                     |
| 9    | <b>.480</b>         | <b>.216</b>         |
| 12   | <b>.468</b>         |                     |
| 14   | <b>.426</b>         |                     |
| 24   | .386                | ***                 |
| 2    |                     | <b>.720</b>         |
| 10   |                     | <b>.680</b>         |
| 18   |                     | <b>.645</b>         |
| 20   | <b>.237</b>         | <b>.524</b>         |
| 15   |                     | <b>.512</b>         |
| 22   |                     | <b>.510</b>         |
| 11   |                     | <b>.478</b>         |
| 6    |                     | <b>.465</b>         |
| 25   |                     | <b>.462</b>         |
| 8    | <b>.252</b>         | <b>.435</b>         |
| 3    |                     | <b>.407</b>         |
| 21   | <b>.212</b>         | <b>.378</b>         |
| 13   | <b>-.220</b>        | .278                |
| 7    | ***                 |                     |

## Sport Orientation Questionnaire (Self-Report)

| Item | Factor 1 (competitiveness) | Factor 2 (win) | Factor 3 (goal) |
|------|----------------------------|----------------|-----------------|
| 4    | <b>.934</b>                |                | .687            |
| 15   | <b>.899</b>                |                | .767            |
| 24   | <b>.853</b>                | .527           | .705            |
| 1    | <b>.839</b>                |                | .642            |
| 3    | <b>.837</b>                | .503           | .539            |
| 16   | <b>.819</b>                |                | .661            |
| 8    | <b>.773</b>                |                | .659            |
| 7    | <b>.720</b>                |                |                 |
| 23   | .689                       |                | <b>.558</b>     |
| 25   | <b>.659</b>                | .596           |                 |
| 9    |                            | <b>.835</b>    |                 |
| 21   | .525                       | <b>.791</b>    |                 |
| 5    | .723                       | <b>.765</b>    |                 |
| 20   |                            | <b>.721</b>    |                 |
| 22   | <b>.558</b>                | .686           |                 |
| 6    | .607                       | <b>.671</b>    |                 |
| 14   | <b>.485</b>                | .615           |                 |
| 18   |                            | <b>.612</b>    |                 |
| 11   | .505                       |                | <b>.872</b>     |
| 10   | .626                       |                | <b>.841</b>     |
| 2    | .540                       |                | <b>.822</b>     |
| 13   | .584                       |                | <b>.814</b>     |
| 17   | .657                       |                | <b>.802</b>     |
| 12   | <b>.684</b>                | .532           | .794            |
| 19   | <b>.687</b>                |                | .695            |

**Alpha reliabilities:**

External LOC = .8178

External LOC (after deletion) = .8277

Internal LOC = .7967

Internal LOC (after deletion) = .7718

Competitiveness = .9467

Win-Orientedness = .8729

Goal-Orientedness = .9062

## Appendix C: Descriptive Statistics

Descriptive statistics for demographical variables:

| <u>Variable</u>  | <u>Mean</u>                | <u>Std. Dev.</u>     | <u>Minimum</u> | <u>Maximum</u> | <u>Frequency</u>   | <u>Male/Female</u>   |
|--|----------------------------|----------------------|----------------|----------------|--|--|
| Gender   | 0.51                       | 0.50                 | -              | -              | 104 female<br>98 male  |  |
| Age  | 20.35                      | 1.40                 | 18             | 24             | 11 (18)<br>61 (19)<br>39 (20)<br>45 (21)<br>31 (22)<br>14 (23)<br>1 (24) | 5 M, 6 F<br>24 M, 37 F<br>16 M, 23 F<br>22 M, 23 F<br>19 M, 12 F<br>11 M, 3 F<br>1 M |
| Year of Eligibility  | 2.26                       | 1.12                 | 1              | 4              | 66 Freshman<br>44 Sophomore<br>46 Junior<br>35 Senior                    | 29 M, 37 F<br>19 M, 25 F<br>22 M, 24 F<br>24 M, 11 F                                 |
| Type of Sport  | 3.39                       | 1.14                 | 1              | 4              | 29 Baseball<br>16 Softball<br>1 Basketball<br>151 Track and Field        | 29 M<br>16 F<br>1 F<br>69 M, 82 F  |
| Do you feel you<br>would play better<br>for a coach that<br>you liked? | 6.00<br>M= 5.90<br>W= 6.09 | 1.28<br>1.34<br>1.22 | 1              | 7              |  |  |

Descriptive statistics for the measured variables of the Ideal Coach Scale:

| <u>Variable</u>  | <u>Gender</u> | <u>N</u> | <u>Mean</u> | <u>Std. Deviation</u> | <u>Std. Error</u> |
|------------------|---------------|----------|-------------|-----------------------|-------------------|
| Internal LOC     | Men           | 98       | 38.79       | 9.06                  | .9152             |
|                  | Women         | 104      | 32.66       | 7.98                  | .7830             |
|                  | Total         | 202      | 35.63       | 9.04                  | .6361             |
| External LOC     | Men           | 98       | 53.34       | 6.98                  | .7050             |
|                  | Women         | 104      | 53.49       | 6.72                  | .6593             |
|                  | Total         | 202      | 53.41       | 6.83                  | .4807             |
| Competitiveness  | Men           | 98       | 77.84       | 10.19                 | 1.0295            |
|                  | Women         | 104      | 73.64       | 10.84                 | 1.0633            |
|                  | Total         | 202      | 75.68       | 10.71                 | .7538             |
| Goal-Orientation | Men           | 98       | 34.79       | 4.89                  | .4935             |
|                  | Women         | 104      | 35.23       | 4.69                  | .4598             |
|                  | Total         | 202      | 35.02       | 4.78                  | .3362             |
| Win-Orientation  | Men           | 98       | 30.68       | 6.99                  | .7059             |
|                  | Women         | 104      | 24.31       | 7.32                  | .7176             |
|                  | Total         | 202      | 27.40       | 7.82                  | .5504             |

Descriptive statistics for the measured variables of the Self-Report Scale:

| <u>Variable</u>  | <u>Gender</u> | <u>N</u> | <u>Mean</u> | <u>Std. Deviation</u> | <u>Std. Error</u> |
|------------------|---------------|----------|-------------|-----------------------|-------------------|
| Internal LOC     | Men           | 98       | 41.51       | 9.28                  | .9377             |
|                  | Women         | 104      | 37.58       | 9.67                  | .9487             |
|                  | Total         | 202      | 39.48       | 9.67                  | .6801             |
| External LOC     | Men           | 98       | 51.75       | 7.62                  | .7693             |
|                  | Women         | 104      | 52.53       | 7.58                  | .7433             |
|                  | Total         | 202      | 52.15       | 7.59                  | .5339             |
| Competitiveness  | Men           | 98       | 80.04       | 11.76                 | 1.1882            |
|                  | Women         | 104      | 75.21       | 11.42                 | 1.1200            |
|                  | Total         | 202      | 77.55       | 11.81                 | .8310             |
| Goal-Orientation | Men           | 98       | 37.01       | 5.39                  | .5444             |
|                  | Women         | 104      | 36.92       | 4.23                  | .4143             |
|                  | Total         | 202      | 36.97       | 4.81                  | .3386             |
| Win-Orientation  | Men           | 98       | 32.45       | 7.13                  | .7204             |
|                  | Women         | 104      | 26.55       | 7.81                  | .7660             |
|                  | Total         | 202      | 29.41       | 8.03                  | .5653             |

### **Appendix D: Correlation Matrix**

This is the final correlation matrix for all variables in the various analyses. Significant correlations are marked by asterisks (\* $p < .05$ , \*\* $p < .01$ ).

