

PERCEIVED LEADERSHIP IN SWIMMING: LEADERSHIP STYLES OF NCAA SWIM
COACHES AND ITS RELATIONSHIPS WITH ATHLETE SATISFACTION, TURNOVER
INTENTION, AND COMMITMENT

by

FERNANDO MARTINELLI RODRIGUEZ

(Under the Direction of Dr. Doyeon Won)

ABSTRACT

This study examined the relationship between coaching leadership styles and swimmers' satisfaction, turnover intention, and commitment in NCAA swimming. Dividing leadership into five dimensions (training and instruction, autocratic behavior, democratic behavior, social support, and positive feedback); it was predicted that swimmer's satisfaction and commitment would be positively related with all dimensions except for autocratic behavior; and turnover intention would show the opposite correlation. It was also expected that swimmers of different genders and from different NCAA divisions would perceive different leadership styles. The questionnaire included a scaled down version of Chelladurai's "Perceived Leadership Scale for Sports" as well as questions that measured satisfaction, commitment, and turnover intention. It was sent to coaches from 63 NCAA Division I, II, and III institutions who were asked to forward it to their swimmers. A total of 237 swimmers participated in this survey. Correlation and ANOVA analyses were used to determine relationships between the variables. Much of the earlier findings and all of the hypotheses of this study were supported by the results of this study.

INDEX WORDS: Leadership, Coaching, Commitment, Motivation, Satisfaction, Swimming.

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FERNANDO MARTINELLI RODRIGUEZ

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FERNANDO MARTINELLI RODRIGUEZ

Major Professor: Doyeon Won

Committee: Thomas Baker
Joel Maxcy

Electronic Version Approved:

Maureen Grasso
Dean of the Graduate School
The University of Georgia
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DEDICATION

I would like to dedicate this project to my family and friends who have always been there for me. To my mother, Adriana, for being a better mother than I could ever wish for. I'd need to write a whole new thesis to even begin to explain how much you mean to me. To my father, Luiz Carlos, who has been such excellent role model and whose advices are invaluable. Hopefully we will be able to one day sail out to sea on that sailboat we've dreamed of. To Eduardo, my brother, who gives me peace of mind by nonchalantly providing me with the simplest answers to the things that puzzle me the most (even though you mostly do it unknowingly). To my grandparents Julieta and Dante, who I don't get to see enough. You're both an inspiration and I only hope I have been able to make you proud. To my grandmother Flora, always so sweet and caring. I'm looking forward to your next *tortilla de patatas*. To the rest of my family and friends, I can't thank you enough for your support. I love you all and I'm happy I've been able to keep you in my life.

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CHAPTER 1

INTRODUCTION

The contribution of coaching to athletic advances has become increasingly important with the evolution of game and race strategy and, in the case of swimming, the development of stroke technique. Although superior physical conditioning was once the main advantage an athlete could have over his opponents, it takes much more knowledge of the sport in modern days to have hopes of being a competitor. Swimming is a sport that requires large technical knowledge and understanding as well as physical conditioning to perform in an environment that is not natural for human beings. While a good athlete can learn how to swim by himself through imitation, it takes a lot of training and instruction with outside input and critique to truly become a great swimmer.

Initial gains achieved in swimming were reached through simple observation and implementation of new concepts. Improvements in the results were directly related to changes that were made to their training and technique. In the beginning of the 20th century, innovative stroke techniques were commonly seen in competitions. The lack of specific stroke technique definitions by the governing bodies allowed for considerable changes that proved to be important for the development of the present-day strokes.

The sport of swimming took its modern shape in the mid-20th century, when butterfly, backstroke, breaststroke, and freestyle were accepted as the four strokes used to make up all of the events in swimming as a competitive sport; but we continue to see changes today. Throughout the last century, improvements were officially made through

the establishment of detailed stroke definitions and rules by the Fédération Internationale de Natation (FINA) (the international governing body in swimming), and the International Olympic Committee (IOC). In the United States, US Swimming regulates club swimming, while the National Collegiate Athletic Association (NCAA) is the main governing body in collegiate swimming. Although many of the rules are similar, there are some differences due to the fact that the United States is the only country to hold competitions in 25-yard pools. In fact, some rule changes have occurred due to situations encountered in 25-yard competitions.

The rules and regulations in US, collegiate, and international swimming are monitored and updated by the governing bodies. The last major changes have been the implementation of a limitation on underwater distance off the walls, the allowance of a downward kick in the breaststroke pullout, the banning of technical suits, and limitation of how much surface area a suit can cover on a swimmer's body.

Logical rationale states that each time a record falls, the challenge to break the new record is even greater. Additional research is needed to find ways of becoming more efficient in training and technique in order to continue improving. Magazines such as "Swimming World" and journals such as the *Journal of Swimming Research* consistently publish new ideas and official research advances for the field. Some recent studies include the comparison of heart rate variability and performance in low and high altitude training (Atlaoui, Pichot, Lacoste, Barale, Lacour, & Chatard, 2007; Blásquez, Rodas, & Ortiz, 2009; Schmitt, 2006), competitive anxiety (Blásquez & Cervantes, 2009), effects of stroke rate and stroke length in performance (Longo, Scurati, Michielon, & Invernizzi, 2009), anthropometrical measurements to determine ability to learn competitive

swimming techniques (Statkevičienė & Venckūnas, 2008), and even particularly detailed research to determine the most efficient time to begin kicking following a grab start, as opposed to a track start (Elipot, Hellard, Taiar, Boissière, Rey, Lecat, and Houel., 2009). These studies are in large part the reason for the evolution of the sport.

The knowledge gathered throughout the years is so great that the athletes themselves have a hard time knowing what is best for them. It is also difficult for athletes to stay up-to-date with modern advances in the sport. Coaches constantly experiment with new techniques that work for one athlete but are later negated by research (such as the change from a straight arm pull to an “S” pattern pull, which was later shown to increase energy expense and reducing efficiency rather than increasing the amount of water pulled). Because there are so many other variables involved in the improvement of an athlete’s times (such as maturity, experience, competition conditions, swim suits, and mental state), the change in technique may sometimes not be the reason for those improvements. With this, athletes must have the opportunity to learn about the new technique and training methods while also knowing how to judge which advances are truly real improvements. The coaches are the means by which the athletes are able to stay updated with their sport.

In addition, some advances are so detailed, that it takes a trained professional to determine if the swimmer’s training and technique is ideal to reach his or her individual goals. A good coach has the ability and the resources to always know the latest advances in the sport and has the skills to implement it in his athletes’ training, but it takes an even better coach to have the foresight to develop his training before the rest. Coaching is integral to the success of today’s athletes; thus, it is important to know how coaches can

lead their teams effectively while maintaining a high satisfaction and performance rate within their swimmers.

Considering the quick advances of sports, the importance of coaching has grown significantly throughout the last few years. However, coaching styles vary greatly, ranging from very strict and authoritarian coaches to egalitarian coaches who take the athlete's perspective highly into account. Some coaches focus mostly on technique and quality training, while other coaches focus on intensity training with long grueling workouts. This study was interested in determining how different coaching styles affect swimmers in the collegiate setting.

Through the review of literature, it was found that much of the research on leadership in sports has been conducted to identify the relationships between the leadership displayed by coaches and the satisfaction and performance of athletes. Chelladurai and Saleh (1980) developed the Multidimensional Model of Leadership (MML) to allow studies to distinguish particular leadership traits that differentiate coaching leadership styles. It is believed that certain leadership styles can be more conducive to higher levels of satisfaction and increased performance. Other leadership styles lead to the opposite, lowering satisfaction levels within the athletes and diminishing athletic performance as well as decreasing motivation and commitment to the sport.

This study seeks to determine the relationship between perceived leadership and satisfaction, turnover intention, and commitment in collegiate swimming. In order to fully explore the subject, a scaled down version of Chelladurai and Saleh's (1980) Leadership Scale for Sports (LSS) was implemented in congruence with measurements of

satisfaction, turnover intention, and commitment as well as a collection of variables such as athlete gender, coach gender, age, scholarship status, and levels of satisfaction.

It was anticipated that different types of leadership would be found in the three NCAA divisions. A direct relationship was expected between types of leadership and satisfaction, turnover intention, and commitment while also looking at other demographic variables. This study determined if there is a specific type of leadership in collegiate swimming that is more beneficial for student-athletes, and made it possible to understand how they affect the swimmers, and ascertained how demographic variables impact perceived leadership, satisfaction, turnover intention, and commitment.

Importance of Study

According to Sherman and Fuller (2000), actual coach behavior is influenced by institutional parameters, situational demands, personal characteristics, and athlete characteristics. This calls for multiple variables to be looked at when studying leadership behavior in sports. This study focused on differences in institutional parameters, situational demands, and athlete characteristics that can be measured quantitatively. Athlete satisfaction, turnover intention, commitment, as well as the different NCAA divisions, and gender differences were of particular interest.

The first three variables were chosen because they provide good measures of an athlete's overall well being. Differences in regulations between the divisions – most of which are regarding scholarship, recruiting, eligibility, training limitations, academic policies, and amateurism policies – made divisional differences an interesting variable. Gender differences are obvious characteristics that were of interest as they clearly

influence personal coach characteristics as well as athlete characteristics. By collecting data on multifarious variables, the study was able to compare the results obtained with previous research and support or reject past findings in sports as it relates to collegiate swimming.

Past studies, such as Alfermann, Lee, and Würth's (2005) study on perceived leadership and its importance in athlete's skill development, Riemer and Toon's (2001) study on leadership and satisfaction in tennis, Riemer and Chelladurai's (1995) study on leadership and satisfaction in athletics, and Beam, Serwatka, and Wilson's (2004) study on divisional differences in preferred were researched using data gathered from multiple sports. However, it has been found that there are discrepancies in the results gathered from the different types of sports.

Interdependent sports, which can also be referred to as team sports (such as basketball and football) have produced different results from independent sports, also referred to as individual sports (such as track and field and martial arts). There has also been some discrepancy between open sports, where outside factors can influence the game, and closed sports, where outside conditions are constant (Riemer & Chelladurai, 1995). Open sports include most team sports (such as football and soccer) where the opposing team can make unpredictable plays. Closed sports include most individual sports (such as swimming and track and field) where the competitions are held in a standardized environment and the athletes race against time or compete for distance, which is a universal constant. This study focused on swimming, which, following the descriptions of task dependence and task variability, is considered an independent closed

sport. By focusing on a particular sport, it was possible to determine how leadership styles particularly affect swimmers' satisfaction, turnover intention, and commitment.

The main purpose of this study was to investigate leadership dimensions that affect individual swimmers' level of satisfaction, turnover intention, and commitment. The secondary purpose was to investigate the differences in perceived leadership based on gender and division. These variables were specifically studied for the sport of swimming, an independent and closed sport.

This study provided information to the body of knowledge on coaching leadership in swimming with the expectation of delivering new information to swim coaches on the leadership styles provoke stronger results. The findings also allow younger swimmers to note the different leadership styles found depending on specific variables in order to aid them in finding the right program for them.

Statement of Purpose

In summary, this study was designed to strengthen support for previous studies on perceived leadership and its correlations with satisfaction, turnover intention, and motivation. It was also expected to determine if there was a significant difference in the perceived coach leadership in the three different divisions of the NCAA and in how men and women perceive that leadership in swimming.

CHAPTER 2

LITERATURE REVIEW

Measuring Leadership

Although there were other studies on leadership styles before Chelladurai (1993), it was his MML that opened up room for much of the new leadership studies to take place. His development of the LSS gave researchers the opportunity to correlate their findings with other studies because of the use of a common scale. This allowed researchers studying specific sports to compare their results with studies done in different sports, and researchers from other countries to compare their results with other international studies. This gave us the ability to cross-reference results from other research and come to conclusions that would not have been possible without a standardized measure of coaching leadership.

The LSS questionnaire is made up of five dimensions of leadership (see Chelladurai & Saleh, 1980). Each dimension measures a different leadership trait. The first dimension measures coaches' skills on training and instruction. In the original questionnaire, the first dimension is made up of 13 questions that measure a coach's ability to organize their team and their workouts, the extent of the coach's expectations, as well as the ability to instruct the athletes on various tasks. The second dimension is made up of nine questions and measures a coach's democratic behavior as the leader of a team. The questions for measuring this dimension focus on determining how much the coach allows his or her athletes to get involved in making decisions that affect them as

individuals or as a team. The third dimension is made up of five questions and measures a coach's autocratic behavior, a behavior that is in large part contrary to a democratic behavior. The fourth dimension, with eight questions, measures the coach's level of social support to the team and the individuals on the team. A strong score in this dimension requires a coach to provide social support outside of the training environment as many of the questions are linked to the athletes' lives in general. The last dimension measures a coach's ability to provide positive feedback to the athletes with five questions. This dimension is meant to see if the coach shows appreciation for his or her athletes and gives credit to them when it is deserved.

The MML was designed mainly to relate different variables to the discrepancy between preferred and perceived leadership behaviors. It is postulated that the closer the discrepancy between the two, the higher the athlete's satisfaction. Chelladurai confirmed this in a study where he found that among basketball players, discrepancy scores in all dimensions were significantly related to satisfaction with leadership (Chelladurai, 1984).

A group of researchers began to question the reliability of studies using discrepancy scores stating that the scores tend to lean on one or the other (either preference for leadership or perceived leadership). A collaborative work between Riemer and Chelladurai (1995) took into account all of the issues surrounding the topic and summarized the debate. The basic tenet of the MML is that satisfaction is highest when leadership behavior preferences are congruent with perceptions of that same behavior. However, the results of studies using this method have not been consistent, perhaps due to the difficulties associated with the use of discrepancy scores. Chelladurai and Riemer

listed the following most pressing issues surrounding discrepancy scores of the LSS (Riemer & Chelladurai, 1995, p. 280):

First, the reliability of discrepancy scores decreases as the correlation between the two base scores (e.g., preferences and perceptions) increases; that is, if the correlation is relatively high, it is likely that most of the variance in the discrepancies is due to error. (Ferguson, 1976; Gardner & Neufeld, 1987; Johns, 1981; Linn & Slinde, 1977; Peter et al., 1993). Second, restriction of the variance (i.e. when one of the component scores is consistently greater than the other) may also be problematic (Peter et al., 1993). The results of studies cited earlier suggest that preferences for a particular leadership behavior are likely to be lower than perceptions of that behavior. Third, because difference scores are not unique from their component parts, any relationship between the discrepancy scores and variables of interest is most probably spurious (Cronbach, 1958; Johns, 1981; Peter et al., 1993; Wall & Payne, 1973).

Although Chelladurai (1984) found that discrepancy scores accounted for more variance than either preference or perception scores, Weiss and Friedrichs (1986) found that perceptions of all five leadership dimensions significantly predicted team and individual satisfaction scores. Chelladurai, Immamra, Yamaguchi, Oinuma, and Miyauchi (1988), in a study of perception as an alternative to variance between preference and perception, further supported that perceptions of leadership behavior were better predictors. There is still disagreement as to what model works best, but it is apparent that perceived leadership can generate significant results. Because of the success of studies using perception rather than preference or discrepancy, this study used the LSS for perceived leadership. Although this study used perceived leadership, studies on

preferred leadership were also relevant because of the idea that coaches may lead depending what they believe their swimmers prefer. Discrepancy studies were also used due to their acceptance as a valid measure for leadership.

Leadership and Satisfaction

Patterns were found in athlete satisfaction in studies that looked at the discrepancy scores of perceived and preferred leadership. With basketball players, Chelladurai (1984) found higher levels of satisfaction in groups that presented greater perceptions of training and instruction, democratic behavior, social support, and positive feedback, and lower perceptions of autocratic behavior relative to the preferences. Wrestlers presented greater satisfaction with leadership if their perception of training and instruction and social support were higher than their preference for the same dimensions (Riemer & Chelladurai, 1995). Discrepancy scores of training and instruction, social support, and positive feedback were the only three significant predictors of satisfaction with leadership in a study done by Horne and Carron (1985) on Canadian university volleyball, basketball, track and field, and swimming athletes. These studies have all shown similar results and therefore lead to the first hypothesis:

H_{1A} – Coaches’ training and instruction methods, democratic behavior, social support, and positive feedback are positively related to satisfaction while autocratic behavior is negatively related to satisfaction.

Leadership and Turnover Intention

In a specific study on swimming, Black and Weiss (1992) conducted a study with age-group swimmers between the ages of 10 and 18. In an attempt to increase the body of knowledge on the influence of coaches on the self-perceptions and motivation of sport participants, the goals of the research were to study the relationship between perceived coaching behaviors, perceptions of ability, and motivation. Black and Weiss (1992) hypothesized that:

- (a) Athletes who perceived more frequent praise, information, or praise combined with information following desirable performances would score higher on perceptions of success, swimming competence, enjoyment, effort, choice, and preference for optimal challenge and will score lower on perceived pressure.
- (b) Athletes who perceive that their coach gives more frequent general encouragement, corrective information, or encouragement combined with corrective information following undesirable performances would score higher on perceptions of success, swimming competence, enjoyment, effort, choice, and preference for optimal challenge and will score lower on perceived pressure.

Although the study used the Coaching Behavior Assessment Scale developed by Smith et al. (1979) and modified by Horn and Glenn (1988) rather than Chelladurai's more widely accepted LSS, the research provided some interesting results. As was the case with the findings on extrinsic motivation, there was significant difference in the findings between genders. Females scored significantly lower than males on perceptions of praise and competence. However, a previous study suggested that females tend to depend less on peer comparison and more on adult feedback than males (Dweck & Bush, 1976; Lenney,

1977; Ruble, Parsons, & Ross, 1976). Also, empirical research has shown that females receive less contingent and appropriate reinforcement than males (Black & Weiss, 1992). The authors suggest that these differences, therefore, may be in account to actual coaching-behavior differences and/or gender differences in the self-assessment process. Specifically, the findings of this research found that athletes who received positive praise had higher levels of self-esteem and positively influenced their enjoyment. Black and Weiss' study demonstrate that coaches play a crucial role in the lives of their athletes and depending on their coaching style can highly affect swimmers' perceptions of ability and continued motivation to continue in the sport. This led to the second primary hypothesis: H_{1B} – Coaches' training and instruction methods, democratic behavior, social support, and positive feedback are negatively related to turnover intent while autocratic behavior is positively related to turnover intent.

Leadership and Commitment

Horne and Carron (1985) explain that the longer an athlete is in a sport, the higher their preference for social support. For example, an athlete who has played a certain sport for ten years seeks more social support from their coaches and their team than an athlete who has played that same sport for only two years. The same holds for athletes who participate in the sport for the full ten years but only dedicating themselves to the sport seasonally rather than year-round. The researchers explain that longer involvement with a sport indicates a more intense involvement with it and may lead to the neglecting of social interactions outside athletics and therefore look to the team and coach to provide them with social support.

In the collegiate environment, where most students suffer a change in their living conditions (i.e., living on their own and moving to a higher caliber of competition), athletes may place a higher importance in social support (Horne & Carron, 1985). It is possible that collegiate coaches show more social support than club coaches, as they are likely to be aware of such difficulties felt by their athletes. In addition, athletes that live farther from home may look for stronger social support from their coaches, specifically international athletes, considering the difficulties they face in contacting family and friends from home. It would be interesting to see if these athletes would see their coaches and team-members differently than those who are closer to home.

It is obvious that the athlete's environment has a large effect on his well-being. Since the coaches play an important role in implementing the team culture, which is a big part of the environment in which the athletes find themselves, it is natural to relate the training environment to the coaches. Athletes that are satisfied with their environment are more likely to show higher commitment to their team and coaches. This leads to the second primary hypothesis:

H_{1C} – Coaches' training and instruction methods, democratic behavior, social support, and positive feedback are positively related to commitment while autocratic behavior is negatively related to commitment.

Divisional Differences

While many Division I schools are large state schools with revenue generating sports like football and basketball as well as large athletic budgets, Division III schools are often small private schools where all sports are financed by the athletic department.

Division I policies also allow athletes to red shirt a year, which gives them an opportunity to decrease their course load and focus more on athletics. These, and many other situational differences instated by the NCAA, create differences between the divisions that represent situational demands that can affect a coach's behavior. There are also institutional differences that include a great variance in size, sports offered, emphasis on fans, and commitment to academics (Whiting, 2008) that vary between schools and also have an impact in how coaches lead. It is important to see if there are any constant differences in perceived leadership styles between the Divisions of the NCAA.

Beam, et al. (2004) introduced the first comparison study of leadership between divisions by researching the difference in preferred leadership styles between Division I and II athletes in the NCAA. Beam and his associates proposed three hypotheses: (1) Differences in leader behavior preferences related to gender are likely to occur; (2) NCAA Division I and Division II student-athletes' leader behavior preferences will differ; and (3) Differences in preference of leadership styles will occur among the variables of task dependence and task variability. For the study they used gender (male or female), competition level (Division I or II), task dependence (open or closed sport), and task variability (independent or dependent sports) as their four variables.

The main hypothesis this study on divisional differences, the idea that there is a difference in leadership preference depending on level of competition, was refuted. The study, however, found many differences between the variables, of which the most important findings are listed below:

- There is a significant higher preference for autocratic leader behavior among male student-athletes.

- Female closed sport student-athletes gave higher ratings to democratic behavior than male closed sport student-athletes.
- Male student-athletes have significantly higher preference for social support leader behavior.
- Female student-athletes showed significantly higher preference for training and instruction leader behavior.
- Significant preference for positive feedback by independent student-athletes.

Because there was no significant difference in leadership preference between the athletes of the two divisions it can be deduced that the average athlete prefers the same leadership style. This, although interesting, simply shows us that swimmers enjoy the same type of leadership. The fact that the athletes swim in a Division I or Division II program should not, logically, change their preferences for leadership styles. It may be that coaches adapt to what their athletes desire and lead in that manner. In this case, when studying perceived leadership, we would find little to no difference between coaches. However, it may also be that coaches lead depending on their own style of leadership, despite the athletes' preferences. This could lead to multiple perceived leadership styles.

The study by Beam and his colleagues was very limited by not including a number of variables that would have furthered their contribution to the issue. The researchers only studied preferred leadership rather than perceived leadership styles and limited themselves to the two divisions that offer athletic scholarship in the NCAA. In addition, the study was limited to the Northeast United States, perhaps limiting their study to a single sporting culture. Had they included Division III institutions, where recruiting, scholarship, and institutional goals are very different from Division I and

Division II, as well as including other universities and colleges from other areas of the United States, they could possibly have experienced more varied results. However, the research idea remains a valid topic that should be expanded.

This topic has not been widely researched outside of Beam et al.'s (2004) study, which was not able to report significant results between the leadership differences in Division I and II athletic teams. By including a larger number of participating schools from all three divisions, this study expected that perceived leadership would be more significant between Division III teams and the other two divisions. This is largely due to the effects of scholarship on motivation and satisfaction as well as the large importance placed on extracurricular activities outside of varsity sports found in Division III colleges.

The presence or lack of scholarships, and their effects on motivation, is a large factor in the expected results of this study. Motivation was determined to be closely related to commitment for the effects of this study. An athlete that is not committed to their sport and their team is not likely to be motivated to train and compete. Since the coach is largely responsible for determining the culture of the team and creating the environment in which the team trains and competes, coaching leadership was determined to be an important factor in the athlete's motivation and commitment. Due to the close relationship of these two terms, this study researched both as a single variable.

Although this study used commitment to refer to motivation, it is important to understand that there are two motivational processes in sport settings; intrinsic motivation (IM) and extrinsic motivation (EM) (Medic, Mack, Wilson, , & Starkes., 2007). While IM is defined as performing an activity for the satisfactions and pleasures resultant of

those actions rather than for some separable consequence (Ryan & Deci, 2000), EM reflects behaviors that are performed simply to achieve some separate goal, such as receiving a reward or avoiding punishment (Medic et al., 2007).

Initial studies suggested that rewards negatively affected free-choice behavior resulting in a decrease in IM. One of the logics used to support this idea is that when rewards are offered as an incentive for engaging in what are already interesting activities, people begin to attribute their participation to external causes. The other reasoning is that IM can be reduced if individuals feel their behavior is being controlled through the offerings of rewards (Medic et al., 2007). However, these ideas have been challenged with the reasoning that IM increases if “the existence of rewards is perceived as a source of competency and autonomous action” (Medic et al., 2007, p.294).

In a study by Amorose and Horn (2000), which included an assessment of IM, they decided to include an additional subscale to the Intrinsic Motivation Inventory (IMI; McAuley, Duncan & Tammen, 1989) that measured perceived choice. The study found that students with scholarships had higher IM than those without scholarship. The results showed the opposite pattern than that found by Ryan (1980), who noted that increased IM was only observed in athletes who competed in sports where resources (scholarships) were limited in number. Amorose and Horn suggests that this may be due to the fact that Deci and Ryan’s studies focused on football players where as his studies focused on a wide variety of sports. Therefore, it may be possible that scholarships may show different effects in the motivation of athletes depending on the characteristics of the sport. Because of this, studies on independent sports may show varied results from that of dependent sports. Regardless of the differences in the findings regarding IM, in support of previous

sport motivation research, the studies have consistently found that male athletes report higher levels of EM than female athletes (Medic et al. 2007).

Another possible determinant of differences between the divisions is the fact that athletic funding is much higher for Division I schools and therefore sporting events are likely to attract more viewership, creating more excitement as well as added pressure to perform well. In addition, since Division one is considered to be the highest level of athletics in the collegiate setting, it is expected that the coaches in this level are, on average, better remunerated in their positions, therefore adding to an even higher level of differentiation in leadership behavior.

Direct hypotheses on this matter were not postulated due to the lack of research done on the topic. However, due to the many differences in cultural and institutional differences I looked for variance in relation to divisional differences with the following secondary hypothesis:

H_{2A} – There *is a difference* in **leadership perception** between **divisions**.

Gender Differences

Many studies, including the original research by Chelladurai, have found that male athletes prefer more autocratic behavior than female athletes and female athletes show a higher preference for democratic behavior in comparison to male athletes (Chelladurai & Saleh, 1978). Two decades later, Sherman and Fuller (2000) found that although female athletes express a slight preference for democratic behavior and positive feedback, male and female athletes expressed similar preferences for the majority of individual coaching behavior items. Therefore, the trend found by Chelladurai may be

changing with the shifting attitudes of society toward gender roles (Sherman & Fuller, 2000). This could be due to the fact that women sports have become more competitive and more popular in recent times and the athletes have developed different training attitudes. In addition, the implementation of rules that seek to enact equal opportunities for women in sports has caused a large impact in the attention women's sports have received. With the increase in the level of competition and the reshaping of goals in women sports, it is likely that the different gender expectations of coaching styles are becoming more similar. Such preferences are likely to be different for individual sports considering that an autocratic behavior tends to be more common in team sports as a way of maintaining order.

However, this study investigated perceived leadership rather than preferred leadership; thus, differences between genders were expected. Although female athletes and male athletes share the same general goals in their respective sports, there are slight psychological and emotional differences that the coaches deal with on a daily basis. Sherman and Fuller (2000) state that not only are coaches' actual behaviors dictated by his or her personal characteristics, they are also a result of an interaction between the situational characteristics and the individual characteristics of each athlete, including age, gender, personality, ability, and experience. Because of this, coaches may treat athletes of different genders slightly different. This study examined those differences more closely with the following secondary hypothesis:

H_{2B} – There *is a difference* in **leadership perception** between **genders**.

CHAPTER 3

METHODS

Participants

The coaches of both men and women's swim teams of sixty-one colleges and universities were contacted via email and invited to participate in this survey. Teams were chosen based on their ranking from the 2009 NCAA Championships so as to create a comparable sample. The questionnaires were sent to the top 15 placed teams for each gender in each of the three divisions. Fifteen teams were chosen to control teams that only took one individual swimmer or only took enough athletes for one relay. I did not want to include teams that scored due to a few exceptionally talented individuals in teams that would otherwise not be competitive at the NCAA Championships.

If only one gender of a particular team placed among the top 15 in their division, the other gender's coach was also contacted. This was done because some teams have the same coach for both genders. When this was the case, it would have been too difficult to control the distribution of questionnaires so that it would only be sent to the gender that scored top 15. Considering their high rankings, these teams were expected to be highly regarded programs well supported by their institution. Top ranked teams are generally fully funded programs in their divisions and receive more support from their school and athletic departments than lower-ranked programs. By only including the top teams in each division, this study controls for programs that are not well supported.

Of the 62 teams that received questionnaires, student-athletes from twenty teams completed the survey accounting for a team participation rate of 32.8%. Out of a total of two hundred and thirty-six participants, two hundred and twenty-two student-athletes ($N = 222$) completed the questionnaire with the option of skipping questions that they were not comfortable answering. Considering the possibility that participants would not answer all the questions, the sample comprised male ($n = 98$) and female ($n = 122$) swimmers from NCAA Division I ($n = 21$), Division II ($n = 62$) and Division III ($n = 138$) colleges and universities around the United States. Most of the athletes identified themselves as Caucasian-American ($n = 193$, 87.3%), with the rest identifying themselves as International ($n = 10$, 4%), Asian-American ($n = 8$, 3.6%), Hispanic-American ($n = 3$, 1.4%), Other ($n = 6$, 2.7%), and African-American ($n = 1$, 0.5%). The participants ranged in age from 18 to 24 ($M = 19.98$).

Procedures

Participants were recruited by contacting coaches via email at the conclusion of the collegiate swimming season. The coaches were offered a copy of the completed research report along with their team statistics so that they could compare their team's scores to that of their division as well as other divisions. An initial email was sent explaining the goals of the research and what it entailed. It included a link to the questionnaire which was set up on the Survey Monkey website. A second email was sent two weeks later reminding the coaches to forward the questionnaire to their swimmers. Because team size varies greatly, the total number of athletes who received the questionnaire was not calculable.

Measures:

Demographic Information

Each participant was asked to complete a demographic questionnaire that assessed the athlete's age, gender, ethnicity, school name, school division (I, II or III), head coach gender, manner in which practices are organized (separate or combined genders), number of hours of "in water" training per week, number of hours of dryland or weight training per week, school year (Fr., So., Jr. or Sr.), completed years of NCAA eligibility, scholarship status, and number of years as a competitive swimmer. School information was asked in order to provide the coaches with their team's information if requested, but otherwise remained confidential.

Perceived Coach Leadership

In order to assess how the athletes perceived their coach as a leader, the LSS (Chelladurai & Saleh, 1980) was administered. This scale has been highly accepted and used in leadership studies throughout the world. The subscales are the following:

- *Training and instruction*: Coaching behavior aimed at improving the athletes' performance by emphasizing and facilitating hard and strenuous training; instructing them in the skills, techniques and tactics of the sport; clarifying the relationship among the members; and structuring and coordinating the members' activities. The coefficient alpha (α) of the scale was .88.
- *Democratic behavior*: Coaching behavior that allows greater athlete participation in decisions pertaining to group goals, practice methods, and game tactics and strategies. The coefficient alpha (α) of the scale was .84.
- *Autocratic behavior*: Coaching behavior that involves independence in decision making and stresses personal authority. The coefficient alpha (α) of the scale was .86.

- *Social support*: Coaching behavior characterized by a concern for the welfare of individual athletes, positive group atmosphere, and warm interpersonal relations with members. The coefficient alpha (α) of the scale was .88.
- *Positive feedback*: Coaching behavior that reinforces an athlete by recognizing and rewarding good performance. (Riemer & Chelladurai, 1995). The coefficient alpha (α) of the scale was .90.

The original LSS contains 40 questions that are scored on a 5-point Likert-type scale (always, often, occasionally, seldom, and never). Although Chelladurai's MML was constructed to study the relationship between discrepancy of perceived and preferred leadership and satisfaction, this study simply used perceived leadership in order to study its relationship to satisfaction, performance, turnover intention, and commitment. In order to minimize participant mortality due to time constraints or lack of motivation to complete the survey, a panel of five experts in education, coaching, and swimming was used to reduce Chelladurai's LSS to 25 questions; five questions in each of the five dimensions. In the perceived leadership model, all questions begin with "My coach..." (there are two other models, one that measures preferred leadership and where the coach assesses his own leadership style).

Satisfaction, Turnover and Commitment

Satisfaction, turnover, and commitment were measured with questions that were adapted from previously used models. The scale for athlete satisfaction was taken from Riemer and Chelladurai (1998) and included questions that measure the swimmers' satisfaction with the training and instruction they receive from the head coach, how they are personally treated by their coach, their satisfaction with the team's performance, their

satisfaction with the athletic department, and their satisfaction with their individual performance. Affective commitment was measured using a scale by Kuvaas (2007), which was adapted from Meyer and Allen (1997) and includes questions that measure the athlete's attachment to their team. To measure turnover intention, a scale by Meyer, Allen, and Smith (1993) was slightly adapted to refer to a "team" or "school" rather than "organization." The questions measure the likelihood of an athlete to leave the school or team.

Each measure has a specific number of questions that was scored on a 5-point Lykert-type scale. These adapted measures were used in order to maintain the questionnaire at a reasonable length so as to increase the number of participants willing to complete it. The adapted questionnaires were considered acceptable for the purposes of this study.

Satisfaction

This study was interested in measuring four different dimensions of satisfaction, including the athlete's satisfaction with (1) the head coach throughout the season, (2) the team's performance, (3) the athletic department, and (4) the athlete's personal performance (Reimer & Chelladurai, 1998). The coefficient alpha (α) of the scale for satisfaction with training was .85, satisfaction with the head coach was .93, satisfaction with the team's performance was .80, satisfaction with the athletic department was .82, and satisfaction with personal performance was .86. For each of the variables, the last question is always in regards to the swimmers' overall satisfaction.

In order to measure the student-athlete's satisfaction with their coach's performance, an eight question model was used that includes questions regarding the coach's training methods and personal relationship with the swimmer. To measure satisfaction with team performance and satisfaction with the athletic department, only three questions were asked, including the level of the individual's overall satisfaction for each dimension. Regarding the team's performance, the questions included the athlete's level of satisfaction with the team's win/loss record and the extent to which the team accomplished its goals. Satisfaction towards the athletic department was rated by measuring the extent to which the department met its obligations to the team and their recognition of the individuals' contributions. Lastly, satisfaction with personal performance was measured by asking questions regarding the achievement of goals, improvement over the previous season and improvement in technique (see Reimer & Chelladurai, 1998).

Turnover Intention

Also measured with three questions on a 5-point Lykert-type scale ranging from *Strongly Agree* (5) to *Strongly Disagree* (1), I was interested in seeing the swimmers' future intentions. These questions were adapted from Cammann, Fichman, Jenkins, and Klesh (1979) to measure turnover intention in a sporting environment rather than a work environment, as they were originally designed to measure. The questions included their level of agreement with feelings of quitting the team, transferring to a different team, and the probability of them actually taking action and quitting or transferring. The coefficient alpha (α) of this scale was .83.

Commitment

Commitment was measured with three questions rated on a 5-point Lykert-type scale ranging from *Strongly Agree* (5) to *Strongly Disagree* (1). These questions were taken from Kuvaas' (2007) study on employee's perceptions of developmental performance appraisal and self-reported work performance. Simple adaptations to the questions so they would refer to sports teams rather than the workplace were made, as was necessary with the scale for turnover intention. The purpose was to see how the swimmers relate to their team in order to find patterns between the coach's leadership and how integrated the teams are. The questions inquired about the individual's personal feelings towards the team, including their level of agreement to their sense of belonging, their emotional attachment, and if they feel they are a "part of the family" with their team. The coefficient alpha (α) of the scale was .94.

Overview

The complete questionnaire is made up of four different sections and a total of 62 questions. There were 236 athletes who initiated the questionnaire, 222 answered the majority of the questions, but not all of them completed every question. Because this survey was administered online, it is not clear why some questions were left unanswered. Each of the participants completed the questionnaire voluntarily. They had unlimited time to complete all of the questions and could terminate their participation at any time. The coaches were asked to not oversee their swimmers completing the survey, but were given a copy of all of the questions as a courtesy considering their leadership was a big part of what is being studied in the present research.

Research Purposes

This study attempted to determine the relationship between the five dimensions of coach leadership and swimmers' satisfaction, turnover intent, and commitment. The study also looked into the differences in perceived leadership by the swimmers between genders and NCAA division. Any additional significant results were reported as additional information gathered by this research.

Analytical Methods

Data was analyzed with Statistical Analysis Software (SAS) and the Statistical Package for Social Sciences (SPSS). The primary hypotheses (H_{1A} , H_{1B} , and H_{1C}) were tested with correlational analyses. The secondary hypotheses (H_{2A} and H_{2B}) were analyzed with ANOVA. In addition, descriptive statistics including means and standard deviations were provided.

CHAPTER 4

RESULTS

This study was conducted to determine if a statistically significant relationship existed in the correlation between coaching leadership styles and satisfaction, turnover intent, and commitment. It also sought to determine if a statistically significant relationship existed in leadership perception between athletes of the three divisions of the NCAA and if the perceptions of leadership were different depending on athlete gender.

Primary Hypotheses

Satisfaction

Table 1 confirms hypothesis H_{1A} with the use of Pearson correlations. The statistical analysis showed that the leadership dimensions training and instruction, democratic behavior, social support, and positive feedback were positively correlated with athlete satisfaction. Autocratic behavior was negatively correlated with satisfaction. The dimension of social support was not significantly correlated with satisfaction with the team and satisfaction with the athletic department. More specifically, satisfaction with the team is not significantly related to the social support dimension in leadership and satisfaction with the athletic department is not significantly related to social support. It was also found that satisfaction with the athletic department was only significantly related to autocratic behavior at the $p = .05$ level. All other relationships are significant at the $p = .01$ level.

Turnover Intention

Table 1 also confirms hypothesis H_{1B} showing that turnover intention is negatively related to training and instruction, democratic behavior, social support, and positive feedback and positively related to autocratic behavior. In addition, it shows that turnover intent is negatively related to all dimensions of satisfaction. In addition, all of the relationships with satisfaction were statistically significant except for satisfaction with the athletic department.

Commitment

Table 1 confirms hypothesis H_{1C} showing that affective commitment was positively related to training and instruction, democratic behavior, social support, and positive feedback and negatively correlated with autocratic behavior. The statistical analysis additionally shows that commitment is positively related to all dimensions of satisfaction, with statistically significant results in relationship to satisfaction with the coach, training, and personal satisfaction.

Division Differences

Hypothesis H_{2A} stated that there is a difference in leadership perception between the divisions. A series of Analysis of variances (ANOVAs) was run and the hypothesis was supported in many levels. Both *t*-test and Tukey's test were performed and found significant differences between perceptions of democratic behavior and autocratic behavior between the divisions. Division I coaches are perceived as less democratic than Division II coaches, Division II coaches are less democratic than Division III coaches,

and Division I coaches are less democratic than Division III coaches, $F(2,219) = 15.96, p < .001$, as shown in Table 2. Division I coaches received a democratic mean score of 2.70, Division II coaches of 3.26, and Division III coaches as 3.65. We can also see that student-athletes perceived significantly higher autocratic behavior in Division I coaches than Division II and Division III coaches, $F(2,219) = 17.04; p < .0001$, as shown in Table 2. Division I coaches received an autocratic score of 3.19, Division II coaches of 2.40, and Division III coaches of 2.16.

Table 2 also shows that, although not statistically significant, lower divisions show higher leadership perceptions of training and instruction, democratic behavior, and positive feedback, as hypothesized in H_{2A} . Other significant differences were found using t -Test analysis, but were not supported by Tukey and therefore will not be reported.

Gender Differences

In order to analyze data in regards to differences in gender, three ANOVAs were run. The first was to determine the different perceptions of leadership as it related to male and female coaches. A significant p value was found in the relationship between coach gender and autocratic behavior in perceived leadership, $F(2,219) = 7.74; p < .01$, as shown on Table 3. Both a t -test and Tukey's test were performed and found that male coaches are perceived as significantly more autocratic than female coaches where male coaches had a mean score of 2.38 and female coaches had a mean score of 1.94.

An ANOVA was also run to determine the relationship between athlete gender and perceived leadership styles. As shown on Table 4, a significant p value was found in the relationship between athlete gender and autocratic behavior in perceived leadership,

$F(1, 219) = 7.09; p < .01$. Both a *t*-test and Tukey's test were performed and found that male athletes perceive significantly higher autocratic behavior from their coaches than female athletes, thus confirming hypothesis H_{2B}. Male athletes' mean scores for autocratic behavior from their coaches was 2.47 and females' mean score was 2.19.

Lastly, an ANOVA was run to determine if there was any relationship between matches in gender and leadership. The matches include all the different combinations of swimmers and coaches of both genders; male coaches with male swimmers (1), female coaches with female swimmers (4), male coaches with female swimmers (2), and female coaches with male swimmers (2). This was done to see if any combination in genders perceived different leadership styles from their coaches. A significant *p* value was found in the relationships between male/male and autocratic behavior, with a mean value of 2.53, and female/female and autocratic behavior, with a mean value of 1.94, $F(1, 219) = 6.572; p = .002$, as shown on Table 5. It was found that male swimmers with male coaches perceive significantly higher autocratic behavior than female swimmers with female coaches.

Other Correlations

Other significant results include the following:

- Satisfaction with the athletic department is negatively related to coach gender at the .01 level. Swimmers with male coaches were significantly more satisfied with the athletic department than swimmers with female coaches.
- Turnover intention is negatively correlated with NCAA division at the .01 level. Swimmers in the top divisions have higher turnover intent scores.

- Satisfaction with coaching and training is positively correlated with NCAA division at the .01 level. Athletes in the lower divisions showed higher satisfaction with coaching and training.
- Positive feedback is positively correlated with NCAA division at the .05 level. Lower division swimmers perceive higher levels of positive feedback than swimmers of higher divisions.
- Male athletes perceived significantly higher levels of autocratic behavior.
- Male coaches were perceived as significantly more autocratic.

CHAPTER 5

DISCUSSION

This study sought to better understand the differences in leadership styles of collegiate swim coaches and the effects it has on swimmers' satisfaction, turnover intention, and commitment. The goal was to determine how different types of leadership in collegiate swim coaches affected their swimmers, as well as to determine where different leadership styles are found. In order to do this, gender and divisional differences were also studied. All of the hypotheses were supported and the results corresponded to previous findings by other studies on sports leadership.

As expected, it was found that satisfaction and commitment are positively related to training and instruction, democratic behavior, social support and positive feedback while negatively related to autocratic behavior. Turnover intent had the inverse relationship with the same dimensions of leadership. It was determined that democratic coaches produce much higher satisfaction among their swimmers in comparison to autocratic coaches. Autocratic behavior also accounts for a significantly higher incidence of turnover intention and a significantly lower level of commitment. Commitment was directly related to satisfaction with the coach and training, but no significant relationship was found between commitment and satisfaction with the team or the athletic department.

These results demonstrate the importance of a good relationship between the coach and the swimmers. Chelladurai (1984), Riemer and Chelladurai (1995), Horne and Carron (1985), and many other studies found the same results. Although all of these

studies have researched different sports, the results show that there is a consistent relationship between these leadership dimensions and satisfaction, commitment, and turnover. This study found that it is important for a coach in NCAA swimming to have high levels of training and instruction, democratic behavior, social support, and positive feedback, and to not lead in an autocratic manner. It is important to allow swimmers to have an active role in their own careers as collegiate athletes.

Due to the lack of significant relationship between the athletes' commitment and their satisfaction with the team and athletic department, commitment to the team may be linked directly to the coach. It is the coach's actions that determine the nature of the team's atmosphere and the social interaction within the team. Considering the significant relationship between commitment and the social support dimension in leadership, I believe that the team mirrors a strong support from the coach, augmenting the social support within the team. Turnover intention, on the other hand, shows a significant negative relationship to every aspect of leadership except for autocratic behavior (where it shows a positive relationship). It also shows a significant negative relationship to satisfaction. Although this was expected, it is an important find that coaching leadership styles play such a large role in turnover intention. The influence of the coach in a swimmer's decision to continue in the program or sport demonstrates his or her responsibility as a leader. Some coaches, in the instance of a particular swimmer being a bad influence, may think it is necessary to remove that athlete from the roster for the benefit of the team. In other cases they may do anything that is necessary to help a swimmer that is unhappy. The athlete's personality is just as important as the coach's personality in judging their leadership style.

In support of the above statements, Aoyagi, Cox, and McGuire's (2008) literature review show that there is a positive relationship between leadership and team cohesion. This explains that coaches who present favorable scores in the leadership dimensions tend to have teams that are more cohesive. This was also supported in studies done by Turman (2001, 2003, 2008) who studied a combination of coach leadership styles, satisfaction levels, and team cohesion. The combination of good leadership and a close team leads to high levels of satisfaction and commitment, and low levels of turnover intent.

Statistical analyses found that male coaches present more autocratic behavior and less democratic behavior than female coaches. These results are in line with the leadership styles that lead to higher satisfaction levels. However, coach gender does not have a significant relationship to satisfaction, except for satisfaction with the athletic department, where athletes with female coaches were found to be less satisfied with their athletic department. This lack of relationship between satisfaction and coach gender shows that there are other variables that lead to higher satisfaction levels when coaches are more democratic and less autocratic. The fact that male athletes perceived higher autocratic behavior and lower democratic behavior than female athletes is interesting, but not surprising. This could be a matter of different perceptions due to gender differences, or perhaps the coaches may truly present different behaviors depending on the gender of the athlete. Chelladurai and Saleh's (1978) findings stated that male athletes prefer more autocratic and social support behavior and female athletes prefer more Democratic Behavior. Perhaps the coaches perceive this preference and coach their athletes

accordingly, which would account for the different perceptions in coaching behavior between the genders.

The analysis with the matching of genders reinforces the idea of differences in perception of coaching behavior as it relates to gender. The matched gender analysis showed that male athletes perceive higher autocratic behavior from their coaches, especially when their coaches are male, and female athletes perceive higher democratic behavior from their coaches, especially when their coaches are female. Although Sherman and Fuller (2000) state that “the shifting attitudes of society toward gender roles may have created an entirely new set of circumstances for athlete participation in sport,” the fact that findings from the 70’s are still being supported by current research shows that there are still differences between genders.

Differences in perceived leadership were found between the divisions. As stated earlier in this paper, Beam, et al. (2004) did not find any significant difference in preferred leadership between the divisions. However, although that study suggests that swimmers prefer similar types of leadership, there is significant difference between what they perceive in the different divisions. The most noticeable difference is between D-I and both D-II and D-III, where the coaches of the latter two divisions are perceived as more democratic and less autocratic. As the statistical analyses show, these are the leadership types that lead to higher satisfaction and lower turnover. Since D-I athletics is known as the highest level of competition in collegiate athletics, a roster spot in D-I teams is highly desirable. Because of this, coaches in this division may be more demanding. Since the demand for a spot on the roster of a D-I team is high, these coaches have the option of cutting a swimmer and taking on a new athlete every year. This allows

the coaches to be less emotionally attached to their swimmers and their team and focus on attaining athletes who will require less attention but will perform just as well or better without requiring as much time or energy. However, it may also be true that the D-I coaches studied are more experienced and therefore more susceptible to leading from past experience and coming off as autocratic rather than democratic.

It is noticeable that the most important variables in this research were the autocratic and democratic behaviors in leadership. Most of the significant data collected were correlated with these variables. This could be because these athletes spend a large part of their collegiate careers training with their coaches. The student-athletes studied spent an average of 17.06 hours per week training in the water and 4.70 hours per week training outside of the water (including weights and dryland training). This accounts for a total average of 21.76 hours of training with the same coach each week. The manner in which a coach treats his swimmers impacts a large part of their week and therefore affects many aspects of the swimmers' lives. Chelladurai (1978) suggested that when athletes dedicate a large part of their lives to a sport, they tend to neglect social interactions outside athletics. I believe this leads to more intense involvement with their team and increased dependence on their coach. Coaches who demonstrate more democratic behavior may help their swimmers feel more independent leading to higher levels of satisfaction.

Because this research focused on collegiate swimmers, it is not possible to generalize the findings to other sports. As Riemer and Chelladurai (1995) indicated, there are differences in preference of leadership in athletes in interdependent, dependent, closed, and open sports. If we see differences in leadership preference in these sports,

there is a great likelihood that there will also be a difference in leadership perception.

Although the findings of this study may not be true in other sports, I believe that the findings in swimming will be similar to the findings in other independent closed sports.

In sum, this study contributes to the body of knowledge on leadership behaviors in NCAA swimming and how these behaviors affect satisfaction, turnover intention, and commitment. It was also important in supporting previously studied ideas. This study can help swim coaches understand what types of behaviors improve their athletes' overall experience. I suggest that coaches who are interested in increasing swimmer satisfaction, commitment, and retention work on developing a more democratic approach to coaching. This study was also helpful in pointing out the differences between the different divisions for high-school swimmers who find such differences important deciders in their college search. Swimmers that value training and instruction and autocratic behavior should consider higher divisions while swimmers that value democratic behavior, social support and positive feedback should consider lower divisions.

If this study is replicated, it is recommended that a larger population be used. Many of the coaches contacted did not forward the questionnaire to the teams, it may be beneficial to contact the coaches by phone or personally. An increase in the response rate, especially in Division I, would greatly increase the reliability of the data. It may also be relevant to differentiate swimmers based on their primary events. In teams where practices are divided into groups (such as distance, middle distance, and sprint; or by strokes), swimmers may have a different perception of leadership and may even present different levels of satisfaction, commitment, and turnover intention. Although this research attempted to screen for only the top ranked teams in each division, there is a

much larger discrepancy between the top tier and lower tier teams in Division III and Division II than in Division I. Perhaps a reduction in the number of teams studied to ten teams in each division, with a guarantee that all teams would participate, would be beneficial in order to have a study that is more representative of the differences between the divisions. Another option would be to study a much larger number of teams in order to get broader results that are more representative of the three divisions as a whole. It may be interesting to study how the assistant coaches affect the athletes, noting that although the head coach has a bigger impact on the training environment and team culture, the athlete's main coach may be one of the assistants, who could have a bigger impact on their overall satisfaction.

It would be interesting to see how much swimmers link their personal performance with leadership styles to see how much they believe their coaches influence their individual results. Studies on the relationship between leadership and team performance have shown weak and inconsistent results (Alfermann, et al., 2005). Some studies show a negative correlation between the coach's social support and team record (Serpa, Pataco, & Santos 1991; Weiss & Friedrichs, 1986) which contradicts logic as it leads us to believe that less social support is related to better performance. Others show a positive correlation between coach behavior and athletes' performance, such as Horne and Carron (1985) whose studies found that players' competence increased with positive feedback. Most studies measured performance through either team win-loss percentages, or perceptions of performance relative to what was expected. In the case of swimming, the former measurement is impractical because the events swam by an individual varies greatly depending on the competition as does the level of competition faced by the

athlete. In addition, some sports, like swimming, do not place much emphasis on the dual meet season, only focusing on their conference or national championship. I would like to see future studies develop a multidimensional model for determining different levels of performance and linking it to the different dimensions of leadership and satisfaction.

CHAPTER 5

CONCLUSION

Coaches have a central role in the lives of NCAA swimmers. The manner in which they lead their teams and relate to their swimmers can determine the athlete's level of satisfaction, commitment, and turnover intent. This study supported this conclusion and showed that swimmers in the NCAA are generally happier with coaches who present a more democratic behavior.

The study also supported the idea that there is a difference in how coaches of different divisions are perceived by their swimmers. In addition, it was found that gender plays an important role in the perception of leadership styles. Further research is warranted with a larger sample of athletes from all three divisions and measuring additional variables. Similar research in other sports would also be helpful to determine the differences between the leadership styles found in other areas of collegiate athletics.

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APPENDICES

IRB APPROVAL

PROJECT NUMBER: 2009-10671-0

TITLE OF STUDY: Coaching Leadership Styles and their Effects on Swimmers' Satisfaction, Performance, and Commitment in NCAA Swimming

PRINCIPAL INVESTIGATOR: Dr. Doyeon Won

Dear Dr. Won,

The University of Georgia Institutional Review Board (IRB) has reviewed and approved your above-titled proposal through the exempt (administrative) review procedure authorized by 45 CFR 46.101(b)(2) - Research involving the use of educational tests (cognitive, diagnostic, aptitude, achievement), survey procedures, interview procedures or observation of public behavior, /unless:/(i). the information obtained is recorded in such a manner that human participants can be identified, directly or through identifiers linked to the participants; /and/(ii). any disclosure of the human participants' responses outside the research could reasonably place the participants at risk of criminal or civil liability or be damaging to the participants' financial standing, employability, or reputation.

You may now begin your study. Your approval packet will be sent by mail.

Please remember that no change in this research proposal can be initiated without prior review. Any adverse events or unanticipated problems must be reported to the IRB immediately. The principal investigator is also responsible for maintaining all applicable protocol records (regardless of media type) for at least three (3) years after completion of the study (i.e., copy of approved protocol, raw data, amendments, correspondence, and other pertinent documents). You are requested to notify the Human Subjects Office if your study is completed or terminated.

Good luck with your study, and please feel free to contact us if you have any questions. Please use the IRB number and title in all communications regarding this study.

Thank you,

Kim Fowler Human Subjects Office 606A Boyd Graduate Studies Research Center
University of Georgia Athens, GA 30602-7411

kfowler@uga.edu

Telephone: 706-542-5318

Fax: 706-542-3360 <https://www.ovpr.uga.edu/compliance/hso/>

FIRST EMAIL TO COACHES

My name is Fernando Rodriguez, MS Candidate in Kinesiology at the University of Georgia. I am currently conducting my thesis study on swimmers perception of their coaches as leaders and how this relates to their Satisfaction, Performance, Motivation, and Commitment to the program. The study will also include other variables such as age, scholarship status, NCAA division, and experience as a swimmer.

I have set up an online questionnaire that is being sent to all of the coaches in the top 15 teams in each gender of each division from this year's NCAA championship. I simply ask that you forward it to your team and encourage them to fill it out. It should take no more than 15 minutes to complete. At your request, the results will be made available to you with the results gathered from your team and the entirety of each division so that you can compare your results with the rest of the country.

The following link will take you directly to the survey:

https://www.surveymonkey.com/s.aspx?sm=dVgJFnEmvh0IuXui7PozNg_3d_3d

If you have any questions, please feel free to contact myself, or my major professor Dr. Doyeon Won. Our contact information is below.

Thank you for your time!

Fernando

Fernando Martinelli Rodriguez
Department of Kinesiology
University of Georgia
354 Ramsey Center, 300 River Rd.
Athens, GA 30602
Tel (330) 317-5327
fernand0@uga.edu

Doyeon Won, Ph.D.
Department of Kinesiology
University of Georgia
361 Ramsey Center, 300 River Rd.
Athens, GA 30602
Tel (706) 542-4362
won@uga.edu

SECOND EMAIL TO COACHES

I was wondering if you have had the time to forward the survey link to your swimmers. If not, please encourage them to go to the following website and answer a few questions (mostly multiple-choice). It should take no longer than 15 minutes for them to complete.

https://www.surveymonkey.com/s.aspx?sm=dVgJFnEmvh0IuXui7PozNg_3d_3d

Thank you,
Fernando

Fernando Martinelli Rodriguez
Department of Kinesiology
University of Georgia
fernand0@uga.edu

ONLINE SURVEY

1. Introduction

Dear Participant:

You are being asked to participate in this research study due to your team's prominent standing in this year's NCAA Championship.

At this time, we request you to kindly participate in this study that investigates coaching leadership styles and their effects on their swimmers. More specifically, in this study we want to examine how specific leadership traits presented by coaches affect swimmers' personal satisfaction, performance, motivation, and commitment to the sport. In addition, we are also looking at how this affects the swimmers' view of the team and the school's athletic department. You must be 18 years of age or older to participate in this study. You must also still be eligible to compete in the NCAA or have just completed your last year of eligibility.

Participation in this survey is completely voluntary. You can refuse to participate or stop participating at any time without penalty or loss of benefits to which you are otherwise entitled. You can skip any question you do not wish to answer. The on-line survey does not allow us to identify responders or their IP address. All information provided by you will serve for research purposes only. Internet communications are insecure and there is a limit to the confidentiality that can be guaranteed due to the technology itself. However, once the materials are received by the researcher, standard confidentiality procedures will be employed. The results of this study will be reported to your coaches, providing them with feedback on their coaching styles and their swimmers' satisfactions that can help them become more effective leaders. This will benefit swimmers, coaches, and the sport of swimming in general. We are hopeful that this research study will allow us to determine specific leadership traits that are preferred by swimmers and lead to maximum satisfaction. With the information obtained from this study, coaches will be able to improve their coaching which in turn will positively affect the swimmers.

This questionnaire is comprised mostly of multiple-choice questions and should take no more than 15 minutes to complete. There are no foreseeable risks or discomforts related to taking this survey. Your decision to participate or not to participate will not affect your relationship with your school/university.

Your cooperation is greatly appreciated. If you have any questions about this research project, please contact the researchers below. Questions or concerns about your rights as a research participant should be directed to The Chairperson, University of Georgia Institutional Review Board, 612 Boyd GSRC, Athens, Georgia 30602-7411; telephone (706) 542-3199; email address irb@uga.edu. By completing the following survey, you are agreeing to participate in the above described research project. You may print this letter for your records. Thank you very much for your time and assistance.

Sincerely,

Fernando Martinelli Rodriguez
Department of Kinesiology
University of Georgia
354 Ramsey Center, 300 River Rd.
Athens, GA 30602
Tel (330) 317-5327
fernand0@uga.edu

Doyeon Won, Ph.D.
Department of Kinesiology
University of Georgia
361 Ramsey Center, 300 River Rd.
Athens, GA 30602
Tel (706) 542-4362
won@uga.edu

2. Coach Leadership

Please answer the following regarding how you perceive your HEAD COACH as a leader. Each section is designed to measure a specific leadership trait.

1. My coach...

	Never	Rarely	Sometimes	Often	Always
Sees to it that every athlete is working to his/her full capacity.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Explains to each athlete the techniques and tactics of the sport.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Pays special attention to correcting athletes' mistakes.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Sees to it that the efforts of team members are coordinated.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Specifies in detail what is expected of each athlete.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

2. My coach...

	Never	Rarely	Sometimes	Often	Always
Asks for the opinion of the athletes on strategies for specific competitions.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Lets his/her athletes share in decision making.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Encourages athletes to make suggestions for ways of conducting practices.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Lets the group set its own goals.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Lets the athletes try their own way even if they make mistakes.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

3. My coach...

	Never	Rarely	Sometimes	Often	Always
Works relatively independent from the athletes.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Does not explain his/her action.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Refuses to compromise on a point.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Keeps to himself/herself.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Speaks in a manner not to be questioned.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

4. My coach...

	Never	Rarely	Sometimes	Often	Always
Helps the athletes with their personal problems.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Helps members of the group settle their conflicts.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Looks out for the personal welfare of the athletes.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Encourages athletes to confide in him/her.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Encourages close and informal relations with athletes.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

5. My coach...

	Never	Rarely	Sometimes	Often	Always
Compliments an athlete for his performance in front of others.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Tells an athlete when he/she does a particularly good job.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Sees that an athlete is rewarded for a good performance.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Expresses appreciation when an athlete performs well.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Gives credit when credit is due.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

3. Swimmer Satisfaction with Coach, Team, and Personal Performance

1. Regarding your satisfaction with your HEAD COACH'S PERFORMANCE for this season (2008-2009).

	Extremely Unsatisfied	Unsatisfied	Neutral	Satisfied	Extremely Satisfied
The training I received from my coach during the season.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My coach's teaching of race strategy.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My coach's teaching of stroke technique.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The recognition I receive from my coach.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My coach's friendliness towards me.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My coach's loyalty to me.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The extent to which the coach is supportive of me.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My coach's overall performance.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

2. Regarding your satisfaction with your TEAM'S PERFORMANCE this year (2008-2009 season).

	Extremely Unsatisfied	Unsatisfied	Neutral	Satisfied	Extremely Satisfied
The team's win/loss record this season.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The extent to which the team has met its goals for the season.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The team's overall performance.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

3. Regarding your satisfaction with your ATHLETIC DEPARTMENT this year (2008-2009 season).

	Extremely Unsatisfied	Unsatisfied	Neutral	Satisfied	Extremely Satisfied
The extent to which the athletic department has met its obligations to the team.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The athletic department's recognition of my contributions.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My overall satisfaction with the athletic department.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

4. Regarding your satisfaction with your PERSONAL PERFORMANCE for this season (2008-2009).

	Extremely Unsatisfied	Unsatisfied	Neutral	Satisfied	Extremely Satisfied
The degree to which I have reached my performance goals during the season.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My improvement over the previous season.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The improvement in my technique.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My overall performance.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

4. Swimmer's Affective Commitment and Turnover Intention

1. Regarding your feelings towards your team:

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
I feel a strong sense of belonging to my team.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I feel emotionally attached to my team.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I feel like "part of the family" with my team.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

2. Regarding your current thoughts or future intentions:

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
I often think about quitting the team.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I often consider transferring to a different team at a different school.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I will probably leave the team within the next year (either to quit swimming or to transfer to a different team).	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

5. Swimmer Demographics

1. Your Age:

2. Your Gender:

- Male
 Female

3. Your Ethnicity (If you are not a US citizen, please check "International")

- | | |
|--|---------------------------------------|
| <input type="radio"/> African-American | <input type="radio"/> Native-American |
| <input type="radio"/> Asian-American | <input type="radio"/> Other |
| <input type="radio"/> Caucasian-American | <input type="radio"/> International |
| <input type="radio"/> Hispanic-American | |

4. Your University or College:

5. Your School's Division:

- Division I (D-1)
 Division II (D-2)
 Division III (D-3)

6. Your Head Coach's Gender:

- Male
 Female

7. How are your team practices organized?

- Separate Training (Men and Women Teams Train Separate)
 Combined Training (Men and Women Teams Train Together)

8. Approximately how many hours do you swim per week?

***Please answer in a one or two digit format. Examples: "26", "9"**

9. Approximately how many hours do you train with weights or with dryland exercises per week?

***Please answer in a one or two digit format. Examples: "12", "5"**

10. What is your academic standing in your University or College?

- Freshman
- Sophomore
- Junior
- Senior

11. How many years of your NCAA eligibility have you completed?

- 0 (Redshirted or have not yet been on the varsity roster)
- 1 (One year completed)
- 2 (Two years completed)
- 3 (Three years completed)
- 4 (Four years completed)

12. What is your athletic scholarship status?

- | | |
|---|---|
| <input type="radio"/> Full Scholarship | <input type="radio"/> None - Division I (D-1) |
| <input type="radio"/> Partial totaling MORE than half | <input type="radio"/> None - Division II (D-2) |
| <input type="radio"/> Half Scholarship | <input type="radio"/> None - Division III (D-3) |
| <input type="radio"/> Partial totaling LESS than half | |

13. How many years have you been a competitive swimmer?

TABLES

Table 1

Variable	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	Mean	s.d.
1. Gender	-															1.55	0.50
2. Coach_Gender	.07	-														1.13	0.33
3. NCAA_Division	.06	.25**	-													2.53	0.66
4. Hours_Swim	-.04	-.25**	-.47**	-												17.06	4.47
5. Hours_Dry	-.03	.02	-.05	.11	-											4.71	2.03
6. Training	.02	.04	.09	-.06	.04	-										4.05	0.78
7. Democratic	.05	.12	.36**	-.13	.00	.53**	-									3.45	0.83
8. Autocratic	-.18**	-.19**	-.34**	.16*	-.02	-.58**	-.65**	-								2.34	0.80
9. Social	-.05	.00	.10	-.01	-.01	.57**	.47**	-.48**	-							4.01	0.79
10. Feedback	-.08	.06	.15*	-.07	.01	.56**	.50**	-.53**	.58**	-						4.06	0.75
11. Sat_CoachTrain	.05	.05	.19**	-.05	.08	.67**	.53**	-.63**	.60**	.56**	-					4.09	0.82
12. Sat_Self	.05	.03	-.04	.01	-.07	.43**	.22**	-.31**	.27**	.24**	.56**	-				3.92	0.95
13. Sat_Team	.11	.05	.00	-.08	-.04	.26**	.26**	-.28**	.12	.22**	.34**	.37**	-			4.27	0.82
14. Sat_AthDept	.06	-.18**	.16*	.11	.02	.20**	.19**	-.17*	.05	.25**	.16*	.18**	.19**	-		3.45	0.94
15. AffComm	-.10	-.03	.12	-.01	-.02	.39**	.33**	-.30**	.38**	.36**	.47**	.26**	.13	.06	-	4.47	0.77
16. TurnoverInt	-.03	-.08	-.24**	.12	.03	-.45**	-.43**	.50**	-.41**	-.42**	-.63**	-.32**	-.24**	-.05	-.54**	1.61	0.87

Note: $p^{**} < .01, p^* < .05$

Table 2

Differences in Leadership Perceptions Between the Divisions

Leadership Subscale	DI	DII	DIII	<i>F</i> (2,219)	Sig.	Tukey
Training	3.77 (1.09)	4.07 (0.75)	4.08 (0.73)	1.50	.225	
Democratic	2.70 (0.91)	3.26 (0.84)	3.65 (0.74)	15.96	.000	DI<DII, DII<DIII, DI<DIII
Autocratic	3.19 (0.94)	2.40 (0.82)	2.16 (0.67)	17.04	.000	DI>DII, DI>DIII
Social	3.65 (1.10)	4.07 (0.84)	4.04 (0.71)	2.46	.088	
Feedback	3.76 (0.90)	4.01 (0.73)	4.13 (0.74)	2.47	.087	

Table 3

Analysis of Variance Between Leadership and Coach Gender

Leadership Subscale	Male Coach	Female Coach	<i>F</i> (1,219)	Sig.	Tukey
Training	4.04 (0.80)	4.13 (0.59)	0.32	.571	
Democratic	3.42 (0.87)	3.71 (0.51)	2.98	.086	
Autocratic	2.38 (0.82)	1.94 (0.40)	7.74	.006	Male>Female
Social	4.01 (0.83)	4.01 (0.57)	0.00	.974	
Feedback	4.05 (0.76)	4.19 (0.65)	0.91	.341	

Table 4

Analysis of Variance Between Leadership and Athlete Gender

Leadership Subscale	Male Athlete	Female Athlete	$F(1, 219)$	Sig.	Tukey
Training	4.04 (0.82)	4.07 (0.75)	0.07	.790	
Democratic	3.40 (0.92)	3.49 (0.77)	0.59	.441	
Autocratic	2.47 (0.84)	2.19 (0.72)	7.09	.008	Male>Female
Social	4.07 (0.84)	3.99 (0.75)	0.62	.433	
Feedback	4.14 (0.75)	4.02 (0.75)	1.48	.226	

Table 5

Difference When Match in Gender is Examined

		Sum of Squares	df	Mean Square	F	Sig.
Training	Between Groups	.548	2	.274	.448	.639
Democratic	Between Groups	1.730	2	.865	1.231	.294
Autocratic	Between Groups	7.827	2	3.914	6.572	.002
Social	Between Groups	.509	2	.254	.405	.667
Feedback	Between Groups	.529	2	.264	.468	.627

Descriptive: Autocratic

Subset for alpha = 0.05					
	GendXGend	N	1	2	
Tukey HSD ^a	4	18	1.9444		
	2	113	2.2102	2.2102	
	1	88		2.5312	
	Sig.		.278		.156
Scheffe ^a	4	18	1.9444		
	2	113	2.2102	2.2102	
	1	88		2.5312	
	Sig.		.311		.183

Note 1. Means for groups in homogeneous subsets are displayed.

Note 2. 1 = male/male; 2 = male/female; 4 = female/female.