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Coaching Style Preferences of Division I College and Professional Softball Players

Megan Diane Langenfeld
University of Arkansas, Fayetteville

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Coaching Style Preferences of Division I College
and Professional Softball Players

Coaching Style Preferences of Division I College
and Professional Softball Players

A thesis submitted in partial fulfillment
of the requirements for the degree of
Master of Education in Recreation and Sport Management

by

Megan Langenfeld
University California, Los Angeles
Bachelor of Arts in Economics, 2011

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University of Arkansas

This thesis is approved for recommendation to the Graduate Council.

Dr. Stephen Dittmore
Thesis Director

Dr. Merry Moiseichik
Committee Member

Dr. R.J. Elbin
Committee Member

Abstract

The purpose of this study was to describe the coaching style and leader behavior preferences of softball players. The Leadership Scale for Sports (LSS; Chelladurai & Saleh, 1980) was administered to Division I college softball players and professional softball players from the National Professional Fastpitch league (NPF). Sixty-four softball players completed the Leadership Scale for Sport questionnaire (preference version), 52 Division I college softball players and 12 professional softball players from the NPF. Descriptive statistics revealed that softball players prefer Training and Instruction, Democratic Behavior, and Positive Feedback; players did not prefer Autocratic Behavior or Social Support. Follow-up univariate ANOVAs indicated that Autocratic Behavior was significantly different for Division I college softball players and professional softball players. Pairwise comparisons showed professional softball players significantly preferred Autocratic Behavior to Division I softball players; however, no statistical significance was found when examining coaching style preferences with relation to age and years of experience. Two one-way ANOVAs followed the trend that professional softball players preferred autocratic coaching behavior while Division I college softball players preferred democratic coaching behavior. Thus, female softball players, overall, prefer a democratic coaching style, training and instruction, and positive feedback; however, professional softball athletes significantly prefer autocratic coaching behaviors while Division I college players do not prefer autocratic coaching styles. Age and years of experience were not statistically significant when determining coaching preference, however, a power analysis is needed to reveal the optimal sample size to establish significance.

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Introduction

The concept of leadership has been studied by many researchers and is important in many facets of life including business, company management, and sports. Effective leadership has been shown to improve trust and team performance (Dirks, 2000); motivate subordinates and satisfy them (Sarpira, Khodayri, & Mohammadi, 2012). Leadership can also increase team task and social cohesion (Jowett & Chaundy, 2004). Leadership style of coaches shape the environment in which athletes carry out responsibilities, affect communication skills as well as meet the basic psychological needs of the athletes (Sari, Soyer, & Yiğiter, 2012). Efficient leadership and coaching has the potential to go beyond the sports environment and affect other spheres of the lives of athletes; therefore, coaches try to create conditions that maximize opportunities and talents of their athletes (Sarpira et al., 2012).

Chelladurai's multidimensional model of leadership incorporates three states of leader behaviors: required, preferred, and actual (Chelladurai, 1990; 2007; 2012; Leadership, 2011). Each leader behavior is associated with certain characteristics that are needed for the best outcomes. The Leadership Scale for Sports (LSS) was developed with the proposal of the multidimensional model of leadership so the model could be adequately tested. Chelladurai and Saleh (1980) purported that the leadership behaviors that produce the desired performance outcomes of athletes are a function of three interacting aspects of leader behavior: (a) the actual behavior exhibited by the coach; (b) the type of leader behavior preferred by the athletes; and (c) the type of leader behavior appropriate to, or required in, a situational context. The LSS consists of five dimensions of leader behavior: Training and Instruction, Democratic Behavior, Autocratic Behavior, Social Support, and Positive Feedback/Rewarding Behavior (Chelladurai, 2007). Autocratic and Democratic Behaviors refer to the coach's style and decision making.

Training and Instruction and Positive Feedback are task-oriented dimensions and the fifth dimension (Social Support) is oriented toward creating a positive group climate.

Many populations and groups have been studied while examining the effects and aspects of leadership. These include: gender differences (Beam, Serwatka, & Wilson, 2004; Lam, Chen, Zhang, Robinson, & Ziegler, 2007; Pyun, Kwon, Koh, & Wang, 2010; Terry & Howe, 1984); task dependence, also known as team vs. individual sports (Beam et al., 2004; Pyun et al., 2010; Sarpira et al., 2012; Terry & Howe, 1984); mentally tough athletes (Crust & Azadi, 2009); communication and psychological needs (Sari et al., 2012); coaches vs. physical education teachers (Ayers, 2011); and athletes in European professional leagues (Fallah, Janani, Dana, & Fallah, 2012; NACAR, 2013). Currently, there is a lack of research describing the coaching preferences of college and professional softball players.

This population needs emphasis because the National Professional Fastpitch league (NPF) is not thriving and currently softball is not one of the sports in the summer Olympic program. Softball is not like its competitors-volleyball, soccer, track and field, basketball, gymnastics, golf, and tennis. These other sports have another peak for girls and women to reach. For example, women can play in the Women's National Basketball Association (WNBA) and can compete for their country at the Olympics. Women can travel professionally on the Ladies Professional Golf Association tour and compete on the Olympic stage. Track and field, tennis, gymnastics, and soccer are some of biggest international sports in the nation. Women have the ability to compete both professionally in successful professional organizations and in the Olympics. The Olympic dream and playing professionally as a career is obtainable for softball's competitors. This is not the case for softball players around the world.

As of 2014, softball players do not have the ability to showcase their talents on the Olympic stage. Softball was taken out of the Olympics in 2005 and has yet to be voted back in by the International Olympic Committee. Softball players do not have a prosperous professional league or association; a professional softball player cannot live only by playing in the NPF. She will depend on another job, endorsements, and other supplemental money.

Therefore, the pinnacle of a softball player's career is during college at the Women's College World Series. When players have completed their college career, they have a few options: (a) quit, (b) pursue a professional career in the NPF or in the Japanese Professional League (a very select few have the opportunity to play in Japan professionally), and (c) play overseas in Europe in which housing, meals, and a monthly stipend is provided, however, no substantial income is made.

Athletes who choose to quit may do so for many reasons, one of which may be coaching style conflict. Every softball player who quits due to coaching friction is important. The study of leadership in athletics has the possibility to identify coaching behaviors and styles as well as player preferences. For example, players can discover that he or she prefers a certain style that corresponds with a specific coach. The coach-player partnership has the possibility to be more successful because of the leadership/coaching style match. Research needs to be done to better prepare coaches to cater their coaching styles to what their softball players need and want. The purpose of this study is to describe the coaching style and leader behavior preferences of softball players.

Research Questions

RQ1. What leader/coaching behaviors are preferred by Division I college softball players given by the LSS?

RQ2. What leader/coaching behaviors are preferred by professional softball players from the National Professional Fastpitch league (NPF) given by the LSS?

RQ3. Do differences exist between Division I college and professional softball players regarding their preferred leader/coaching behaviors given by the LSS?

RQ4. What coaching style (Autocratic or Democratic) is preferred by softball players in relation to age and experience?

Definitions

D1. Autocratic behavior dimension: coaching behavior that involves independent decision making and stresses personal authority as measured by LSS (Chelladurai, 1990).

D2. Democratic behavior dimension: coaching behavior that allows greater participation by the athletes in decisions pertaining to group goals, practice methods, and game tactics and strategies as measured by LSS (Chelladurai, 1990).

D3. Positive feedback dimension: coaching behavior that reinforces an athlete by recognizing and rewarding good performance as measured by LSS (Chelladurai, 1990).

D4. Social support dimension: coaching behavior characterized by a concern for the welfare of individual athletes, positive group atmosphere, and warm interpersonal relations with members as measured by LSS (Chelladurai, 1990).

D5. Training and instruction dimension: 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 as measured by LSS (Chelladurai, 1990).

Delimitations

Division I college athletes at four universities were examined for this study. The universities are diverse in location, athletic conference, and ability level for a variety in

participants. Professional athletes from the National Professional Fastpitch league (NPF) were also studied. A majority of the athletes who received the questionnaire will play professionally only in the NPF, however, a select few who received the survey will play both professionally in the NPF and in the Japanese Professional League.

Literature Review

Components of a Leader

Leadership is the process where an individual influences a group of individuals to achieve a common goal (Leadership, 2011). Team success is largely dependent on the coach, yet there are so many successful coaches with different leadership styles and personalities. One of the most contrasting comparisons within the same sport is Bobby Knight and Mike Krzyzewski. Bobby Knight screams, yells, and appears to be feared by his players and even media. “Coach K,” on the other hand, is calm, approachable, and seems to be loved by his players and support staff. Bobby Knight and Mike Krzyzewski are arguably two of the most successful college basketball coaches in history. How can team success come from two entirely different coaching and leadership styles?

To be one of the best coaches, an individual must produce winners, demand respect in some way, and preach honor and integrity (Pumerzantz, 2012). According to Pumerzantz (2012), the top five coaches of all-time are: (a) John Wooden (basketball), (b) Vince Lombardi (football), (c) Dean Smith (basketball), (d) Bear Bryant (football), and (e) Scotty Bowman (hockey). Even though these coaches have different personalities, coaching styles, and coached different sports, there are a few important factors that are constant in their coaching philosophies (Pumerzantz, 2012).

Quality coaches who are good leaders provide a clear vision not only for what to achieve, but also the day-to-day structure, motivation, and support to translate the vision into reality (Chelladurai, 2007; Kirkpatrick & Locke, 1991; Leadership, 2011; Vallée & Bloom, 2005). Implementing the vision requires another set of skills: (a) structuring and facilitating information; (b) selecting and training players; (c) motivating players; (d) managing information;

(e) team building; and (f) promoting change and innovation (Kirkpatrick & Locke, 1991). It is a mistake to overlook vision; it would make implementation more difficult and success for the team harder to achieve.

Leadership motivation involves the desire to influence and lead others and is often equated with the need for power (Kirkpatrick & Locke, 1991). Inspirational communication, also known as external motivation, is a key component for successful coaches and leaders (Chelladurai, 2007; Kirkpatrick & Locke, 1991; Vallée & Bloom, 2005). Studies have shown that leaders have a strong desire to lead. People with high leadership motivation prefer to be in a leadership rather than subordinate role. The willingness to assume responsibility, which seems to coincide with leadership motivation, is frequently found in leaders (Kirkpatrick & Locke, 1991). Leaders can inspire their athletes to extend themselves to achieve excellence by stimulating enthusiasm, building confidence, instilling pride, enhancing morale, setting examples of courage and dedication, and sharing hardships (Chelladurai, 2007).

Internal motivation, an element of emotional intelligence, is the ability to work with others (Goleman, 1998). Emotional intelligence distinguishes outstanding leaders and is linked to strong and successful performances. Components of emotional intelligence are: (a) self-awareness, (b) self-regulation, (c) motivation, (d) empathy, and (e) social skills (Goleman, 1998). Self-awareness is the ability to recognize and understand one's moods, emotions, and drives, as well as their effects on others. Self-regulation is the ability to control or redirect disruptive impulses and moods; it is the propensity to suspend judgment to think before acting. A passion to work for reasons that go beyond money or status is motivation. Motivation is also a propensity to pursue goals with energy and persistence. Empathy is the ability to understand the emotional makeup of other people and is the skill in treating people according to their emotional

reactions. Social skill is proficiency in managing relationships and building networks; it is the ability to find common ground and build rapport. Self-awareness, self-regulation, and motivation are self-management skills, whereas empathy and social skills concern an individual's ability to manage relationships with others (Goleman, 1998). The following sections will highlight the Mediational Model of Leadership and the Multidimensional Model and their respective evaluation procedures.

Mediational Model of Leadership and the Coaching Behavior Assessment System

Smith, Smoll, and Hunt (1977) developed the original mediational model of leadership that consisted of (a) coach behaviors, (b) players' perceptions and recollections of those behaviors, and (c) players' evaluative reactions (Chelladurai, 2007; 2012). Situational factors are the central elements of the model. The mediational model of leadership requires that consideration be given not only to situational factors and overt behaviors, but also to the cognitive processes and individual difference variables; the emphasis is player recall and evaluation of coach behavior (Chelladurai, 2007; 2012; Leadership, 2011).

In conjunction with the mediational model, Smith and associates also developed an observational method to measure one factor presumably important in sports – coaching behavior (Smith et al., 1977). The Coaching Behavior Assessment System (CBAS) consists of 12 behavioral categories derived from content analyses of coaching behaviors during practices and games (Smith et al., 1977). These 12 categories are further classified as either reactive or spontaneous (Chelladurai, 2007; 2012; Leadership, 2011). Reactive behaviors are responses to immediately preceding player or team behaviors (responses to desirable performances or mistakes); spontaneous behaviors are initiated by the coach and are not responses to immediately preceding events (game-related or game-irrelevant behaviors initiated by the coach) (Smith et al.,

1977). The 12 behavioral categories include: (a) Positive Reinforcement; (b) Nonreinforcement; (c) Mistake-Contingent Encouragement; (d) Mistake-Contingent Technical Instruction; (e) Punishment; (f) Punitive TIM; (g) Ignoring Mistakes; (h) Keeping Control; (i) General Technical Instruction; (j) General Encouragement; (k) Organization; and (l) General Communication (Smith et al., 1977).

Multidimensional Model and the Leadership Scale for Sports

Chelladurai's multidimensional model incorporates three states of leader behaviors: required, preferred, and actual (Chelladurai, 1990; 2007; 2012; Leadership, 2011). Each leader behavior is associated to certain characteristics that are needed for the best outcomes. Situational characteristics, such as group goals, type of tasks, and the social and cultural context of the group, set the parameters for the required behaviors. Preferred behavior refers to the preferences for instruction and guidance, social support, and feedback; these preferences are a function of member characteristics, which include personality and ability related to the tasks, and situational characteristics (Chelladurai, 2007). The actual behavior is largely a function of the leader's characteristics, including personality, expertise, and experience (Chelladurai, 1990; 2007; 2012; Leadership, 2011).

The Leadership Scale for Sports (LSS) was developed with the proposal of the multidimensional model of leadership so the model could be adequately tested. Chelladurai and Saleh (1980) purported that the leadership behaviors that produce the desired performance outcomes of athletes are a function of three interacting aspects of leader behavior: (a) the actual behavior exhibited by the coach; (b) the type of leader behavior preferred by the athletes; and (c) the type of leader behavior appropriate to, or required in, a situational context. The LSS can be distributed in three methods: (a) a coaches' version in which the coach self-describes his or her

behavior, (b) a perceived version in which athletes describe the behaviors of their coach, and (c) a preferred version in which athletes describe the types of coaching behaviors they desire. The LSS consists of 40 items representing five dimensions of leader behavior: Training and Instruction (13 items), Democratic Behavior (9 items), Autocratic Behavior (5 items), Social Support (8 items), and Positive Feedback/Rewarding Behavior (5 items) (Chelladurai, 2007).

Democratic Behavior allows greater participation by the athletes in decisions pertaining to group goals, practice methods, and game tactics and strategies, whereas autocratic behavior involves independent decision making and stresses personal authority (Chelladurai, 1990). Training and Instruction is aimed at improving the athletes' performance by emphasizing and facilitating hard and strenuous training; coaches instruct players in the skills, techniques and tactics of the sport (Chelladurai, 1990). Positive Feedback is a coaching behavior that reinforces an athlete by recognizing and rewarding good performance (Chelladurai, 1990). Social Support is a coaching behavior characterized by a concern for the welfare of individual athletes, positive group atmosphere, and warm interpersonal relations with members (Chelladurai, 1990). Autocratic and Democratic Behaviors refer to the coach's style and decision making. Training and Instruction and Positive Feedback are task-oriented dimensions and the fifth dimension (Social Support) is oriented toward creating a positive group climate. The response format refers to the frequencies of the behavior exhibited by the coach in the five categories: (1) always, (2) often – 75% of the time, (3) occasionally – 50% of the time, (4) seldom – 25% of the time, and (5) never.

Chelladurai and Saleh (1980) reported that team sport athletes (e.g., baseball, softball) preferred training and instruction more than individual sport athletes (e.g., golf, wrestling). Also, as a sport interdependent task (i.e., team sports vs. independent sports) increases, the need for

training and instruction increases. In other words, team sport athletes (e.g., softball) prefer coaches who provide training and instruction more than athletes participating in individual sports (e.g., golf). Males preferred more autocratic behavior than females, whereas females preferred more democratic behavior than males (Chelladurai & Saleh, 1980). Coaching does not have to be solely democratic or autocratic in style; a coach can effectively integrate and blend autocratic and democratic coaching styles. This study will describe the leader behaviors and coaching style preferences of softball players by utilizing the multidimensional model and LSS by averaging the item scores per dimension to get a score out of 5.

Methodology

Instrumentation

The coaching behavior preferred by athletes is measured by the Leadership Scale for Sports (LSS). The 40-item questionnaire was developed by Chelladurai and Saleh (1980) specifically for the sport environment. Each item is preceded by the phrase, "I prefer a coach who..." The LSS requires subjects to respond to each item by checking one of five response categories: Always, Often (75% of the time), Occasionally (50% of the time), Seldom (25% of the time), and Never. The LSS contains five separate sub-scales to represent five dimensions of coaching behavior: Training Behavior (13 items), Democratic Behavior (9 items), Autocratic Behavior (5 items), Social Support Behavior (8 items), and Rewarding Behavior (5 items). Although an internal consistency problem in Autocratic Behavior subscale has been reported, the LSS is believed to properly measure various leadership behaviors of coaches in different sports and countries with reliable results (Pyun et al., 2010). Internal consistency estimates ranged from .45 to .93 and test-retest reliability coefficients ranged from .71 to .82 (Chelladurai & Saleh, 1980). The leader dimensions of the LSS are averaged. The item scores are added to obtain a score for the specific leader dimension and then divided by the number of items per dimension to get a score out of 5.

For the purpose of this study, demographic information was obtained along with responses to the LSS. Demographic items included: age, Division I college or professional softball player, and cumulative years playing organized fastpitch softball.

Study Participants

Division I college

To complete this study, communication was made by contacting the director of softball operations or academic counselor of four Division I softball programs via phone and email to ask them to electronically distribute the LSS (preference version) to their corresponding players. If the director of operations was not available, contact was made to the academic counselors to electronically distribute the questionnaires.

The four universities were selected by convenience sampling. Each university has a prior relationship with the researcher; the head and/or assistant coaches are familiar with the researcher, therefore the researcher felt comfortable asking for their permission to participate in the study.

The director of operations or academic counselor received the LSS (preference version) and demographic questions in an email with the LSS questionnaire Internet link from the researcher. The director of operations or academic counselor forwarded the questionnaire link to their players. Every player on the current team roster received the questionnaire link. Each athlete had two weeks to complete the LSS questionnaire to her preferences in her ideal coach. The questionnaire took approximately 15 minutes and was anonymous. The athletes submitted their questionnaire through the same link on the Internet. Multiple statistic tests were computed to measure level of significance ($p < 0.05$).

Professional

Communication was made by contacting the player representatives or the General Manager (GM) of the four professional softball teams via phone and email to ask them to electronically distribute the LSS (preference version) to their players. All four professional

teams from the NPF, the Akron Racers, Chicago Bandits, Pennsylvania Rebellion, and USSSA Florida Pride, participated in the study.

Because it was the off-season for the professional teams, the four teams in the NPF were in the process of resigning and restructuring contracts of professional softball players. Also, the Pennsylvania Rebellion is a brand new team in the NPF. In 2013, the four professional teams in the NPF were the Akron Racers, the Chicago Bandits, the USSSA Florida Pride, and the NY/NJ Comets. In the fall of 2013, the NY/NJ Comets were bought out by a company and is now the Pennsylvania Rebellion residing in Western Pennsylvania. Because of restructuring contracts, resigning professional players and a brand new organization in the NPF, the number of players receiving the questionnaire link is unknown.

The player representative or GM received the LSS (preference version) and demographic information in an email with the LSS questionnaire Internet link from the researcher. The player representative or GM agreed to forward the questionnaire link to the corresponding players. Each athlete will had two weeks to complete the LSS questionnaire of her preferences in her ideal coach. The questionnaire took approximately 15 minutes and was anonymous. The athletes submitted their questionnaire through the same link on the Internet. Multiple statistic tests were computed to measure level of significance ($p < 0.05$).

Procedures

A survey form was created using Google forms. Once Institutional Review Board approval was obtained from the University of Arkansas, participants were emailed a link to the form from their corresponding team representative. Participants were given two weeks and asked to complete the survey by the deadline, March 1, 2014. Two reminders were emailed to the participants from their team representatives; one reminder was emailed on Monday, February

17, 2014 and another on Monday, February 24, 2014. Data were no longer collected after March 1, 2014. The questionnaire and demographic questions are listed in the Instrumentation.

Data Analysis

RQ1 used descriptive statistics which asks, “What leader/coaching behaviors are preferred by Division I college softball players given by the LSS?” RQ2 also used descriptive statistics which asks, “What leader/coaching behaviors are preferred by professional softball players from the National Professional Fastpitch league (NPF) given by the LSS?”

RQ3 used MANOVA statistics which asks, “Do differences exist between Division I college and professional softball players regarding their preferred leader/coaching behaviors given by the LSS?” RQ4 used one-way ANOVA statistics which asks, “What coaching style (Autocratic or Democratic) is preferred by softball players in relation to age and experience?”

RQ3 and RQ4 both used inferential statistics.

Results

Sixty-four softball players completed the Leadership Scale for Sport questionnaire (preference version), 52 Division I college softball players and 12 professional softball players from the NPF. A median split was used to divide the sample according to both age and years of experience. Thirty-eight participants were between 18 and 20 years old (59.4%) while 26 participants were older than 21 years of age (40.6%). Thirty-three participants had less than or equal to 12 years of fastpitch softball playing experience (51.6%). Thirty-one participants had more than 12 years of playing experience (48.4%). The average age of a softball player in this study was 20.61 years old with a standard deviation of 2.56. The minimum and maximum age for this study was 18 and 29 years respectively. The mean experience level was 12.14 years with a standard deviation of 3.78. The minimum and maximum years of experience were 2 and 12 years respectively.

Table 1 – Demographics

Demographic	Min	Max	<i>M</i>	<i>SD</i>
Age (years)	18	29	20.61	2.56
Amount of Experience (years)	2	12	12.14	3.78

The scores of the subscales/dimensions were averaged among the participants by ANOVA statistics. The mean score of the Training and Instruction dimension was 4.33 with a standard deviation of 0.45 (N=60). The mean score of the Democratic Behavior dimension was

3.50 with a standard deviation of 0.68 (N=64). The average score and standard deviation of the Autocratic Behavior dimension were 1.81 and 0.58 respectively (N=64). The mean score of the Social Support dimension was 2.99; the standard deviation was 0.75 (N=64). The average score and standard deviation of the Positive Feedback dimension were 4.07 and 0.69 respectively (N=64).

Table 2 – Leader Behavior Dimensions among All Participants

Subscale	N	<i>M</i>	<i>SD</i>
Training and Instruction	60	4.33	0.45
Democratic Behavior	64	3.50	0.68
Autocratic Behavior	64	1.81	0.58
Social Support	64	2.99	0.75
Positive Feedback	64	4.07	0.69

Discussion

RQ1 stated, “What leader/coaching behaviors are preferred by Division I college softball players given by the LSS?” Fifty-one Division I college softball players completed the LSS. Results indicated that Division I college softball players preferred the following dimensions: Training and Instruction ($M = 4.33, SD = .45$), Democratic Behavior ($M = 3.55, SD = .71$), and Positive Feedback ($M = 4.13, SD = .73$). Division I college softball players did not prefer Autocratic Behavior ($M = 1.75, SD = .58$) or Social Support ($M = 2.97, SD = .77$).

Table 3 – Division I College Player Preferences

Subscale	<i>M</i>	<i>SD</i>
Training and Instruction	4.33	0.45
Democratic Behavior	3.55	0.71
Autocratic Behavior	1.75	0.58
Social Support	2.97	0.77
Positive Feedback	4.13	0.73

RQ2 stated, “What leader/coaching behaviors are preferred by professional softball players from the National Professional Fastpitch league (NPF) given by the LSS?” Nine professional softball players completed the LSS and results indicated that professional softball players preferred the following dimensions: Training and Instruction ($M = 4.32, SD = .47$), Democratic Behavior ($M = 3.26, SD = .29$), Social Support ($M = 3.29, SD = .55$), and Positive Feedback ($M = 3.87, SD = .40$). Professional softball players from the NPF did not prefer Autocratic Behavior ($M = 2.27, SD = .51$).

Table 4 – Professional Player Preferences

Subscale	<i>M</i>	<i>SD</i>
Training and Instruction	4.32	0.47
Democratic Behavior	3.26	0.29
Autocratic Behavior	2.27	0.51
Social Support	3.29	0.55
Positive Feedback	3.87	0.40

The results were consistent with the literature regarding female athletes. Female athletes prefer a higher degree of Democratic Behavior, Social Support, Positive Feedback, and Training and Instruction but a lower degree of Autocratic Behavior (Beam et al., 2004; Lam et al., 2007). Results were also consistent with the literature regarding task dependence. Softball is a team sport and is, therefore, an interdependent sport; athletes depend on their teammates to win and have ultimate success. According to Pyun et al. (2010), athletes of interdependent sports prefer coaches to be more socially supportive. Specifically, female interdependent sport athletes have a higher mean score for Training and Instruction, Social Support, and Positive Feedback than athletes who are in individual sports (Pyun et al., 2010).

RQ3 stated, “Do differences exist between Division I college and professional softball players regarding their preferred leader/coaching behaviors given by the LSS?” Box’s Test of Equality of Covariance Matrices was used to check the assumption of homogeneity of covariance across the groups using $p < .001$ as a criterion (Shavelson, 1996). Box’s M (22.163) was not significant, $p (.339) > \alpha (.001)$. Therefore, the assumption is not violated and Wilk’s Lambda is an appropriate test to use (Shavelson, 1996). The overall MANOVA was significant

using the Wilk's Lambda test, Wilk's $\Lambda = .794$, $F(5, 54) = 2.810$, exact $p = .025$, multivariate $\eta^2 = .206$.

Levene's Test of Equality of Error Variances was used to test variances of each variable were equal across groups (Shavelson, 1996). Two of the five dependent variables (Democratic Behavior and Positive Feedback) were significant, indicating the assumptions were violated.

Table 5 – Results for Levene's Test of Equality of Error Variances

Subscale	Significance
Training and Instruction	.902
Democratic Behavior	.003*
Autocratic Behavior	.944
Social Support	.362
Positive Feedback	.018*

* $p < .05$

Follow-up univariate ANOVAs indicated that preferred Autocratic Behavior was significantly different for Division I college softball players and professional softball players, $F(1, 58) = 6.275$, exact $p = .015$, $\eta^2 = .098$. Pairwise comparisons showed professional softball players ($M = 2.267$, $SD = .510$) significantly preferred Autocratic Behavior to Division I softball players ($M = 1.749$, $SD = .581$).

RQ4 stated, "What coaching style (Autocratic or Democratic) is preferred by softball players in relation to age and experience?" Results indicated that no statistical significance was shown for age or years of experience regarding coaching style preference. Two one-way ANOVAs showed that experience level and age were not statistically significant in determining

coaching behavior preferences for professional or Division I collegiate softball players. While these differences were not statistically significant, there may be practical implications.

Table 6 – Pairwise Comparisons

Subscale	Level	N	<i>M</i>	<i>SD</i>
Training and Instruction	Division I college	51	4.33	0.45
	Professional	9	4.32	0.47
Democratic Behavior	Division I college	51	3.55	.71
	Professional	9	3.26	.29
Autocratic Behavior	Division I college	51	1.75	.58
	Professional	9	2.27	.51
Social Support	Division I college	51	2.97	.77
	Professional	9	3.29	.55
Positive Feedback	Division I college	51	4.13	.73
	Professional	9	3.87	.40

One potential reason as to why professional softball players reported a higher mean score for Autocratic Behavior is because these players come from a different generation. Professionals in any arena are typically older and come from generations that create their own traditions and cultures. These individuals have shared collective fields of emotions, attitudes, preferences, and dispositions (Arsenault, 2004). In addition, differences in how these generations rank admired leadership characteristics correlates to their preferred leadership styles and favorite leaders (Arsenault, 2004).

Limitations

One limitation of this study was time. Participants were only allotted two weeks to complete the survey and the researcher was restricted to 16 weeks to finish the study. This timeframe is too short to present a thorough data analysis.

Another limitation was the sample size ($N = 64$). This is extremely undersized for this type of study. The sample was also very disproportionate which could skew the results. Eighty-one percent of the sample was Division I college softball players while only 19% were professional softball players from the NPF.

A notable limitation of this study was the reliability and accountability the researcher had regarding athlete participation. The researcher had to rely on third parties to distribute and remind the athletes to participate in the study. Because the researcher had to rely on third parties, participation in the study could have decreased.

Additionally, the time of year in which the study was conducted could be a considerable limitation. During the spring, all college softball teams are taking part in their heaviest portion of their season; this is known as being in-season. College softball teams are traveling to tournaments and games, playing weekend series after weekend series, and are constantly busy. Participation from the Division I college softball players in this study could have been decreased due to the busy schedule of the softball season. Professional teams are in their off-season during the spring; professional players could be home, taking time off, or training on their own. Many teams and players are in the process of restructuring their contract agreements. Participation from the professional players in the study could have been decreased because players could have been in the process of signing their contracts. Therefore, the players in these negotiations might not have ever received the survey link.

Further Research

Further research should take place between coaching style preferences and experience level. There is a multitude of research studying gender differences and task dependence, however, there is little to no research comparing the coaching style preferences with experience level. For example, what coaching style is preferred by Little League baseball players compared to high school baseball players? What coaching style is preferred by interscholastic baseball players with collegiate baseball players and with professional baseball players in Major League Baseball? This could help answer the question of significance between experience level and coaching preference. It can also be studied in multiple sports to better prepare coaches at multiple experience levels, from youth all the way to professional. In return, leaders/coaches and subordinates/athletes will have greater success in the long run.

Another area of future research is to run a power analysis to determine the optimal sample size needed for the study to show significance regarding coaching style preference with respect to age and years of experience. In other words, what is the optimal sample size needed for the study to show statistical significance? A power analysis needs to determine the optimal sample size for the study to show significance.

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Instrumentation

Demographic Items

1. What is your age?

2. Do you play Division I college softball or professional softball?
 - a) Division I college softball
 - b) Professional softball

3. How many cumulative years have you been playing organized fastpitch softball?

Leadership Scale for Sports

Using the following scale, please circle a number from 1 to 5 to indicate your level of agreement with each of the statements regarding your PREFERENCES IN A COACH.

1 Never	2 Seldom 25% of the time	3 Occasionally 50% of the time	4 Often 75% of the time	5 Always
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I prefer a coach who...

1. Sees to it that every athlete is working to his/her capacity.	1	2	3	4	5
2. Explains to each athlete the techniques and tactics of the sport.	1	2	3	4	5
3. Pays special attention to correcting athlete's mistakes.	1	2	3	4	5
4. Makes sure that his/her part in the team is understood by all the athletes.	1	2	3	4	5
5. Instructs every athlete individually in the skills of the sport.	1	2	3	4	5
6. Figures ahead on what should be done.	1	2	3	4	5
7. Explains to every athlete what he/she should and what he/she should not do.	1	2	3	4	5
8. Expects every athlete to carry out his assignment to the last detail.	1	2	3	4	5
9. Points out each athlete's strengths and weaknesses.	1	2	3	4	5
10. Gives specific instructions to each athlete as to what he/she should do in every situation.	1	2	3	4	5
11. Sees to it that the efforts are coordinated.	1	2	3	4	5
12. Explains how each athlete's contribution fits into the total picture.	1	2	3	4	5
13. Specifies in detail what is expected of each athlete.	1	2	3	4	5
14. Asks for the opinion of the athletes on strategies for specific competitions.	1	2	3	4	5
15. Gets group approval on important matters before going ahead.	1	2	3	4	5
16. Lets his/her athletes share in decision making.	1	2	3	4	5

17. Encourages athletes to make suggestions for ways of conducting practices.	1	2	3	4	5
18. Lets the group set its own goals.	1	2	3	4	5
19. Lets the athletes try their own way even if they make mistakes.	1	2	3	4	5
20. Asks for the opinion of the athletes on important coaching matters.	1	2	3	4	5
21. Lets athletes work at their own speed.	1	2	3	4	5
22. Lets the athletes decide on the plays to be used in a game.	1	2	3	4	5
23. Works relatively independent of the athletes.	1	2	3	4	5
24. Does not explain his/her actions.	1	2	3	4	5
25. Refuses to compromise a point.	1	2	3	4	5
26. Keeps to himself/herself.	1	2	3	4	5
27. Speaks in a manner not to be questioned.	1	2	3	4	5
28. Helps the athletes with their personal problems.	1	2	3	4	5
29. Helps members of the group settle their conflicts.	1	2	3	4	5
30. Looks out for the personal welfare of the athletes.	1	2	3	4	5
31. Does personal favors for the athletes.	1	2	3	4	5
32. Expresses affection he/she feels for his/her athletes.	1	2	3	4	5
33. Encourages the athlete to confide in him/her.	1	2	3	4	5
34. Encourages close and informal relations with athletes.	1	2	3	4	5
35. Invites athletes to his/her home.	1	2	3	4	5
36. Compliments an athlete for his/her performance in front of others.	1	2	3	4	5
37. Tells an athlete when he/she does a particularly good job.	1	2	3	4	5
38. Sees that an athlete is rewarded for a good performance.	1	2	3	4	5
39. Expresses appreciation when an athlete performs well.	1	2	3	4	5
40. Gives credit when credit is due.	1	2	3	4	5

Appendix A – IRB Approval



Office of Research Compliance
Institutional Review Board

February 13, 2014

MEMORANDUM

TO: Megan Langenfeld
Stephen Dittmore

FROM: Ro Windwalker
IRB Coordinator

RE: New Protocol Approval

IRB Protocol #: 14-01-454

Protocol Title: *Coaching Style Preferences of Division I College and Professional Softball Players*

Review Type: EXEMPT EXPEDITED FULL IRB

Approved Project Period: Start Date: 02/13/2014 Expiration Date: 02/12/2015

Your protocol has been approved by the IRB. Protocols are approved for a maximum period of one year. If you wish to continue the project past the approved project period (see above), you must submit a request, using the form *Continuing Review for IRB Approved Projects*, prior to the expiration date. This form is available from the IRB Coordinator or on the Research Compliance website (<http://vpred.uark.edu/210.php>). As a courtesy, you will be sent a reminder two months in advance of that date. However, failure to receive a reminder does not negate your obligation to make the request in sufficient time for review and approval. Federal regulations prohibit retroactive approval of continuation. Failure to receive approval to continue the project prior to the expiration date will result in Termination of the protocol approval. The IRB Coordinator can give you guidance on submission times.

This protocol has been approved for 200 participants. If you wish to make *any* modifications in the approved protocol, including enrolling more than this number, you must seek approval *prior to* implementing those changes. All modifications should be requested in writing (email is acceptable) and must provide sufficient detail to assess the impact of the change.

If you have questions or need any assistance from the IRB, please contact me at 210 Administration Building, 5-2208, or irb@uark.edu.

210 Administration Building • 1 University of Arkansas • Fayetteville, AR 72701
Voice (479) 575-2208 • Fax (479) 575-3846 • Email irb@uark.edu

The University of Arkansas is an equal opportunity/affirmative action institution.

Appendix B – Initial Email

Initial Email

Dear Team Representative,

I got the official okay to begin my study. Here is the link to the questionnaire. All you need to do is send the link to the girls. If I could PLEASE have the girls' responses no later than MARCH 1, that would be greatly appreciated.

Thanks again!!

Megan

https://docs.google.com/forms/d/1g0Q1wuMpr2StVbwE3IG1WJX5XgoFa7J0QSJJ4GYKA_M/viewform

Appendix C – Email Reminders

Email Reminder 1

Dear Team Representative,

I hope all is well. If you haven't sent out the questionnaire link to your softball players, please do so. If you have, could you please send out a reminder to them to please fill it out? As of this morning, I only have 12 responses (3 from professional players, 9 college players).

Thank you for your help,

Megan

Email Reminder 2

Dear Team Representative,

I hope all is well. If you haven't sent out the questionnaire link to your softball players, please do so. If you have, could you please send out a reminder to them to please fill it out. This is the last week for players to complete the questionnaire.

Thank you for your help,

Megan