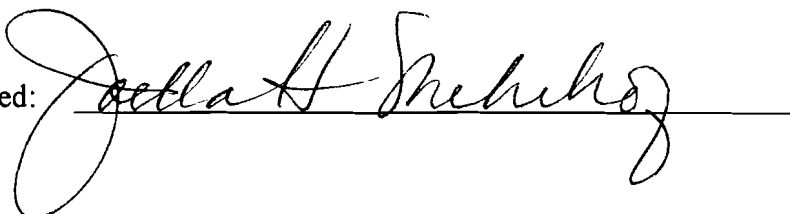


An Abstract of the Thesis of

JOSEPH ANTHONY JACOBS for the degree of Master of Science in Physical Education  
presented on September 27, 1993.

THE EFFECT OF WINNING AND LOSING RECORDS ON TEAM COHESION AND  
ATTENTIONAL FOCUS

Abstract Approved:

A handwritten signature in cursive script, reading "Joella H. Snehoboj", is written over a horizontal line.

The purpose of this study was to determine if winning and losing records influence team cohesion and attentional focus. Three questionnaires were used in the study. These questionnaires included: The Baseball Test of Attentional and Interpersonal Style (BTAIS), The Group Environment Questionnaire (GEQ) and The Sport Cognitive Interference Questionnaire (SCIQ). Thirty-one subjects participated in the study, twelve from losing teams and nineteen from winning teams. Two teams with losing records from the previous season and two teams with winning records from the previous season were used in the study. Each group contained one fast pitch softball team and one baseball team. Subjects were tested in the preseason or before any games were played. A one-way analysis of variance was used to determine if there was a significant difference between winning and losing teams.

The following hypotheses served as a basis for this investigation:

1. There is no significant difference between the GEQ scores of winning teams and losing teams.
2. There is no significant difference between the B-TAIS scores of winning and losing teams.
3. There is no significant difference between the SCIQ scores of winning and losing teams.

This study found a significant difference on certain subscales of the B-TAIS and the GEQ. Hypothesis one was rejected for the BETA, BITA, NARA and INFPA subscales of the B-TAIS. Hypothesis two was rejected for the IAGT and GIT subscales of the GEQ. There was a significant difference on these subscales. Hypothesis three was not rejected for the SCIQ. There was no significant difference between the winning and losing teams.

**THE EFFECT OF WINNING AND LOSING RECORDS ON TEAM  
COHESION AND ATTENTIONAL FOCUS**

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A THESIS  
PRESENTED TO  
THE DIVISION OF HEALTH,  
PHYSICAL EDUCATION AND RECREATION

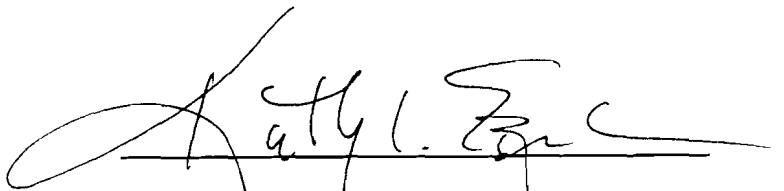
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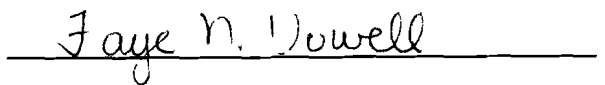
In Partial Fulfillment  
of the Requirements for the Degree  
MASTER OF SCIENCE

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by  
**Joseph Anthony Jacobs**  
**September 1993**



Approved for the Major Division



Approved for the Graduate Council

THE EFFECT OF WINNING AND LOSING RECORDS ON TEAM  
COHESION AND ATTENTIONAL FOCUS

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## **CHAPTER ONE**

### **INTRODUCTION**

Physical educators and coaches strive to enhance the performance of students and athletes. Two areas that have the potential to enhance athletic performance and determine positive or negative experiences on the playing field are cohesion and attentional focus. Webster (1987) defined cohesion as the tendency to stick together and focus as the ability to concentrate. Attentional focus is a relatively new term that refers to the ability of an individual to attend to pertinent information. Coaches seek to maximize the potential of athletes. Methods to improve the areas of cohesion and attentional focus will enhance an athlete's ability to utilize his/her full potential.

A survey of coaches by Silva, (1984) ranked team cohesion as the most critical problem coaches faced. While biomechanical and physiological errors have clearly defined ways in which technical problems can be corrected, problems involving team cohesion are less concise and easily corrected. A coach may spend an entire season trying to find the right combination of players that allow the team to play to its maximum potential. A team in which all its players are united and directed by team goals should perform better than a team in which its players are disorganized and are directed by individualistic motives and goals.

Being able to mentally focus on the important aspects of a contest and filter out all of the non-important information is a skill that coaches would like their athletes to possess. Focusing is an ability that individuals use every day. For example, individuals must filter out background noise when they are engaged in a conversation with another person. Athletes take this process to a higher level since decisions on what to filter and what not to filter become increasingly more difficult.

There are several instances which players have attentional problems off the court, but are able to focus solely on the contest during the game. For example, athletes often



will perform in an inspired fashion after personal tragedies. The 1991 Loyola Marymount basketball team performed above expectations in the 1991 National Collegiate Athletic Association Tournament. Hank Gathers, the team's leading scorer and rebounder, died suddenly during a late season regular season game. The team seemed to increase the level of motivation and focus. These two factors caused the team to play in inspired fashion. A desirable trait for an athlete is the ability to regain focus quickly and effectively.

Experience and the type of sport can affect attentional focus. For example, eye movements of skilled ice hockey goalies are focused on the stick of the incoming opponent (appropriate stimulus) while the eye movements of the less skilled goalies are focused on the puck (inappropriate stimulus) (Wilson, Ainsworth & Bird, 1985). Wilson, Ainsworth & Bird, (1985) also found that volleyball players used a style of attention called focusing while basketball players used a style called chunking. The volleyball players focused on the ball and adjusted as play continued, while the basketball players put situations into chunks, made a decision and then entered a new situation and made a new decision.

### Statement of the Problem

It was the purpose of this study to determine if winning and losing records influence team cohesion and attentional focus. Three different questionnaires were used in this study. These questionnaires included: The Sport Cognitive Interference Questionnaire (SCIQ), The Group Environment Questionnaire (GEQ), and The Baseball Test of Attentional and Interpersonal Style (B-TAIS). The SCIQ assesses task-irrelevant cognitions experienced by athletes and deals with the athlete's ability to filter inappropriate stimuli (Schwenkmezger & Laux, 1986). The GEQ is an instrument used to assess the task and social aspects of an individual's perceptions of a sport group (Carron, Widmeyer, & Brawley, 1985). The B-TAIS is an instrument that assesses the attentional styles of

athletes in baseball or softball when batting. The B-TAIS is a sport specific version of Nideffer's Test of Attentional and Interpersonal Style (Feltz, 1987).

### Hypothesis

The following hypotheses served as a basis for this investigation:

- 1) There is no difference between the GEQ scores of winning teams and losing teams.
- 2) There is no difference between the B-TAIS scores of winning and losing teams.
- 3) There is no difference between SCIQ scores of winning and losing teams.

### Definitions

The following terms are defined in order to clarify frequently used words and to establish a common basis for discussion of these terms throughout this study.

Attention - the act of concentrating mentally on a specific cue.

Attentional focus - the athlete's ability to focus on relevant information during competition (Cox 1990 p. 83).

There are two dimensions of attentional focus: width and depth. Width of attention ranges from narrow to broad attention. A baseball hitter must have a narrow focus of attention; e.g., focus on the baseball. A tennis player must have a broad focus of attention; focus on the opposing player's court position, the trajectory of the ball and the spin of the ball. Depth of attention is the second dimension. The depth dimension ranges from an internal focus to an external focus. Internal focus is attention which is directed toward the athlete's own feeling and thoughts. External focus is attention which is directed toward external environment.

Team cohesion - a dynamic process which is reflected in the tendency for a group to stick together and remain united in the pursuit of its goals and objectives (Carron 1982).

In a sports setting, team cohesion refers to the ability of an athletic team to stick together.

Winning team - a baseball or softball team with a winning percentage over .500.

Losing team - a baseball or softball team that has a winning percentage under .500

### Significance

Silva (1984) ranked team cohesion as the most critical problem coaches face. Freischlag (1985) stated that the ability of teams to remain cohesive through adverse circumstances is a trait coaches believe is critical to success. Coaches can gain an advantage if they can create a more unified team.

Attentional focus is also a problem to which coaches must attend. Teaching athletes to focus on appropriate cues is a skill that is helpful in decision making. Coaches that can teach this skill can have an advantage over their competition. There has been little research on attentional focus and its relationship to win/loss percentage. Information on team cohesion and attentional focus may be helpful to coaches. If cohesion and focus are affected by winning and losing, then coaches can do something to eliminate or diminish the effects. This study will provide objective information to coaches and all who are concerned with two important factors that can affect the performance of athletes.

### Delimitations

The following delimitations define the scope of the study. All subjects were fast pitch softball and baseball players from the Wichita Athletic League (N=31). Wichita was chosen as a population site since it is a medium sized metropolitan city and it is the nearest city to have fast pitch softball and baseball leagues. Two male baseball teams with 19 total members and two female softball teams with 12 total members made up the subject pool. The age of the subjects ranged from 16 to 18 years of age.

## Limitations

The findings of this study were limited by the following factors:

1. There were a limited number of subjects in the pool (N=31).
2. Summer athletic leagues appear to be less competitive than at other times during the season. Some of the attitudes of the participants and the coaches tended to be more recreational than serious.
3. All subjects were volunteers.

## Assumptions

This study was based on the assumption that all subjects were honest and candid in their response to statements on all three scales.

## Summary

The purpose of this research was to determine if winning or losing records influence team cohesion or attentional focus. This chapter included definitions of commonly used terms. The results of this study can contribute to the sports literature related to cohesion and attention.

Chapter 2 (Review of Literature) examines team cohesion, attention and attentional focus. Chapter 3, Methodology, discusses subject selection, instrumentation, procedures and data analysis. Chapter 4, Results, discusses the statistical procedures used in determining if there was a difference between winning and losing teams in the areas of team cohesion and attention. Chapter 5, Discussions and Recommendations, includes the researcher's personal interpretations of results and suggests recommendations for future studies. The appendices include a copy of the GEQ, SCIQ, B-TAIS, informed consent document, human subject's permission and permission to use scales.

## CHAPTER TWO

### REVIEW OF LITERATURE

#### Introduction

The ability to selectively attend to the appropriate stimuli is crucial in most athletic situations (Cox, 1990). Nogier (1989) believed that orienting of attention was a central mechanism which led a subject to a cued location. This cueing allows a participant to adjust and select relevant information. Team sports require that performers continually attend to varying visual, auditory, and kinetic cues. It is logical to assume that the more quickly an athlete can select relevant information during a contest the better the chance the athlete will be successful.

Another factor that affects athletic performance is team cohesion. Silva (1984) surveyed athletic coaches and found team cohesion was the most critical problem coaches faced. Carron (1982) defined cohesion as "a dynamic process which is reflected in the tendency for a group to stick together and remain united in the pursuit of its goals and objectives" (p. 124). Coaches attempt to find the right player combinations on the basketball court or football field in an effort to get the team to interact in a positive manner. Relationships between and among athletes, on and off the field, can be a major factor in the success or failure of the team. This chapter contains a review of literature pertaining to attentional focus and team cohesion. Factors that influence attentional focus are experience, type of sport, skill level, arousal, and fatigue. Factors that affect team cohesion include win/loss percentage, age, skill level and role functions of players.

## Experience

Experience of the athlete seems to play a role in the ability to attend correctly. Eye movements of skilled ice hockey goalies were on the stick of the incoming opponent while the eye movements of the less skilled goalies were on the puck. The ability to filter out unimportant information could be developed with game and practice experience (Bard & Fleury, 1976).

Jongsma, Elliot, & Lee (1987) examined the influence of experience and instructional set on the running sprint start. Twelve male university athletes were used as subjects. Six of the participants had a minimum of eight years sprinting experience and were classified as experienced sprinters. The remaining six subjects had participated in only one six week university track practicum and had no substantial, previous track experience. These subjects were classified as novice sprinters. Reaction time (RT) and movement time (MT) were the two skills tested in the controlled and track environment. In the control movement, subjects were asked to do a simple dorsiflexion. In the track situation, the subjects were asked to do a leg extension followed by a flexion at the knee and hip. The findings indicated that experienced sprinters had faster RT than novice sprinters in the track situation, but not in control situations. Attention can affect RT and MT. Sprinters in the starting block focus on the sound of the starter's pistol. If this cue is recognized quickly, it can speed RT and MT. This finding suggests that differences in latency of sprinters and nonsprinters are task specific and not the function of a general speed ability possessed by the experienced group.

## Type of Sport

An athlete's ability to concentrate or pay attention is crucial to his/her success or failure in athletic settings. Neideffer (1976) believed that different sports and situations in sports demand different types of attentional focus. For example, a basketball player's focus would be different from that of a hitter in baseball. The basketball player must know

where all the opposing players and teammates are positioned, while the baseball hitter must focus his attention only on the opposing pitcher. Nideffer (1976) believed that individuals have unique attentional strengths and weaknesses. In order to assess the various attentional styles, he developed a Test of Attentional and Interpersonal Style (TAIS). The test measures two types of attention: width of attention, (broad or narrow) and the direction of attention, (internal and external). The attentional subscales of the TAIS are: 1) broad external focus, (BET), which measures ability to deal with a large amount of environmental information at one time; 2) Overinclusive external focus, (OET), which measures errors due to taking in too much external information; 3) Broad internal focus, (BIT), which measures the ability to effectively integrate ideas and information from several different areas; 4) Overinclusive internal focus, (OIT), which measures mistakes due to the internal distractions; 5) Narrow attention, (NAR); which measures the ability to concentrate on one thing effectively; 6) Reduced attention, (RED), which measures attentional errors due to an overly reduced attentional focus; and 7) Information Processing, (INFPA), which measures the ability to process information.

Wilson, Ainsworth, & Bird (1985) studied eleven male university athletes from a nationally ranked volleyball team. The head coach assessed the volleyball players' ability to concentrate during a stressful competition. The coach used a 10 point scale (10 = perfect concentration). The 6 players who had the highest rank were classified as good concentrators and the remaining 5 players were classified as poor concentrators. All participants were given the TAIS.

They found that volleyball players who were classified as good concentrators had significantly lower scores on the subscales BET and BIT on the TAIS than poor concentrators. The good concentrators had a more narrow internal and narrow external focus of attention compared to poor concentrators. No other TAIS subscales differentiated between the two groups was noted. These results may indicate that good

concentrators can narrow and expand their attention when appropriate more easily than poor concentrators.

A study by Maynard and Howe (1989) examined the relationship among age, skill, player position and attentional style. 144 male rugby players were administered Nideffer's TAIS. 72 were classified as above average in skill level and 72 were classified as average in skill level. It was concluded that rugby players of different skill levels did not differ on the TAIS. It was also concluded that the attentional subscales of the TAIS did discriminate between players of different ages. Younger players scored higher on the BET, OET and the RED. The lack of any other control group made it impossible to assess whether these findings were due to increasing years in the sport, the increase in age, or both. In addition, halfbacks had higher BET scores than other positions. Halfback is a position where a player must be able to integrate many environmental stimuli at one time.

Albrecht and Feltz (1987) developed a sport specific version of the TAIS. A baseball version of the TAIS, the B-TAIS, was given to 15 members of the Michigan State University men's varsity intercollegiate baseball team and 14 members of the women's varsity intercollegiate softball team. Subject's TAIS and B-TAIS scores were compared to TAIS scores reported by Nideffer (1976). Attentional profiles for the baseball/softball batters were compared with Nideffer's college student norms by plotting the group's mean Z scores. The batters' scores were found to considerably higher than the college norms on the narrow attention (NAR) subscale of both the TAIS and the B-TAIS. The subject's TAIS attentional profile appears virtually identical to the college students' norms, with the exception that the subjects' mean score on the NAR subscale was one full standard deviation above that of the norming population. Albrecht and Feltz stated that the dramatic difference between baseball/softball hitters and the college student norms on the NAR subscale, purported to measure the type of attention generally thought involved in the task of hitting a baseball or softball, raises the possibility that such attentional differences are sport related.



Van Schoyck and Grasha (1981) developed a sport specific test for tennis (T-TAIS) and compared it with the TAIS for internal consistency, test-retest reliability, and predictive validity. The T-TAIS included the same six subscales as the TAIS. Each question was rewritten in a tennis format. Both the TAIS and the T-TAIS were administered to 90 tennis players: 45 men and 45 women. The results indicated that the internal consistency and the test retest reliability of the tennis specific test were superior to Nideffer's parent test. The authors concluded that a situation specific test of attentional style is more reliable and valid than the general test.

### Skill Level

Skill level of athletes may influence attentional focus. Superior attentional focus may make an average performer into a good performer. The ability to attend properly could elevate the level of play of certain players. A coach who can teach athletes to attend to relevant cues may have an advantage.

Maddocks and Summers, (1986) gave cricket players the TAIS. Sixty-eight male players were divided into three groups based on skill level. The skill levels were based on their highest level of cricket played. The levels were advanced, intermediate, and low skill players. An examination of the profile scores indicated significant differences between the skill level groups. Advanced players exhibit a significantly higher proportion of profiles associated with superior performance while the low skill group displayed a significantly higher proportion of profiles associated with poorer performance. Based on these results, the author suggested that attentional profile scores may be used as a predictor of sport performance.

Iso-Ahola & Hatfield (1986) tested the hypothesis that more experienced and proficient target shooters would be more likely to correctly perceive their actual heart rate and respiratory changes during shooting. Shooters were given the Autonomic Perception Questionnaire and used their heart rate and respiratory self reports to compare to their

actual physiological measures of heart rate and respiration while shooting. The shooters whose perceptions agreed with the actual recordings were labeled as synchronous and the shooters whose perceptions indicated a lack of agreement were designated as desynchronous. The results indicated that synchronous subjects had significantly better performance scores than the desynchronous subjects. This finding suggests that the more skilled athletes consciously or unconsciously attend to HR and respiration and use this information to determine when it feels right to pull the trigger.

Nettleton (1986) did a comparative study on the flexibility of attention between elite fast ball athletes and good fast ball athletes. All subjects participated in the team games of soccer, hockey or Australian football. The subjects were 27 fast ball athletes. Nineteen of these subjects were students enrolled in a Human Movement Studies Course. The remaining 8 subjects were elite games players. The elite players had state or international experience in one of the team games. The subjects were seated between two runways that had eleven lights evenly spaced down the entire length on both sides of the runway. The subjects held a push button switch in each hand. The task of the subjects was to make responses with the right and left switches coincident with the stimulus presented. The subjects would push the button in either or both hands depending on which side the lights were illuminated. The velocity of each line of lights was changed periodically. The elite athletes scored significantly higher than the non-elite with regard to RT. It was suggested that the results provided tentative support for the superiority of attentional flexibility of elite fast ball game performers.

### Arousal Level

The level of arousal an athlete experiences is a major factor associated with the quality of the athlete's movements and the quantity of outcome (Beuter and Duda, 1985). Oxendine (1970) suggested that during gross motor movements a high level of arousal is desired. Activities such as line blocking in football, 200m and 400m sprints, and weight

lifting require a high level of arousal for optimum performance. Fine motor movements such as those used in archery, golf putting, and bowling require a narrow focus and a low level of arousal.

There is evidence that increased arousal causes attentional focus to narrow (Easterbrook, 1959; Callaway, 1958). Performance deteriorates because the number of relevant cues has decreased as a function of a narrowing attentional band. To help control high arousal levels, relaxation procedures are recommended (Singer, Cauraugh, Tennant, Murphey, Chen, and Lidor, 1991). The ability to relax in preparation for and during a skilled movement is often thought to be a prerequisite for enhancing focus (Syer & Connolly, 1987). Relaxation techniques may provide a state in which physical, mental, and emotional tensions are reduced. This reduction in tension allows one to be alert to cues relevant during a performance. Some of the relaxation techniques in sport are based on a combination of breathing control and muscle relaxation. Nideffer (1978) believed that relaxation occurs rapidly through coordination of breathing and muscle relaxation practice. He suggested that these procedures function to control one's attention.

Landers, Qi, and Courtet (1985) reported a sports related study in which Easterbrook's attentional narrowing theory was supported. Rifle shooters were required to respond to a peripheral auditory reaction time task while at the same time attend to a primary shooting task. Arousal was manipulated as a function of time between rounds fired. The results demonstrated that increased arousal caused a narrowing of attention for the primary task at the detriment of the secondary reaction time. The RT was slower when arousal was increased.

### Fatigue

Fatigue can influence attentional focus. When an athlete begins to tire, mental capacity, decision making and concentration begin to suffer. Rejeski and Kenney (1987) indicated that the more complex the task the harder it is to disassociate. Dissociators are

defined as athletes who focus on external cues and block out feedback from the body (i. e. long distance runners who develop external attentional focus to reduce discomfort). It is possible that when tasks demand considerable physical capacity and the participants attend to these demands, the activity provides an endogenous coping system. In essence if a physical activity requires a significant amount of physical capacity, fatigue will be less noticed by the body if external attention strategies are used by the athlete.

If a coach could educate and train athletes in ways to reduce the effect of fatigue, these athletes would have better attentional focus. Athletes who attend to the feelings of being tired (internal cues) show signs of fatigue more quickly than those athletes who attend to external cues. A coach must exercise caution in teaching athletes to use coping strategies such as disassociation since this strategy can be hazardous to these athlete's health. Cox (1990) indicated that while an internal focus during marathon running is not necessarily the most effective and enjoyable strategy, it is the safest. During an endurance activity, if an athlete chooses to disassociate, a serious injury could result. During an athletic event the body continually informs the brain of discomfort and injuries. If the athlete fails to receive this input from the body by dissociating, a minor injury could turn into a major injury.

A coach who can maximize attentional focus and concentration should have an advantage over the competition. Coaches can teach strategies to their athletes and improve their focus and concentration. With the proper use of disassociation to reduce the effects of fatigue, athletic coaches can gain a distinct advantage. A coach at the college level may wish to recruit the types of athletes who can readily adapt these strategies into their cognitive set.

### Team Cohesion

A factor that affects an athlete's performance is team cohesion. Silva (1985) surveyed athletic coaches and found team cohesion was the most critical problem coaches

faced. Carron (1982) defined team cohesion as "a dynamic process which is reflected in the tendency for a group to stick together and remain united in the pursuit of goals and objectives." Coaches attempt to find the right player combinations on the basketball court or football field in an effort to get the team to interact in a positive manner. Relationships between and among athletes, on and off the field, can be a major factor in the success or failure of the team.

### Group Dynamics

Freischlag (1985) examined the dynamics of athletic teams and devised a series of questions that would help a coach assess the dynamics of his/her team. The questions dealt with topics considered to be the major elements of team dynamics. These elements included the following:

1. Decision making - who is involved in the teams decisions;
2. Team conflict - how internal problems within the team are handled;
3. Leadership - who assumes the leadership roles on the team; and
4. Cohesion - how a team will pursue its goals.

It was suggested that coaches should explain these elements to the players. The coach should demonstrate and model the way in which players are expected to deal with certain situations. If there is a problem on the team, the problem should be worked out as a team. Commitment and communication should be stressed as an important part of a "productive atmosphere." Freischlag believed that if the players knew what was expected and what behavior was appropriate, problems dealing with team cohesion would be eliminated or minimized.

A team will go through stages of growth and development. Tuckman (1965) described a series of stages that occur as the team grows closer together. The first stage is forming. In this stage, boundaries for interpersonal behavior and relationships are established. Task goals and methods devised to attain these goals are determined. The

second stage is storming. In this stage there may be team conflict, polarization, and rebellion. The team has a general resistance to task requirements. The third stage is norming and involves a feeling of cohesiveness and solidarity with players accepting their team roles. The final stage is performing. This stage involves the channeling of the group's energy toward accomplishing group goals. The key to achieving group cohesion is not to get stuck in the first two stages of forming and storming. A team that cannot figure out its boundaries and is in a constant state of interpersonal conflict will be less successful and have a general sense of uneasiness. A coach must be able to move a team quickly through these stages in the early season.

One problem that slows movement of a group through these stages is that players' roles and coaches' roles change periodically over the length of the season. If players are not able to readjust their roles and goals, then this lack of flexibility will increase team conflict. For example, an injury to a player may change the roles of every other member on the team.

### Role Function

A role is a set of behaviors that are expected from occupants of specific positions within the group (Williams 1992). Within every group there are two categories of roles: formal and informal (Mabry & Barnes, 1980). Formal roles are roles that explicitly define the group or organization. Coach, team captain, and team manager are examples of explicit leadership roles within an athletic team. Other examples of explicit performance roles include spiker or setter, in volleyball; forward, guard and center, in basketball. Athletic teams require specific individuals to carry out each of these roles. Consequently, individuals are trained or recruited for these roles.

Informal roles evolve as a result of the interaction that take place among group members. Some examples of informal roles are team leader, team clown, enforcer, police officer and social director. Schriesheim (1980) indicated that when group members

understand their roles (role clarity), accept their roles (role acceptance), and attempt to carry out their roles to the best of their ability (role performance), the group's effectiveness improves.

Carron and Grand (1982) indicated that role clarity, role acceptance, and role performance were associated with task and social cohesiveness. Carron (1984) believed goal setting is essential for role clarity and role acceptance. Carron stated that goals serve four functions: they direct the individual's attention and actions toward appropriate behavior, motivate the individual to develop strategies to achieve the goal, contribute to increased interest in the activity, and lead to prolonged effort. It may be that when players identify their roles and accept them team cohesion will increase. Goals may help athletes to realize they must accept a goal if it is for the good of the team. Team goals who have athletes who do not accept their role may experience poor team cohesion.

Cox (1990, p. 336-339) suggested that coaches take steps to improve team and social cohesiveness. One way that was suggested was to acquaint players with the responsibilities of other players. For example, if a volleyball coach has a player who constantly complains about the sets he/she gets, that player should set to appreciate the difficulty of setting. Another way to improve cohesion is for the coach to learn something personal about the athletes: starters and nonstarters. For example, the coach should find out the athlete's favorite athlete, TV program, or type of music. If a group is not getting playing time in games, the coach should develop a way for this group to challenge the starters in practice. The coach can let the players know that it is their team and help them set team goals. All team members must be given a role regardless of whether they are starters or nonstarters. The coach can develop team drills to make starters and nonstarters rely on each other. The coach can highlight areas of success. Even when the team has a bad performance, the coach should pick out the positive aspects of the game. The key to team cohesion is to keep everyone involved and keep the lines of communication open.

## Win/Loss Ratio

Winning or losing can affect team cohesion. Often, a team that has a losing record points to lack of team cohesion as a reason for that record. Statements like "we're not playing together" or "we're not accepting our roles" are common reasons cited by teams with poor records.

Vander Velden (1971) performed a study that attempted to measure levels of team cohesion through the use of a cohesive measure called "status consensus." Status consensus was assessed by having each player on the team rate the degree of contribution and value of each teammate on the squad. The teams with the highest degree of agreement for this rank ordering were assumed to be the highest in team cohesion. Vander Velden (1971) used a team's win/loss ratio, the average number of points allowed, and the average number of points scored as measures of team performance. The subjects for this study were high school basketball teams. A significant correlation was found between the level of team cohesion and the win/loss records of these teams.

A similar study by Martens and Peterson (1971) assessed the degree of team unity in 144 men's intramural teams at an Illinois University. Subjects were asked to complete the Sports Cohesiveness Questionnaire (SCQ) before the intramural season began. Based on the results of the SCQ, the teams were divided into three cohesion groupings: high, medium, and low. When the season was completed the win/loss records of the three groups were examined. The results indicated that three of the task cohesion items on the SCQ were related to win/loss record. These items included degree of teamwork, the feeling of closeness members felt, and the value of the membership.

Donnelly (1975) proposed that there is an optimal length of time a group should remain together in order to take the greatest advantage of the relationship between team cohesion and success. Data was collected from six major league baseball teams for the years 1901 to 1965. The half life of a team was considered to be the time it took for a starting roster to be reduced to half its original size. For example, if the New York



Yankees had fourteen regular starters in 1930, these players were traced for successive years until only seven of the fourteen remained. The number of years it took for this to occur was the half life. Six teams were traced for sixty-five years, for a total of 390 cases. Each new season was considered to be a new team and teams with longer half-lives were presumed to be more stable teams.

To measure success, the researchers used the number of victories by which each team trailed the leading team by at the conclusion of each season. The results indicated that a team which lost 1/2 of its members in five years was more successful than teams which lost 1/2 its members in more or less years. Teams with a half-life of five years concluded their season an average of eleven games behind. Teams with a longer or shorter half-life were less successful.

The above study suggested that teams need a certain amount of time to develop an optimum level of cohesion for task performance. Cohesion takes time to develop. It may take years for a team to become a cohesive unit, or it may take less than a season. The team that has struggled the previous season and then suddenly wins a championship may be a case of positive team cohesion. However, team members who are together for extended periods of time often will become complacent. This complacency may be the result of players who are tired of playing with the same personnel year after year. A coach must be aware of this tendency and have a way to alleviate the effects of this tendency.

### Age

Age can influence team cohesion. With an increase in age, the athlete has a better chance of having experienced problems that lead to poor team cohesion. If athletes have already been in situations involving poor team cohesion, they may try to avoid or alleviate certain situations. A coach must also take into account the age of the athletes. Different age groups may require different techniques to develop team cohesion.

Gruber & Gray (1982) investigated cohesive factors in male basketball players. The subjects included players from elementary, junior high, senior high, small college, and large college teams. The survey measured team performance satisfaction, self performance satisfaction, task cohesion, affiliation cohesion, desire for recognition, and value of membership. Results indicated that starters were more satisfied with their own performance, more task conscious, had a stronger desire to affiliate, and valued their membership on the team to a greater degree than did reserves. Starters on elementary and junior high teams were more concerned with the team's performance, their own self performance, more affiliation conscious, and valued their team membership to a greater degree than college starters. One reason cited for the differences between college and elementary players was that college players may see team membership as a status symbol. Team unity may be stressed more at younger ages and may be the reason the elementary and junior high players scored high on team performance and affiliation value. The sport value structure also changes as level of competition increases. The needs of a younger player are different from those of a high school or college player. These factors could have influenced the results of the study.

### Skill Level

Skill level plays an important part in team cohesion. Different skill levels appear to have different levels of team cohesion. In some cases the higher the skill level, the less need for social cohesiveness. A coach must be aware of the level of play of which the team is capable and decide whether positive team cohesion is a necessary or attainable goal.

Granito and Rainey (1989) studied the differences in cohesion between high school and college football teams and starters and nonstarters. One hundred and twenty-one football players from three teams were tested. These three teams consisted of a small Ohio High School class AA (seven wins and three losses), a large Ohio High School class

AAA (three wins and seven losses), and an NCAA Division III college team (two wins and seven losses). All participants in the study were given the Group Environment Questionnaire. The GEQ consists of 18 questions, scored on a 9-point Likert-type scale. The GEQ consists of four separate scales which yield a separate score. These scores are summed to provide an overall measure of an individual's perception of team cohesion. The four scales include 1) individual attraction to group task; e.g., individuals join a rock climbing club because they enjoy climbing; 2) individual attraction to group-social; e.g., individuals who join sports clubs to make new friends when moving to a new geographical location; 3) group integration to task; e.g., individuals who form running clubs because they want to run and compete in running; and 4) group integration to social; e.g., individuals who form bowling teams in order to have groups with which to socialize. Results indicated starters at high school and college levels of competition scored higher than nonstarters on the two questionnaire measures of task cohesion. It may be that starters were more committed to team goals because they were more involved in attaining those goals. Starters and nonstarters scored similarly on measures of social cohesion.

Granito et al. (1989) also suggested that high school players were more cohesive than college players. The high school players knew each other for several years and played together longer than the college players. This extended time enabled the high school players to develop a deeper social relationship and a deeper concern and commitment to common goals. The author believed that football is a more important part of life for high school players than it is for college players at a small college. While the study utilized a small sample size, it appears that task cohesion is related to competitive level and to player status on football teams.

Davids & Nutter (1988) studied the cohesion-performance relationship of English national league volleyball teams. Subjects were 114 English national league players. Subjects were asked to complete the Group Environment Questionnaire (GEQ). The subjects were tested twice during the season: at the midpoint of the season and at the end

of the season. Results suggested that task cohesion was important for successful performance. However, social cohesion and an individual attraction to the group were not related to achievement. The study also indicated that successful teams at high levels of competition focus on achievement goals rather than social goals. It may be that professional teams that have internal conflicts are able to ignore these during a contest. Coaches at high levels of competition need to set challenging performance goals that members believe in and seek to achieve.

### Summary

Research has indicated that attentional focus can be a factor in the performance of athletes. From a coaching stand point it appears that the more experienced an athlete is, the easier it is to cue in on relevant information. Different sports, skill levels, and arousal levels also affect attentional focus. A baseball batter would need a much narrower field of focus than a tennis player. Elite athletes appear to have superior attentional focus as compared to less skilled athletes. Different levels of arousal are needed in different sports. A high level of arousal is needed for performing tasks such as football or track sprints, while a low level is needed for activities such as golf and rifle shooting. Arousal can affect attention. Landers et al. (1985) indicated that increased arousal caused a narrowing of attention. This factor can be detrimental to athletes in events such as archery, billiards and rifle shooting. Limiting the effect of fatigue on athletes may improve attentional focus. One way to diminish the sense of fatigue is to use dissociating techniques. A coach and athlete need to take all these factors into account when preparing a strategy to get the maximum attentional focus.

Team cohesion seems to be a more pertinent part of a team`s makeup at lower levels of competition. The advanced athletes seem to be able to adjust and set their sights on achievement goals more readily than less skilled athletes. This ability may be due to maturity of players or the experience of playing with many different teammates. Teams

with higher win/loss records performed at a higher levels of team cohesion than the teams with lower win/loss records. It is difficult to determine if the teams with the higher win/loss records were more cohesive to begin with or developed cohesiveness over the length of the season. It appears that the most important aspects of team cohesion are communication and team roles. If athletes understand the importance of and accept their role, team cohesion is increased.

## **CHAPTER THREE**

### **METHODOLOGY**

#### **Introduction**

This chapter describes the methods and procedures used to determine if there was a difference between the team cohesion and attentional focus scores of winning and losing teams. The subjects, procedures, instrumentation, test validity and reliability, and the method for the statistical analysis of the data are presented.

#### **Subjects**

Subjects were fast pitch softball and baseball players from the Wichita Athletic League (N = 31). Two male baseball teams with 19 total members and two female softball teams with 12 total members made up the subject pool. The age of the subjects ranged from 16 to 18 years of age. Wichita was chosen as a population site as it is a moderately sized metropolitan city and it is a city which has both fast pitch softball and baseball leagues.

#### **Procedures**

Permission to conduct this study was obtained from the Institutional Review Board for Treatment of Human Subjects at Emporia State University (see Appendix A). Players from four teams (2 fast pitch softball teams and 2 baseball teams) from a Wichita athletic league were selected as the subjects of this study. These teams were selected because of their win/loss percentage. One of the baseball and fast pitch softball teams had above a .500 record and the remaining two teams had below a .500 record the previous season. Permission to use these players was obtained from the coaches and players of these teams.

The subjects were placed into two groups: a winning percentage group and a losing percentage group. The winning percentage group consisted of subjects from baseball and softball teams which had an over .500 record for the previous season (N=19). The losing percentage group consisted of subjects from baseball and softball teams that had an under .500 record for the previous season (N=12).

During the first meeting, subjects were informed about the purpose of the study and asked to sign an Informed Consent Document (see Appendix B). After signing the informed consent form, subjects were assigned a code number to be used when completing the questionnaires. This code number was assigned to assure the confidentiality of the subjects' responses.

Subjects were asked to complete three different questionnaires: The Baseball Test of Attentional and Interpersonal Style (B-TAIS) (see Appendix C), The Sport Cognitive Interference Questionnaire (SCIQ) (See Appendix D), and the Group Environment Questionnaire (GEQ) (see Appendix E). Testing took place during practice and at the practice field. Subjects were tested in the preseason or before any games were played. After the subjects completed the forms, they placed the forms into a manila envelope and returned the envelope to the researcher.

### Instrumentation

Carron's (1985) Group Environment Questionnaire was developed as a measure of individual group member's perceptions of team cohesiveness. The scale consists of 18 items. Factor analyses of subjects' responses and further item analyses led to the retention of an 18-item GEQ, a reduction from the 24-item format. Each item is rated on a nine point Likert-like scale, ranging from strongly disagree to strongly agree. This questionnaire consists of four subscales. Four items measured individual attraction to group-task, five items measured individual attraction to group-social, five items measured group integration-task and four items measured group integration-social. The reliability of

the GEQ and its subscales was determined using alpha reliability coefficients. The reliability for the ATGT, ATGS, GIT and GIS were .75, .64, .70, and .76, respectively.

The validity of the GEQ was determined through construct validity using a factor analysis of the subjects' responses to a 24 item GEQ. Items were further evaluated by five experts in the area of group dynamics. The reduced 53 item pool was placed in questionnaire format and administered to 212 male and female athletes representing 20 intercollegiate and adult municipal association sport teams. Based on the item analysis and estimates of internal consistency, the GEQ was reduced to 24 items. This decision was supported by a replication study involving 247 athletes representing 26 different sports teams. Factor analyses of subjects' (n=212) responses and further item analyses (n=247) led to the retention of an 18-item GEQ.

Schwenkmezger and Laux (1986) Sport Cognitive Questionnaire was developed as a measure of task-relevant cognitions experienced by elite athletes in handball. The SCIQ contains ten items. Each item is rated on a five point Likert-like scale, ranging from never to very often.

The validity of the SCIQ was determined through construct validity using elite female handball athletes (N=35). Athletes with high trait anxiety experienced an increase in task-relevant cognitions in handball competition versus handball practice. Athletes with low trait anxiety athletes experienced no change in task-relevant cognitions under these two conditions. Concurrent validity was partially supported in that there was some evidence of a relationship between subjects' (N=42 male and female elite handball athletes) scores on the SCIQ and their corresponding scores on Spielberger's (1970) trait anxiety scale. Predictive validity was supported by positive relationships with the post-competition scores on the SCIQ and experts' evaluations of their game performance based on video taped assessments. No reliability measures were reported on the SCIQ.

Albrecht and Feltz's (1987) Baseball Test of Attentional and Interpersonal Style was developed to assess attentional style as it relates to baseball/softball batting. The



scale consists of 59 items. Each item is scored on a five point Likert-like scale ranging from never to always. This questionnaire consists of six subscales. The attentional subscales include broad external attention (6 items), external overload (12 items), broad internal attention (8 items), internal overload (9 items), narrow attention (11 items), reduced attention (15 items), and cognitive control-information processing (INFP), (19 items).

The reliability of the B-TAIS was determined by using Cronbach's alpha internal consistency coefficients. The coefficients ranged from .50 for the reduced attention subscale to .85 for the external overload subscale. Test-retest reliability coefficients across a two week interval ranged from .72 on the internal overload subscale to .95 on the broad internal attention subscale. None of the reliability coefficients statistically exceeded those computed for the TAIS.

Convergent validity was supported by correlating subjects' scores on the TAIS with the B-TAIS. The correlation coefficient was .50. Construct validity was supported by comparing subjects' scores on designated subscales of the B-TAIS with their competitive trait anxiety scores. Also, subjects' scores on the B-TAIS were predictive of their seasonal batting performance scores.

All 59 items of the TAIS were converted to a baseball/softball format. As much of the TAIS context, grammatical structure, and wording were retained in B-TAIS. Five experts who had used the TAIS in their research evaluated the revised item of the B-TAIS for content validity. Each item was also evaluated by an intercollegiate baseball and softball coach.

### Analysis of Data

The differences in the B-TAIS, GEQ, and SCIQ scores between winning and losing teams were analyzed through the use of one way analysis of variance (Hypothesis 1-3). All data were analyzed at the  $p < .05$  level of significance.

## Summary

The purpose of this study was to determine if differences exist in team cohesion and attentional focus between winning and losing teams. The subjects were 16 to 18 year old fast pitch softball and baseball players (N=31) from a Wichita athletic league.

## CHAPTER FOUR

### RESULTS

This chapter contains the results of the data analysis used in the study. Data were analyzed through the use of Oneway Analysis of Variance. All data were analyzed at the  $p < .05$  level of significance.

Hypothesis 1 stated that there is no significant difference between winning and losing teams on scores of the B-TAIS. Table 1 presents the means and standard deviation for all subscales on the B-TAIS for winning and losing teams. The results of the Oneway ANOVA indicated that there was a significant difference between winning and losing teams on the OETA, OITA, and REDA subscales (See Tables 2,3 and 4). Hypothesis 1 was not rejected for the BETA, BITA, NARA and INFPA subscales of the B-TAIS. BETA measures the ability to process large amounts of environmental information. BITA measures the ability to integrate information from several sources. NARA measures the ability to focus on one task at a time. INFPA measures the ability to process information. Hypothesis 1 was rejected at the  $p < .05$  level of significance for the OETA, OITA, and REDA subscales of the B-TAIS. OETA measures errors due to taking in too much external information. OITA measures mistakes due to internal distractions. REDA measures potential errors due to an overly reduced attentional focus.

Hypothesis 2 stated that there is no difference between winning and losing teams on the scores of the GEQ. Table 5 presents the means and standard deviations for the four subscales of the GEQ for winning and losing teams. The results of the Oneway ANOVA indicated that there was a significant difference between and winning and losing teams on the IAGT (individual attraction to group task), and GIT (group integration to task) subscales of the GEQ (See Tables 6 and 7). Losing teams had significantly higher scores on these subscales than winning teams. Hypothesis 2 was not rejected for the

IAGS and the GIS subscales of the GEQ. IAGS measures individual attraction to group social. GIT measures group integration task. However, Hypothesis 2 was rejected at the  $p < .05$  level of significance for the IAGT and the GIT subscales of the GEQ.

Hypothesis 3 stated that there is no difference between winning and losing teams on the scores of the SCIQ. Table 8 presents the means and standard deviations of the SCIQ scale for winning and losing teams. The results of the Oneway ANOVA indicated that there was no difference between winning and losing teams on the SCIQ (See Table 9). Hypothesis 3 was not rejected at the  $p < .05$  level of significance.

### Summary

This chapter contains the results of the data analysis in this study. Data were analyzed through the use of One-Way ANOVA. All data were analyzed at the  $p < .05$  level of significance. The results indicated there were significant differences between winning and losing teams on the OETA, OITA and REDA subscales of the B-TAIS and the IAGT and GIT subscales of the GEQ. There were no differences between winning and losing teams on the BETA, BITA, NARA and INFPA subscales of the B-TAIS, the IAGS and GIS subscales of the GEQ and the SCIQ. Chapter 5 provides a discussion of these results and recommendations for future studies.

Table 1

Means and Standard Deviations of the B-TAIS Subscales for Winning and Losing Teams.

B-TAIS Subscales	Winning Teams		Losing Teams	
	$\bar{X}$	SD	$\bar{X}$	SD
BETA	12.66	2.74	14.50	2.60
OETA	17.53	5.60	12.93	4.56
BITA	17.80	2.56	19.25	4.46
OITA	14.40	3.73	10.62	4.28
NARA	24.80	4.27	26.56	3.79
REDA	26.40	6.32	22.12	4.17
INFPA	41.46	5.73	44.31	6.73

Table 2

Oneway ANOVA for Winning and Losing Teams on OETA Subscale of B-TAIS

Source of Variation	df	Sum of Squares	Mean Squares	F Ratio	F Prob.
Between Groups	1	163.5227	163.5227	6.3004	.0179*
Within Groups	29	752.6708	25.9542		
Total	30	916.193			

\*  $p < .05$

Table 3

Oneway ANOVA for Winning and Losing Teams on OITA Subscale of B-TAIS

Source of Variation	df	Sum of Squares	Mean Squares	F Ratio	F Prob.
Between Groups	1	110.3274	119.3274	6.7879	.0143*
Within Groups	29	471.3500	16.2534		
Total	30	581.6774			

\* $\underline{p} < .05$

Table 4

Oneway ANOVA for Winning and Losing Teams on REDA Subscale of B-TAIS

Source of Variation	df	Sum of Squares	Mean Squares	F Ratio	F Prob.
Between Groups	1	141.4887	141.4887	4.9956	.0333*
Within Groups	29	821.3500	28.3224		
Total	30	962.8387			

\* $\underline{p} < .05$

Table 5

Means and Standard Deviations for Winning and Losing Teams on the GEQ Subscales

TEAMS	IAGT		IAGS		GIT		GIS	
	$\bar{X}$	SD	$\bar{X}$	SD	$\bar{X}$	SD	$\bar{X}$	SD
Winning Teams	26.60	5.92	29.40	6.15	27.60	5.28	21.40	5.60
Losing Teams	33.69	3.26	32.31	5.57	32.43	6.55	22.50	6.70

Table 6

Oneway ANOVA for Winning and Losing Teams on IAGT Subscale of GEQ

Source of Variation	df	Sum of Squares	Mean Squares	F Ratio	F Prob.
Between Groups	1	388.8980	388.8980	17.3232	.0003*
Within Groups	29	651.0375			
Total	30	1039.9355			

\*  $p < .05$

Table 7

Oneway ANOVA for Winning and Losing Teams on GIT Subscale of GEQ

Source of Variation	df	Sum of Squares	Mean Squares	F Ratio	F Prob.
Between Groups	1	181.1722	181.1722	5.0737	.0320*
Within Groups	29	1035.5375	35.7082		
Total	30	1216.7097			

\*  $\underline{p} < .05$ 

Table 8

Means and Standard Deviations for Winning and Losing Teams on the SCIQ

TEAMS	SCIQ	
	$\bar{X}$	SD
Winning Teams	29.33	4.74
Losing Teams	32.12	5.50



Table 9

Oneway ANOVA for Winning and Losing Teams on the SCIQ

<b>Source of Variation</b>	<b>df</b>	<b>Sum of Squares</b>	<b>Mean Squares</b>	<b>F Ratio</b>	<b>F Prob.</b>
<b>Between Groups</b>	1	60.3360	60.3360	2.2751	.1423
<b>Within Groups</b>	29	769.0833	26.5201		
<b>Total</b>	30	829.4194			

$\underline{p} < .05$

## CHAPTER FIVE

### DISCUSSION AND RECOMMENDATIONS

The purpose of this study was to determine if winning and losing records affect team cohesion and attentional focus. Based on the results of this study, it appears that winning and losing may affect certain aspects of cohesion and attentional focus. Results indicated that winning teams had significantly higher scores on the B-TAIS subscales that measured errors in attentional focus. Losing teams had significantly higher scores on the GEQ subscales that measured an individual's and group's attraction to team's goals. This chapter discusses these results and offers recommendations for future studies.

#### Discussion

While winning and losing teams did not differ significantly on the BETA, BITA, NARA, and INFPA subscales of the B-TAIS, these two groups did differ on the OETA, OITA, and REDA subscales of the B-TAIS. It is interesting to note that all three of these subscales measure attentional errors. It appears that the winning teams were more likely to make attentional errors than the losing teams. Nideffer (1976) suggested that there was an ideal athletic profile for elite athletes. High scores on four of the seven attentional subscales reflects positive attentional traits (BETA, BITA, NARA, and INFPA), while high scores on the remaining scales reflect negative attentional traits (OETA, OIT, and RED). In this study the results seem to contradict these findings; winning teams in this study had higher scores on the three scales that measured attentional errors.

Two reasons may explain the results of this study. The teams were tested during preseason. Winning teams had a successful previous winning season and were expected to be successful during the current season. The players may have been anxious and this anxiety level may have affected their scores on attentional focus scales.

Another reason for these results may have been the type of baseball and softball leagues used in this study. While these teams play competitive baseball and softball, these leagues were not associated with schools, but were sponsored by the recreation department. Summer tends to be time when athletes play for enjoyment and the "seriousness" of the competition is not as prominent. The coach of the winning baseball team was strict and presented a high level of discipline. This may have affected his players' anxiety level. The coach of the winning softball team was easy-going. The players may have seen softball in a recreational sense. The coach of the losing baseball team did not expect his players to win. He was laid-back and treated the softball games and practices as a recreational pursuit.

Losing teams scored higher on the IAGT and GIT subscales of the GEQ than winning teams. Both subscales measure the attraction an individual has to individual and team goals. There is evidence to suggest that there is a positive relationship between team cohesion and team success (Landers & Crum 1971; Ball & Carron, 1976; and Bird, 1977). It appears that the more successful a team is, the more cohesive that team will become, particularly cohesive toward the group's goals.

The results of this study contradict the trend suggested in the literature. The losing teams in this study had higher scores on the two subscales that measure attraction to the goals of the group than did winning teams. Possible reasons for these results may be the time of testing and the team's coach. Testing in the preseason may have not allowed relationships to develop between teammates and coaches. It may take the course of a season to accurately predict team cohesion. The coach's attitude during practice and games may affect cohesion. A coach who stresses team unity and winning and losing as a team can and may affect cohesion. A coach who consistently stresses individual goals and dwells on individual mistakes may lead the team to think as separate parts working towards separate goals. A coach who tells players that if they fail, the team fails, may

develop better team cohesion. If a player feels responsible for the entire team and not just him/herself, team cohesion may be enhanced.

Winning and losing teams did not significantly differ on the scores of the SCIQ. The SCIQ is a measure of an athlete's ability to filter inappropriate stimuli and task irrelevant cognitions. The reason that there may have been no difference between winning and losing teams on this scale may have been the general nature of the statements on the scale. The scale is not sport specific; i.e., it is a scale that is generalizable to all sports. As a result of this general nature, the athletes did not discriminate as well as they could have if the scale had been directed toward just softball/baseball.

### Recommendations

Recommendations for future research include the following:

1. The testing of a larger number of subjects. The number of subjects in this study was 31.
2. The testing of summer league programs and comparing the results with athletic teams sponsored by public schools. This approach would determine if there was any difference between the two types of programs.
3. The testing of subjects at three different times during the season (preseason, mid season and post season). This approach would allow the researcher to assess changes that occur in cohesion and attentional focus as the season progresses.
4. The testing of summer league players from various locations in Kansas.
5. The testing of gender differences with regard to attentional focus and team cohesion. Due to the small sample size, the separation of genders was not possible.

## REFERENCES

- Albrecht, R. R. & Feltz, D. L. (1987). Generality and Specificity of Attention Related to Competitive Anxiety and Sport. *Journal of Sports Psychology*. 9, 231-248.
- Ball, J. R., & Carron, A. V. (1976). The influence of team cohesion and participation motivation upon performance success, and intercollegiate ice hockey. *Canadian Journal of Applied Sports Sciences*. 1, 271-275.
- Bard, C. & Fluery, M. (1976). *Considering eye movement as a predictor of attainment*. In I. Cockrell & W. McGilivray (Eds.), *Vision and Sport*. Cheltenham, VA: Stanley Thomas.
- Bird, A. M. (1977). Development of a model for predicting team performance. *Research Quarterly*. 48, 24-32.
- Beuter, A. & Duda, J. (1985). Analysis Of The Arousal/Motor Performance Relationship In Children Using Movement Kinematics. *Journal of Sports Psychology*. 7, 229-243.
- Callaway, E., & Dembo, E. (1958). Narrowed attention: A psychological phenomenon that accompanies a certain physiological change. *Arch. Neurol. Psychiat.*. 79, 74-90.
- Carron, A. V., Widmeyer, W. N., & Brawley., L. R. (1985). The Development of an Instrument to Assess Cohesion in Sport Teams: The Group Environment Questionnaire *Journal of Sports Psychology*. 7, 244-266.
- Carron, A. V. (1984). *Cohesion in team sports*. In J. Silva & R. Weinberg (Eds.), *Psychological Foundations of Sport*, Illinois: Human Kinetics.
- Carron, A. V. (1982). Cohesiveness in sports groups: Interpretations and considerations. *Journal of Sports Psychology*. 4, 123-183.
- Carron, A. V., & Grand, R. R. (1982). Team climate questionnaire. In *Psychology of Sport and Motor Behavior: Research and Practice*. Edmonton, Can., Department of Recreation and Leisure Studies, University of Alberta.
- Cox, R. (1990). *Sports Psychology: Concepts and Applications* (Second ed.). Dubuque, Iowa: Wm. C. Brown Publishers.
- Dauids, K. & Nutter, A. (15 1988). Cohesion-Performance Relationship Of English National League Volleyball Teams. *Journal of Human Movement Studies*. pp. 205-213.
- Donnelly, P. (1975). *An analysis of the relationship between organizational half-life and organizational effectiveness*, Department of Sport Studies, University of Massachusetts-Amherst.
- Freishlag, J. (1985). Team Dynamics: Implications For Coaching. *Journal of Physical Education, Recreation, and Dance*. November/December, 67-71.

- Granito, V. & Rainey, D. (1988). Differences In Cohesion Between High School And College Football Teams And Starters and Nonstarters. *Perceptual And Motor Skills*, April, 471-477.
- Iso-Ahola, S. E., & Hatfield, B. (1986). *Psychology of Sports: A Social Psychological Approach*. Dubuque, IA: Brown.
- Gruber, J. & Gray, G. (1982). Responses To Forces Influencing Cohesion As A Function Of Player Status And Level of Male Varsity Basketball Competition. *Research Quarterly For Exercise And Sport*, March, 27-36.
- Jongsma, D., Elliot, D., & Lee, T. (1987). Experience And Set In Running The Sprint Start. *Perceptual And Motor Skills*, April, 547-550.
- Landers, D. M., & Crum, T. F. (1971). The Effect of Team Success and Formal Structure on Interpersonal Relations and Cohesiveness of basketball teams. *International Journal of Sports Psychology*, 2, 88-96.
- Maddocks, D. & Summers, J. (1987). Attentional Styles Profiles And Sports Performance. *Journal of Sports Psychology*. December, 199.
- Martens, R., & Peterson, J. (1971). Group Cohesiveness as a Determinant of Success and Membership Satisfaction in Team Performance. *International Review of Sports Psychology*. 6, 49-61.
- Maybry, E. A., & Barnes, R. E. (1980). *The Dynamics of Small Group Communication*. Englewood Cliffs, NJ: Prentice Hall.
- Maynard, I. W. & Howe, B. (1989). Attentional Styles in Rugby Players. *Perceptual and Motor Skills*. 34, 394-404.
- Nettleton, B. (1986). Flexibility of Attention and Elite Athletes' Performance in Fastball Games. *Perceptual and Motor Skills*. 63, 991-994
- Nideffer, R. (1976). Test Of Attentional And Interpersonal Style. *Journal of Personality and Social Psychology*, 34, 394-404.
- Nideffer, R. (1978). The relationship of attention and anxiety to performance. In W. F. Straub (Ed.), *Sport Psychology: Analysis of athlete behavior* (pp. 231-235). Ithica, NY, Movement.
- Nougier, V., Ripoll, H., & Stein, J. (1989). Orienting of Attention With Highly Skilled Athletes. *International Journal of Sports Psychology*. July/September, 205-223.
- Oxendine, J. (1970). Emotional Arousal And Emotional Performance. *Quest*. 13, 23-30.
- Rejinski, W. & Kenney, E. (1987). Distracting Attentional Focus From Fatigue: Does Task Complexity Make A Difference?. *Journal of Sports Psychology*. 7, 66-73.
- Schriesheim, J. F. (1980). The Social Context of Leader Subordinate Relations: An Investigation of Effects of Group Cohesiveness. *Journal of Applied Psychology*. 65, 183-194.

- Schwenkmezger, P. & Laux, L. (1986). *Trait Anxiety, Worry, and Emotionality in Athletic Competition*. Washington D.C.: Hemisphere Publishing Corporation.
- Silva, J. I. (1984). The Status Of Sports Psychology. *Journal Of Physical Education, Recreation and Dance*. 7, 46-49.
- Syer, J., & Connelly, C. (1987). *Sporting Body: Sporting Mind*. Englewood Cliffs, NJ, Prentice Hall.
- Tuckman, B. (1965). *Developmental Sequence In Small Groups*. Psychological Bulletin. 63, 384-399.
- Vander Veldon, L. (1971). *Relationships Among Members, Team and Situational Variables in a Basketball Teams Success*: Unpublished doctoral dissertation, University of Wisconsin-Madison.
- Van Schoyck, S. R., & Grasha, A. F. (1981). Attentional Style Variations and Athletic Ability: The Advantages of a Sport Specific Test. *Journal of Sports Psychology*. 3, 149-165.
- Williams, J. M. (1992). *Applied Sport Psychology: Personal Growth to Peak Performance*. Mountain View, Ca., Mayfield.
- Wilson, V., Ainworth, M., & Bird, E. (1984). Assessment Of Attentional Abilities In Male Volleyball Athletes. *International Journal Of Sports Psychology*, December, 296-306.
- Webster, N., & Teale, E. (1987). *Webster's Dictionary*. New York, N.Y.: Modern Press.

## Appendix A

### APPLICATION FOR APPROVAL TO USE HUMAN SUBJECTS

1. Name of Principal Investigator: Joseph Jacobs
2. Department Affiliation: HPER
3. Person to whom notification should be sent:  
Dr. Kathy Ermler  
Address: Emporia State University,  
Physical Education Dept.  
1200 Commercial, Emporia, Ks. 66801
4. Title of Project: Do Team Cohesion and Attentional Focus Affect Each Other?
5. Funding Agency: Not Applicable
6. Project Purpose: Does a winning or losing record affect team cohesion and attentional focus?
7. Describe the proposed subjects: The subjects will consist of two boys baseball teams, approximately 30 subjects, ages ranging from 16 to 18. Two girls softball teams will also participate, approximately 30 subjects with ages ranging from 16 to 18.
8. Describe how subjects will be selected: Subject selection is based on previous season's record.
9. Describe the proposed procedures in the project: Each subject will be given three questionnaires, The Sport Cognitive Questionnaire (SCIQ), The Group Environment Questionnaire (GEQ), and The Baseball Test of Attentional and Interpersonal Style (B-TAIS). These questionnaires will be given at three points during the season: preseason, mid season, and post season. The subjects will be instructed to complete the questionnaires without commenting to their teammates or coach. The coaches and players will be told that these questionnaires will assess their perceptions about their ability as coaches and players.
10. Will questionnaires, tests, or related research instruments not explained in question 9 be used? No



11. Will electrical or mechanical devices be used? No
12. Do benefits of the research outweigh the risks to human subjects? Yes
13. Are there any possible emergencies which might arise in utilization of human subjects in this project? No
14. What provisions will you take for keeping research data private? Each subject will be given a code number.

## Appendix B

### INFORMED CONSENT DOCUMENT

The Division of HPER of Emporia State University supports the practice of protection for human subjects participating in research and related activities. The following information is provided so that you can decide whether you wish to participate in the present study. You should be aware that even if you agree to participate, you are free to withdraw at any time, and that if you do withdraw from the study, you will not be subject to reprimand or any other form of reproach.

As a participant in this study you will be asked to complete three questionnaires: The Sport Cognitive Interference Questionnaire (SCIQ), The Group Environment Questionnaire (GEQ), and The Baseball Test Of Attention And Interpersonal Style (B-TAIS). These questionnaires are designed to evaluate attentional styles and team cohesion of athletes. Each participant will complete these questionnaires at three times during the season: preseason, mid season, and post season. Results will be presented in a manner which will not allow recognition of any one particular subject. Only the primary investigator, Joe Jacobs, will have access to the master list matching code numbers to names. All identification information will be destroyed at the completion of the study.

The major objective of this program is to study attentional focus and team cohesion, and if gender or win/loss percentage effect them. These scores of the three questionnaires will be compared against each other to indicate if there is any correlation. Results of this study will be useful in instructing coaches on possible ways to obtain maximum performance from athletes.

Your permission to use the data described above is requested for use in constructing research for a thesis. If you have any question concerning this program, please feel free to call Joe Jacobs, at 316-343-1457.

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Date

## Appendix C

### B-TAIS

1. I am good at glancing at the positioning on defense, and quickly picking out where the ball should be hit.  
0 = never; 1 = rarely; 2 = sometimes; 3 = frequently; 4 = always.
2. It is easy for me to focus on a number of things at the same time while I bat.
3. When I bat, I have so many things on my mind that I could get confused and forget my instructions.
4. When batting, I keep changing back and forth from one stance and grip to another.
5. When in the batter's box my mind is going a mile a minute.
6. I find myself in the batter's box just looking at the pitcher with my mind a complete blank.
7. I tend to focus on one small part of the pitcher's delivery, and miss those things that may give me a better idea of what (s)he is throwing me.
8. When I get anxious or nervous while hitting, my attention becomes narrow and I fail to see important cues that are going on around me.
9. When hitting, I can keep track of several things at the same time, such as the count, the coaches' instructions, and the type of pitch that I am most likely to see.
10. When I am batting, I find myself distracted by the sights and sounds around me.
11. When batting, I only think about one thing at a time.
12. When asked by my teammates what a given pitcher is throwing, my answers are too narrow, don't give them the information they are looking for.
13. I need to have all the information regarding a certain pitcher before I know to hit against him/her.
14. My interests in hitting are narrower than those of most players.
15. I make mistakes while batting because my thoughts get stuck on one idea or feeling.
16. I have a lot of energy for a hitter my age.
17. I have difficulty telling what a pitcher is thinking by watching his/her moves.
18. When batting, I have a tendency to listen to the catcher or the infielder's chatter and forget about the upcoming pitch.
19. When I get up to bat, I get anxious and forget what it was I was going to try to do against this particular pitcher.
20. Pitchers can fool me by throwing a type of pitch that I'm not expecting or by using an unorthodox motion.

21. With so much going on around me as I bat, it is difficult for me to keep my concentration for any length of time.
22. When up to the plate, I know what everyone in the field is doing.
23. While batting, my thoughts are limited to just the pitcher and the ball.
24. I am good at picking up the rotation of the ball as it leaves the pitcher's hand.
25. While hitting, my thoughts are coming to me so fast that I can hardly keep up with them.
26. Hitting a baseball is a skill which involves a wide variety of seemingly unrelated tasks and strategies.
27. It is easy for me to consider various aspects of the game such as the score, the number of base runners, the outs, and the count, and from this, get a good idea of what to do when I get up to the plate.
28. It is easy for me to keep my mind on the single thought of hitting the baseball.
29. Just by watching a pitcher warm-up, or to throw to one of my teammates, I can figure out how to hit him/her.
30. While batting, I make mistakes because I get too involved with what one player is doing, and forget about the others.
31. I approach the mental aspects of hitting in a focused, narrow and logical fashion.
32. While batting, outside happenings or objects tend to grab my attention.
33. I think a lot about different batting strategies and tactics.
34. After I bat, and my teammates ask me about what the pitcher has thrown me, my answers are too broad, and I tell them more than they really know.
35. When I'm batting, the diamond seems to be a booming, buzzing, brilliant flash of color and confusion.
36. My interests in hitting are broader than those of most players.
37. I am good at quickly analyzing a pitcher and assessing his/her strengths and weaknesses.
38. It is easy for me to keep my mind on the single sight of the ball approaching the plate.
39. When I'm preparing to bat, I am good at analyzing complex situations such as what should be done given the score, the number of outs, runners on base, etc.
40. It is easy for me to keep outside sights and sounds from interfering with my thoughts while I'm hitting.
41. When batting, I get so caught up in my own thoughts I forget what's going on around me.
42. When a pitcher is trying to "set me up" I can think several moves ahead, and see what (s)he's doing.

43. I am socially outgoing, talking to the catcher and/or umpire while I bat.
44. When I'm batting, I find myself distracted by my own thoughts and ideas.
45. Batting is exciting and keeps me interested.
46. I am always on the move in the batters box.
47. It is easy for me to forget about an error I have made in the field while I'm hitting.
48. When I'm hitting, if the coach doesn't give me a signal, I can't make up my mind on what strategy to use.
49. It is easy for me to direct my attention and focus narrowly while I bat.
50. I seem to work on my hitting in "fits and starts" and "bits and pieces".
51. All I need is a little information about opposing pitchers, and I can think a number of ways I can go about trying to hit them.
52. When I bat, it is easy for me to block out everything except the ball.
53. When hitting, I have difficulty clearing my mind of a single thought or idea.
54. Sometimes while hitting, the developments in the game come so fast that it might make me light headed or dizzy.
55. It is easy for me to keep my thoughts from interfering with my hitting while I'm at the plate.
56. When the pitcher has a wide variety of different pitches, I get confused as to which one to expect.
57. I sometimes have to step out of the batter's box because I get distracted by irrelevant sights and sounds.
58. I get confused trying to bat with so many things happening all at the same time.
59. The coach has to repeat the signs because I get distracted by my own irrelevant thoughts when I prepare to bat.

## **Appendix D**

### **THE SPORT COGNITIVE INTERFERENCE QUESTIONNAIRE**

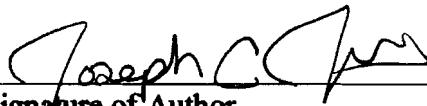
1. I worried about what my team members and my coach think of me.  
(1) never; (2) once; (3) a few times; (4) often; (5) very often.
2. I thought about my performance.
3. I thought about things unrelated to the game.
4. I thought about my losing out on things.
5. I thought about my occasional bad performance.
6. I thought about my failure to follow the coaches instructions.
7. I thought the umpire was prejudice.
8. I was concerned about previous mistakes.
9. I thought about the opposing team giving us a hard time.
10. I compared the performance of my team members to my own performance.

## Appendix E

### GROUP ENVIRONMENT QUESTIONNAIRE

1. I do not enjoy being a part of the social activities of this team.
- |                      |   |   |   |   |   |   |   |   |                   |
|----------------------|---|---|---|---|---|---|---|---|-------------------|
| 1                    | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |                   |
| strongly<br>disagree |   |   |   |   |   |   |   |   | strongly<br>agree |
2. I'm not happy with the amount of playing time I get.
3. I am not going to miss the members of this team when the season ends.
4. I'm unhappy with my team's level of desire to win.
5. Some of my best friends are on this team.
6. This team does not give me enough opportunities to improve my personal performance.
7. I enjoy other parties other than team parties.
8. I do not like the style of play on this team.
9. For me this team is one of the most important social groups to which I belong.
10. Our team is united in trying its goal for performance.
11. Members of our team would rather go out on their own then get together as a team.
12. We all take responsibility for any loss or poor performance by our team.
13. Our team members rarely party together.
14. Our team members have conflicting aspirations for the team's performance.
15. Our team would like to spend time together in the off season.
16. If members of our team have problems in practice, everyone wants to help them so we can get back together again.
17. Members of our teams do not stick together outside of practices and games.
18. Our team members do not communicate freely about each athlete's responsibilities during competition or practice.

I, Joseph A. Jacobs, hereby submit this thesis to Emporia State University as partial fulfillment of the requirements for an advanced degree. I agree that Library of the University may make it available for use in accordance with its regulations governing materials of this type. I further agree that quoting, photocopying, or other reproduction of this document is allowed for private study, scholarship (including teaching) and research purposes of a nonprofit nature. No copying which involves potential financial gain will be allowed without written permission of the author.



Signature of Author

11-30-93

Date

The Effects of Winning and Losing Records  
on Team Cohesion and Attentional Focus

Title of Thesis



Signature of Graduate Office Staff Member

December 7, 1993

Date Received