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Project Adventure activities and team cohesion of girls high school basketball players

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PROJECT ADVENTURE™ ACTIVITIES AND TEAM COHESION OF GIRLS
HIGH SCHOOL BASKETBALL PLAYERS

A Thesis

Presented to

The Faculty of the Department of Human Performance

San Jose State University

In Partial Fulfillment

of the Requirements for the Degree

Master of Arts

By

Melodee Yoko Kiyota

May 2006

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ABSTRACT

EFFECT OF PROJECT ADVENTURE™ ON COHESION OF

GIRLS' HIGH SCHOOL BASKETBALL

by Melodee Y. Kiyota

Coaches are catalysts for developing and maintaining a team's interpersonal dynamics and team cohesion (Freischlag, 1985). Using the Group Environment Questionnaire to measure team cohesion, Project Adventure™ team initiatives were provided to determine if team cohesion increased due to the intervention. Seventeen female basketball athletes ranging from 14 to 18 years of age participated in this study. One school's 7 girls' basketball players served as controls and another school's 10 girls' basketball players served as the experimental group.

A pretest-posttest control group design was implemented to study whether the players in the experimental group that engaged in Project Adventure™ team initiatives daily only during practice time were successful in increasing team cohesion of Girls' High School Basketball versus that of the control group which received no intervention. Over a period of 5 months, it was found

that Project Adventure™ team initiatives was successful in increasing team cohesion.

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DEDICATION

I would like to dedicate this thesis to my mom, Stella Kiyota, who has stuck by my side throughout my life. Without her love, continuing support, and patience I would not be where I am at today. Thank you for everything you have done for me throughout this journey and most of all, in my life.

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Chapter 1

INTRODUCTION

Winning is an important aspect of sport. A coach strives to find strategies that make a team cohesive and to reproduce that cohesiveness time after time. Team cohesion is defined as "a dynamic process that is reflected in the tendency of a group to stick together and remain united in the pursuit of its instrumental objectives and/or for the satisfaction of member affective needs" (Carron, Brawley, & Widmeyer, 1998, p.213). This definition assumes that there is a relationship between team cohesion and team success; that is, team cohesiveness leads to team success.

What factors are related to team cohesion? A survey of coaches ranked team cohesion as the most critical issue facing a coach (Silva, 1984). Effective teams share several characteristics. One effective characteristic that a team shares is clearly defined goals and expectations. Effective teams make decisions together as a group. Effective teams acknowledge each player's contributions and support (Johnson, 1986). With an effective team, the objectives of the group take precedence over the personal interests and goals of the individual members (Raudsepp, 1983). The team that gets along and works together has a

higher success rate than the team that does not work together (Widmeyer & Martens, 1978). Coaches and managers speculate on how they can make an average skilled team into a championship team. Many athletes, coaches, and spectators believe that cohesiveness is often a deciding factor between winning and losing in a team sport.

Studies such as Carron (1982) and Williams and Widmeyer (1991) have revealed that player performance is a key factor in determining team cohesion. The more cohesive a team, it is thought, the more successful the outcome. As stated by Williams and Widmeyer (1991) regardless of whether a team is successful or not, team cohesion is affected in some way by performance. If a team is performing at its worst, team members feel the pressure to play harder and interact in ways that create an increase in team cohesion. To the contrary, if a team is playing at its best, team members have the desire and ability to play well together (Freischlag, 1985). Although the team's performance is a key to team cohesion, the coach is a catalyst for developing and maintaining a team's interpersonal dynamics and team cohesion (Freischlag, 1985). The coach must understand the strengths, weaknesses, motives, needs, and goals of a team. The coach

must constantly be considering ways that will make a team more productive and efficient (Klausner & Hoch, 1997). One way to make the team more productive and efficient is by conducting team building activities (Webber & Donahue, 2001). With team building activities, coaches create an environment for players to work together regardless of their differences to solve a problem, which may help players work together and become a more cohesive group. As the Project Adventure™ curriculum states, differences in people must be accepted and this curriculum offers a number of activities that expose students to issues of differences.

Klausner and Hoch (1997) believed that team chemistry can also make the difference between an ordinary season and an outstanding one. Freischlag (1985) stated that although teams may possess a natural type of chemistry, it is often the coach's responsibility to develop the team's chemistry. Team cohesion unifies a team, which in turn may influence a team's performance.

Statement of Purpose

The purpose of this study was to examine:

1. If the use of early season team initiatives were related to the development of team cohesion.

Hypotheses

1. Treatment will not affect team cohesion.
2. Time of test will not affect team cohesion.
3. Treatment and time will not affect the interaction.

Limitations

The study was limited to:

1. Students of two large public high schools in Central California
2. Students who were taking four or more core classes
3. Athletes from the Girls' Varsity Basketball team
4. 17 female athletes
5. Non-equivalent groups with regard to total time in practice; although both groups practiced basketball for two hours, the experimental group received an additional 15 minutes of time for the Project Adventure™ activities
6. Female coach in experimental group and male coach in control group.

Delimitations

The study was delimited to:

1. The questions on the GEQ
2. The availability of the gymnasium
3. The condition of the gymnasium
4. Selection of the teams

5. A real world setting
6. No random assignment of participants
7. The experimental group's coach was the researcher.

Assumptions

1. Each participant was honest while answering the Group Environment Questionnaire (GEQ).
2. The group initiatives used with the experimental group were perceived by the participants as a positive experience.

Definition of Terms

Debriefing. As stated by Project Adventure™ debriefing should happen after all team initiatives. The participants in this study discussed the importance of the team initiative activities, how the activity helped the team to be united, and other ways the team initiative activities have been completed.

Group Environment Questionnaire. An 18-item questionnaire designed to assess four specific manifestations of the cohesiveness that develops in sport teams (Carron, Brawley, & Widmeyer, 2002). For the purposes of this study, the GEQ was used as a tool to measure team cohesion.

Project Adventure™. A nonprofit organization created to make adventure available to all people. Project Adventure™ initiatives were used in this study as the intervention used to help build team cohesion.

Team Initiatives. Activities completed during practice to bring the team closer as a unit and to build team cohesion.

Team Cohesion. "A dynamic process that is reflected in the tendency of a group to stick together and remain united in the pursuit of its instrumental objectives and/or for the satisfaction of member affective needs" (Carron, Brawley, & Widmeyer, 1998, p. 213). For the purposes of this study, team cohesion was measured by the GEQ.

Team Chemistry. The ability of the players to get along with one another, to work smoothly and unselfishly under the leadership of the coaching staff (Klausner & Hoch, 1997).

Importance of Study

In sport it is not all that uncommon to see a team that has been successful one season return the next season with very similar players and not be as successful (Sidgreaves, Movsessian, Harrod, & Dawson, 2001). Most teachers and coaches believe that if their students and

athletes have high self-confidence, they are more likely to be cohesive in the physical activities or sports in which they participate (Chase, 1998). Boys tend to be more confident about their physical ability than girls (Solomon, Lee, Becher, Harrison, & Wells, 2003). Team initiatives for girls may increase a team's confidence to change those early negative experiences into positive experiences. There has been an implicit assumption by researchers that team cohesion is a positive aspect of sport and that team cohesion is a quality that should be developed and enhanced whenever possible (Gardner, Shields, Bredemeier, & Bostrom, 1996).

Chapter 2

REVIEW OF LITERATURE

This chapter reviews the literature related to team cohesion and how it affects performance. The final section includes a brief conclusion of the literature.

Developing Team Cohesion

As explained by Matheson, Mathes, and Murray (1997) observers of sport often wonder how a team which has been so successful one year could, with essentially the same personnel, fail to repeat that success the following season. Conversely, it is often questioned how a team whose members appear to be less talented, defy logic and become league champions? As Widmeyer (1994) states, team cohesion has been identified as a factor that may play a critical role in the success or failure of teams.

Team cohesion implies that the members of a group are inclined to remain together. The feeling of togetherness is considered important in satisfying team needs, deriving and making the effort to meet team goals, enhancing each player's loyalty to the team and coach, and gaining support among teammates (Anshell, 2003). In sports, team cohesion is viewed as that phenomenon that bonds the team members,

increases overall team motivation, and lays the groundwork for maximizing team performance (Hatcher, 1986).

According to Carron (1982), the relationship between cohesiveness and performance is direct. If the group's performance and cohesiveness is high, then performance is high. Hatcher (1986) agreed with Carron (1982), stating that it seemed highly probable that the more cohesive a team was, the less likely that team conflicts would occur and the more likely that successes would be realized. If teammates get along and work cooperatively with one another, then the team has a chance to perform well. As Sugarman (1998) stated, cohesive teams can achieve dramatic outcomes. The manner in which players interact has a tremendous impact on the way a team performs.

However, as logical as it might appear that there would be a relationship between team cohesion and team performance, the research findings are equivocal. Where some studies have found that team cohesion is related to success, others have not.

Becoming a Team

Although team development does not always follow a step-by-step sequence, a process does exist by which a group of individuals come together to become a team

(Anshell, 2003). Theorists refer to these evolutionary steps of team building as (a) forming, (b) storming, (c) norming, and (d) performing (Cartwright & Zander, 1968). Forming is the first step when team members familiarize themselves with one another (Francis & Young, 1979). Members compare themselves to one another and recognize each player's strengths and weaknesses. The second step, storming, is when conflicts begin to happen. Usually this step happens during tryouts, when players compete with each other to be on the team or gain a starting position. This step often lowers cohesion, but storming is inevitable, so the coach must be aware to not let "storming" get out of hand. The next step is norming. Norming occurs when teammates work together to establish team success (Anshell, 2003). The last stage is performing. Performing is when teammates no longer care about who performs better; instead they want one another to succeed. This final level of team building appears to be related to a team's success and performance.

Project Adventure™

Project Adventure™ is a nonprofit organization which was created to make adventure activities available to everyone. "Physical education continues to be at the core

of Project Adventure's™ work. Project Adventure™ adoptions range from one teacher including a few activities in his or her curriculum to whole school adoptions" (Panicucci, 2003 p. 2). Project Adventure™ offers training to those who are interested to give them the skills necessary to use the Project Adventure™ curriculum safely and effectively.

Project Adventure™ Team Initiatives as Related to Becoming a Team

In order to develop team cohesion, Project Adventure™ recommends that trust development, communication, cooperation, and fun be included in team initiatives, activities that help teams become more cohesive. Trust creates opportunities for people to meet new challenges, knowing that others are there to support them. Trust will help members of a team to feel comfortable with one another and try new activities. Trust activities focus on the activity itself rather than how the participants think about each other.

Rohnke and Butler (1995) and Williams and Widmeyer (1991) believe communication is very important factor in team cohesion. Communication allows participants to share their viewpoints, learn from the experiences of others, and fosters an environment where people can talk openly about

their feelings (Rohnke & Butler, 1995). With regards to norming, when the team could communicate with each other, then team norms begin to form and cooperation among teammates happens. This normally is the important first step in team building.

Cooperation among the members of the team is essential in getting the team to play together. Each member must work together to accomplish certain tasks. The goal is to increase each participant's ability to work as part of a group and for each member to develop an appreciation of what he or she can contribute (Rohnke & Butler, 1995). Although cooperation is stressed, competition can be structured so participants feel positive about their involvement. This relates to the second step of team building, storming.

Storming and competition are similar to one another because when athletes are competing for a position on a team they compete against one another. A central component of Project Adventure™ activities is fun. Participants should have fun engaging in the team initiatives. Activities that are perceived as fun help participants to be motivated, engaged, and focused. When participants have

fun and enjoy what they are doing, then performing is at its best. The team now has formed and is ready to perform.

Describing What Makes a Team Cohesive

Just because a team appears to have team cohesion at practices and games, does not indicate that the team has the type of team cohesion necessary for successful performance. A cohesive team is one that has everyone working towards the same goals. Sugarman (1998) stated:

A cohesive team can be distinguished from a noncohesive team by many characteristics. A cohesive team has well-defined roles and group norms, common goals, a positive team identity, a good working relationship, shared responsibility, respect, positive energy, trust, a willingness to cooperate, unity, good communication, pride in membership, and synergy. Another indicator of the amount of cohesiveness in a team is the frequency of statements of we and our, in contrast to statements of I, me, and mine. The we is just as important as the me. Developing cohesion is something that takes time and effort, but it is well worth the investment. (p.59)

Another aspect of team cohesion is team climate. Team climate is a psychosocial construct, an internal representation of how a person perceives the conditions and interrelationships among group members (James, Hartman, Stebbins, & Jones, 1977). The way for a coach to assess team climate is by means of the team. The players evaluate team climate, not the coach. As created by Francis and Young (1979) the team climate checklist is a method for

coaches to assess the team climate. The checklist is anonymous, so the athletes can answer with complete honesty.

Team Cohesion and Performance

Several investigators have found that cohesion is related to team success and have found that there is a high relationship between team cohesion and winning, but that team cohesion does not necessarily cause success (Iso-Ahola & Hatfield, 1986). In a study completed by Kim and Sugiyama (1992), performance and cohesiveness were investigated. Boys and girls ($n = 1,972$) from 114 Japanese high school athletic teams participated. They were asked to complete the Group Environment Questionnaire (GEQ). Brawley, Carron, and Widmeyer (1987), described the GEQ as an instrument designed to measure cohesion in sport. The GEQ has 18 items that assess four measures of cohesiveness including individual attractions to the group-task, individual attractions to the group-social, group integration-task, and group integration-social (Kim & Sugiyama, 1992). The Kim and Sugiyama (1992) study found that performance and cohesion were related. Freischlag (1985) reported that if a team and coach had high prestige

and credibility, athletes would move toward desired behavior without regulation.

In a meta-analysis, Carron, Colman, Wheeler, and Stevens (2002), explored the relationship of performance and cohesion in sport. As with the Kim and Sugiyama (1992) study, the GEQ was also used in the Carron et al. (2002) study. In their study, Carron et al. (2002), found that cohesion showed a significant moderate to large cohesion-performance relationship for sport teams. Carron, Colman, Wheeler, and Stevens (2002) stated:

Why sports represents a context in which cohesiveness has a particularly strong relationship to performance is unclear. In attempting to come to grips with this issue, Mullen and Copper noted that in contrast to other types of groups, sport teams are characterized by high degrees of groupness or "entitativity." They also proposed that, in sport, standards for excellence are clear and generally universally endorsed by team members. Finally, success and failure are vivid and distinct. Military groups also seem to be characterized in much the same way—high groupness, clear accepted standards for excellence, vivid and distinct barometers for success and failure. Yet cohesion is associated with the strongest performance effects in sport. (p.181)

Mullen and Copper (1994) conducted a meta-analysis of 49 studies on the extent to which group cohesion was related to, or predicts, performance. As with Carron et al. (2002), Mullen and Copper (1994) found that there was a higher relationship between cohesion and performance when

the groups studied were actual teams, rather than for groups in contrived (artificial) settings. They also found that the relationship between cohesion and performance was higher for teams engaged in a sport compared to teams not engaged in a sport.

In other studies such as Williams and Widmeyer (1991), team success was not related to whether or not the players like one another, but rather, to the extent to which they can interact constructively during the contest to use proper skills and strategies (Carron, 1984). Williams and Widmeyer (1991) studied cohesion and performance in a coacting sport. A coacting sport is a sport where players individually perform the same or similar skills, but the team's success is based on the total of all the individual performances. Examples of coacting sports include tennis, golf, and swimming, where the individual performances collectively make the team successful or not. Williams and Widmeyer (1991) found a positive relationship between cohesion and performance. Eighty-three female collegiate golfers from differing skill levels were involved in the study. The GEQ was used in the study to assess team cohesion. Williams and Widmeyer (1991) found that cohesion related positively to performance in a coacting sport.

Interacting sports, such as basketball, football and baseball demand higher coordination and cooperation among team members than coacting sports. Compared to coacting sports, interacting sports increase the potential for team cohesiveness. (Williams & Widmeyer, 1991). In the Williams and Widmeyer (1991) study, communication was found to be a salient factor for teams with high cohesion. When individuals on an interacting sport team communicated with each other, high success was more likely to occur. For example, in a team sport such as basketball, a coach wants to have his or her team members communicate on defense. The players communicate on the court, telling teammates where the opposing players are moving so the team can better defend against the offense. Often players do not communicate to each other on the court. Players become confused and the defense fails allowing the offense to score more easily. As stated by Widmeyer, Brawley, and Carron (1985), if the coach knows that team cohesion is important, the coach must use effective communication strategies to assist in the development of team cohesion.

Like Carron, Brawley, and Widmeyer (2002), Evans and Dion (1991) used a meta-analysis to determine if the relationship between performance and cohesion was positive

and if the variance among the studies was great enough to indicate the need for further examination to determine other possible moderators. Evans and Dion (1991) used a mixture of sport teams, military groups, and experimental groups. After reviewing the studies, Evans and Dion (1991) found group cohesion and performance to be positively related, particularly with sport teams. Evans and Dion (1991) stated that if there were clear criteria related to outcomes, then the performance and cohesion relationship was strong.

In a study by Turner, Hogg, Turner, and Smith (1984), failure and defeat were used as determinants of group cohesiveness. Unlike the other studies discussed earlier, failure, as well as defeat, decreased team performance and team cohesion. They found that defeat and failure affected team cohesion in a way that motivated players to play intensely. In their study, group cohesiveness was defined as attraction to the group, which is a construct associated with the GEQ. Nine groups were selected to participate in the study while each group had a different task to complete. The members had the choice of doing the task or not. The researchers hypothesized that failure in completing the task would produce more team cohesion. Of

the nine groups, only two groups had higher team cohesion when they failed the task.

It has been noted in high-interactive sports, such as volleyball, if one player performs poorly the whole team may suffer (Freischlag, 1985). It is often observed that when a team is losing by many points the players exert more effort because they want to win. They bond together as a team, play with more excitement, and the cohesion of the team becomes greater. If one player plays well in a critical time of the game the rest of the team is often observed utilizing the "hot" player, which in turn, builds team cohesion. Even when players perform poorly, it is often observed that the team can use the negative energy and create a positive outcome. A combination of both success and failure is important to team cohesiveness.

Turner, Hogg, Turner, and Smith (1984) stated:

It is found that failure or defeat produces more cohesion (attraction to the group, liking for members, in-group favouritism) than success or victory under conditions of high choice about group behaviour or high commitment to group membership, but that the opposite is true with low choice or commitment.
(p.108)

Cohesion and Performance Are Not Related

Just because a player enjoys the team atmosphere does not mean the team is going to win more games (Brandon,

2002). If cohesion, as it relates to performance effectiveness, is the focus, then there is yet another reason why interpersonal attraction as a measure of cohesiveness is subject to question (Carron & Chelladurai, 1981). That is, interpersonal attraction as the cohesive force would be associated with the development of cliques within a team which, in turn, would result in less effective performance in those sports which require team coordination (Carron, 1980).

For every study finding that cohesiveness is positively related to performance, another reports no relationship, or a negative relationship between cohesiveness and performance (Gill, 1977). For example, Melnick and Chemers (1974) studied intramural basketball teams during the preseason. They failed to find a positive relationship between cohesiveness and performance.

A case study by Lenk (1977) was written on the world-class German rowing team. The team had poor interpersonal relationships and considerable conflicts, but became world champions. According to Lenk (1977) extrinsic rewards or goals allowed for team cohesion in spite of conflict.

Landers and Luschen (1974) studied intramural bowling teams and reported a negative relationship between

cohesiveness and team performance. At the end of the bowling season, team members rated each teammate on interpersonal attraction, task contribution, communication, and influence (Landers & Luschen, 1974). After scoring the items it was found that successful teams had lower interpersonal attraction ratings than unsuccessful teams.

Cohesion Outside of Sport

Corporations are becoming global, building strategic alliances, and facilitating mergers and acquisitions inside and outside their primary domain of work (Jackson, May, & Whitney, 1995). Concurrently, organizations are implementing work teams with greater frequency to integrate the knowledge of workers across broad specializations, as well as geographic locations (Sundstrom, DeMeuse, & Futrell, 1990). Introducing teamwork, and team-based activities into an organization, is a complex process which involves interactive processes that are often difficult to control (Goodman, Ravin, & Schminke, 1987). The overlap of team and individual activities, the different backgrounds, expectations, and interpersonal styles of people, and work pressures or restrictions make it difficult to apply traditional group dynamics models, such as "forming, storming, norming, and performing," as described later in

this chapter (Lembke & Wilson, 1998). As with sport, the potential of a team depends not only the skill, knowledge, and ability of the people in the team, but also on their ability and motivation to make the best use of their resources toward achieving the team purpose (Stevens & Campion, 1994). When team members all share the same focus on the team, this cognitive, evaluative, and emotional platform created through social identification provides the psychological foundation for team membership and participation (Lembke & Wilson, 1998).

Ability and Cohesion

Biondo and Pirritano (1985) studied the relationship between one's ability and one's acceptance on a team. They studied pre-adolescent boys during a basketball season. Membership on a team influences an athlete's behavior. Sport teams possess characteristics that exert subtle, but powerful, forces on the individual (Freischlag, 1985). Coaches must be alert for team members who become socially alienated (isolated) and for potentially divisive groupings (cliques) that may depart from the main goals of the team (Freischlag, 1985). The sporting domain is privileged in that the pre-adolescent athlete has the potential to acquire, through direct participation, pre-qualifications

that represent the value and trend structures of social adaptation (Biondo & Pirritano, 1985). Whether a person is young or old and regardless of whether or not the individual competed in sports or not, social acceptance is present and a powerful influence on participation. If someone is a highly skilled individual, they are more likely to be accepted by others on the team. Since acceptance relates to performance, acceptance, then, also relates to cohesion. Biondo and Pirritano (1985) stated:

In order that the criterion of utility to the group should not be too strict to somebody and therefore discourage integration and, in the long run, lead to giving up sport, it would be sufficient to form homogeneous teams of players, on the grounds of performance, associating to the above the engagement for a constant control of cohesion, or better paying greater attention to the normative and motivational contribution of the single players. (p.35)

Complimenting Group Cohesion

Yukelson, Weinberg, and Jackson (1984) studied intercollegiate basketball players. The purpose of the study was to develop an instrument to measure group cohesion. In the study Yukelson et al. (1984), quoted Carron (1982), proposing that operational measures of group cohesion in sport should reflect both the goals and task objectives the group was striving to achieve, as well as factors associated with interpersonal attraction or

attraction to the group. Over 600 college athletes were used in this study. Questionnaires were administered and the teams were requested to respond to how they felt about their teammates. The findings of this study showed that group cohesion in intercollegiate basketball teams was multidimensional. Yukelson, Weinberg, and Jackson (1984) stated:

Results from the present psychometric study indicate that cohesion in intercollegiate basketball teams consists of common goals, valued roles, teamwork that is complimentary to the goals that the group is striving to achieve, and interpersonal attraction to the group itself. These characteristics such as an individual's sense of involvement in the group, feelings of acceptance within the group, feelings, of acceptance within the group, and a desire for continued group membership. (p.115)

Girls'/Women's Participation in Sport

What motivates women to participate in sport and what maintains their motivation? Many women do not participate in sport because of the competitive nature of the activities. They also do not participate because of the physical nature of sport. Some women desire to be a part of a team, to have friendships between teammates, and for the social aspects and interactions provided for in sport participation (Hellandsig, 1998). Kientzler (1999) stated, many younger females participate in sport because they,

"want to have fun" and "stay in shape" (p.392). As Hellandsig (1998) found, females on average, participate in sport more for friendship and fun while males are more motivated by winning. As Prusak, Treasure, Darst, Pangrazzi (2004) believe, adolescent females are motivated if given choices. Even if given a small level of input about what they want to learn, their motivation is increased. Being able to choose from a variety of activities, allows people to find ones that suit their needs.

According to Spink (1995) elite female athletes play and return to sport because of the social cohesiveness of the team/sport they play. Spink (1995) also states that coaches interested in keeping female athletes involved may find it useful to promote the social aspects of the group.

Motivation

According to Freischlag (1985), team cohesion cannot be discussed without including a discussion about motivation. When an athlete begins a new competitive sport season, the athlete is usually highly motivated. During the season the motivation level begins to lower as a result of the boredom and routine associated with a long season. A coach must be aware of the lowered motivation because

lower motivation has an effect on team cohesion. It is often observed that when players are motivated to play the game, then there is enthusiasm for the game and the team plays with energy. It is also often observed that when a team loses motivation the players just "go through the motions" of the game and are seen playing sloppily and carelessly.

Self-efficacy, a concept first developed by Bandura (1977), inspires athletes to become more confident, motivated, and to be part of a team. Self-efficacy is not self-confidence; self-efficacy refers to a person's judgment of their capability to successfully perform a task or activity in a specific situation or context. Research has shown that higher self-efficacy will lead to better performance (Chase, 1998). As stated by Solomon et al. (2003), when self-efficacy is low, athletes become unmotivated and avoid challenge. When a team performs well, players become motivated to play together. Zaccaro, Blair, Peterson, & Zazunis (1995) as well as Bandura (1977) believe that self-efficacy can be transferred to group situations to develop the concept of collective efficacy. Since groups are comprised of individuals, groups have different goals and expectations from individuals. These

differences are important because they influence the group's effort (Anshell, 2003). Collective efficacy has four primary components according to Zacarro et al. (1995): shared beliefs, coordinative capabilities, collective resources, and situational specificity. All team members should have shared beliefs about maintaining the team's high performance. Coordinative capabilities refers to the ability of each group member to interact and to complete numerous functions in a timely, planned manner that meet group needs and lead to successful outcomes (Anshell, 2003). For example, in basketball, while on a fast-break, a player who has the ball may pass to his or her teammate up the floor who is wide open instead of keeping the ball and dribbling with surrounding defenders, taking the risk of a turnover. Collective resources refer to the belief that each group member of the team has the skills necessary to be successful (Anshell, 2003). Coaches must emphasize this belief early in the season so as to avoid damaging the collective resources component. Situational specificity refers to instances in which a team has a strong belief about its competence in some, but not all, aspects of performance (Anshell, 2003). For example,

in basketball a team may be very confident about playing defense, but may have a lower confidence playing offense.

Measuring Team Cohesion: GEQ

In another study by Brawley et al. (1987), the GEQ was used and tested for its validity. Both male and female athletes were used as participants. Participants were assessed during different times of the season to avoid seasonal response bias. The athletes responded to a battery of questions. Three studies were completed and in every study the questions given were randomized.

The results showed for all three tests that the GEQ was a valid measure for team cohesion. Although the study recommended that the GEQ be tested on more individuals, the study did conclude that the GEQ assessed an important aspect of cohesion.

Cohesion and Performance in Basketball

Studies of cohesion and performance have been completed across all levels of basketball. With most studies, findings have been similar. The relationship the coach has with his or her players can have an impact on the performance and chemistry of the team. Bray and Whaley (2001) stated:

For years, coaches have intuitively recognized that team unity is important in ensuring team success. The concept of team unity has been operationalized in the sport psychology literature as cohesion, described by Carron, Brawley, and Widmeyer (1998) as a "dynamic process that is reflected in the tendency for a group to stick together and remain united in the pursuit of its instrumental objective and/or for the satisfaction of member affective needs" (p.213). The definition of cohesion implies that higher levels of cohesion are desirable and should result in more effective team performance. (p.261)

Basketball Athletes and Coaches

Curtner-Smith, Wallace, and Wang (1999) studied the relationship between girls' high school basketball players and their coaches. They explored how the athletes spent their time during practice and related that to their performance during game competition. Curtner et al. (1999) reported that what happens at practice determines a player's performance in games. For example, in a practice where much of the time is spent going over managerial functions and waiting, performance in games suffered. Conversely, time spent where players were successfully engaged in skill learning and development, performance was increased. It is likely that the quote "perfect practice makes perfect" is, for the most part, accurate. A coach needs to utilize practice time in a manner where most of the time is spent working on skill development, not on

waiting. A coach should also be educated about which ideas can be used to help improve practices.

In a study completed by Bray and Whaley (2001), cohesion was measured twice during a basketball season with the GEQ. When cohesion was measured initially there was no relationship to performance. This may have been due to the fact the team did not have enough time in the initial stages of the season to evolve through the developmental stages of team cohesion (forming, norming, storming and performing) so as to affect performance. In the second measurement, a relationship between cohesion and performance was found, which was probably in part due to more time for bonding opportunities and having evolved to the stage of team cohesion necessary for the relationship to exist. Bray and Whaley (2001) believed that cohesion fluctuates over time because of the developmental nature of groups and the vacillating influence of antecedents within the categories of leadership factors, team factors, and environmental factors. This relates to the formation of teams with regard to forming, storming, norming, and finally, performing. As teams develop over time, cohesion shifts depending upon the stage of development. If a team is forming, the cohesion is more than likely lower than

when a team is norming, when the team is more cohesive because the players are more concerned about winning as a team, rather than each player highlighting their own contribution to the win. The norming stage is a more advanced stage where the notion of team is more evident than when the team is immature in its nature and lacks cohesion as a result.

In a study completed by Widmeyer and Martens (1978) teams of three players from one of each skill level: average, above average, and below average, were created. The teams were allowed to practice and meet each other in order to be able to fill out a questionnaire about their teams. Teams then played in a 5-week season against the other teams involved in the study. Results from the study showed that teams with higher cohesion performed better.

According to Gruber (1981) basketball coaches seek internal harmony among team members in order to enhance effective team play and create an environment for a winning season. In basketball, specifically, there are mixed results with regard to the relationship between team cohesion and basketball performance. Positive relationships were found in studies by Arnold and Straub (1973), Klein and Christiansen (1969), Martens and Peterson

(1971), Vander Velden (1971), Widmeyer and Martens (1978) and Cotter (1979), whereas negative relationships between team cohesion and basketball performance were found by Fielder (1954), Fielder, Hartman, and Rudin (1952) and Grace (1954). Melnick and Chemers (1974) found that neither a positive nor negative relationship existed between team cohesion and basketball performances. All the aforementioned studies are decades old. There are no recent studies that have examined team cohesion and team performance with girls' high school basketball.

In an attempt to resolve the inconsistencies, Gruber (1981) studied the cohesion-performance relationship with varsity male basketball players. Gruber (1981) studied male participants ranging from elementary age to college age. Participants rated items on a questionnaire twice within a week. The study did show a significant relationship between cohesion and performance in all of the age levels tested. The only significant difference between the different age groups was the interest between basketball and participating in other sports. The younger males scored high in basketball being the only activity they enjoyed participating in, while the college males scored high on wanting to be involved in other pursuits.

The above studies showed that performance was one of the biggest influences on team cohesion. Team cohesion was important for members of a team to function and play well. How a team performed, no matter how well they did, affected the cohesiveness of the team. Based on Williams and Widmeyer's (1991) assumption that cohesion contributes to success and other desirable outcomes, future researchers should direct their efforts toward determining what other factors enhance group cohesion and how cohesion develops over time.

Conclusion

The GEQ appears to be a valid instrument for measuring team cohesion. Team cohesion is a developmental process. Project Adventure™ activities seem to be appropriate in assisting the development of team cohesion. Based on the research that demonstrates that cohesion contributes to success and other desirable outcomes in sport, future researchers should direct their efforts toward determining what other factors enhance group cohesion (Williams & Widmeyer, 1991).

Chapter 3

METHODS

The purpose of this study was to use the GEQ and to determine if Project Adventure™ team initiatives affected team cohesion. This chapter discusses the selection and description of the participants, the research setting, the independent variable, the dependent variable, instrumentation, and procedures used to collect and analyze data.

Participants and Setting

There were 17 female athletes ranging in age from 14 to 18 years of age who participated in this study. The participants were selected after try outs had been completed based on skill level and performance. Approval from the Human Subjects-Institutional Review Board was given prior to the start of this study (Appendix A). Consent forms were returned from the High School Girl's Varsity basketball teams in Santa Clara, California. Permission from the school principal and athletic director was given prior to the study (Appendix B and Appendix C).

One of the high schools used in the study was located in the Silicon Valley of California. The school was a traditional grade 9-12 institution. Students' families

were considered to be low to middle income. The school population was approximately 1,600 students. Student's ethnic backgrounds were varied. The ethnic breakdown for this school was 5.2 percent were African American, 0.9 percent was American Indian, 16.9 percent were Asian, 9.9 percent were Filipino, 22.9 percent were Hispanic, 0.4 percent were Pacific Islander, and 43.8 percent were White. Based on enrollment the school was categorized as a Division II program for athletic purposes.

The other high school used in this study was also located in the Silicon Valley of California. The school was a traditional grade 9-12 institution. Students' families were considered to be low to middle income. The school population was approximately 1,900 students. Student's ethnic backgrounds were varied. The ethnic breakdown for this school was 3.4 percent were African American, 0.6 percent was American Indian, 23 percent were Asian, 9.4 percent were Filipino, 23.5 percent were Hispanic, 1 percent were Pacific Islander, and 39 percent were White. Based on enrollment the school was categorized as a Division I program for athletic purposes.

The study was completed by the coach/researcher and covered one complete basketball season from late October

through February including a minimum of 24 interscholastic games. All practice sessions took place at the High Schools. In addition, practices were held on non-game days from late October until February of the same season. All games consisted of four, 8-minute quarters with stopped time. In a stopped time game, the clock stopped when the referees blew a whistle to stop play and the clock resumed when play resumed. This way, the actual time it took to play a game varied depending upon the number of times the game stopped and started. Practices were 6 to 10 hours weekly with 30 minutes a day devoted to team initiatives (Appendix D). Practice time was not sacrificed for the team initiatives. In the past, practices had been two hours daily and for the purposes of the study practices were increased to 2.5 hours daily for School 0, the experimental group.

Independent Variable

The independent variable for the study was the use of Project Adventure™ team initiatives used during practice. Team initiatives took place for 30 minutes during practices and were designed to build team cohesion so that the players learned to trust and have confidence in one another. The players engaged in team initiatives daily

during practice times only. No team initiatives were implemented on game days.

Project Adventure™ offers training to those who are interested to give them the skills necessary to use the Project Adventure™ curriculum safely and effectively. The coach/researcher for the experimental group was not trained through Project Adventure, but has received informal training through Physical Education Subject Matter courses, as well as through a degree in physical education.

In order to develop team cohesion Project Adventure™ suggested that four elements be included in the team initiatives: trust, communication, cooperation, and fun. Activities such as the "human knot", where players held two other players' hands and tried to become untangled, can teach team members to become more open about their feelings with one another and to feel safe in the group. In "Pairs Walk," all team members have a partner. One partner is blindfolded and the other leads the blindfolded partner to complete a task such as making a lay-up or getting from 1 point to another point by only communicating directions verbally. Another initiative used was 3-D Mine Field, where participants operate in pairs. One partner is blindfolded and placed in the mine field, where there are

obstacles randomly placed and the other is on the outside giving directions verbally while trying to get their partner out safely. Stepping stones was another initiative used for this study, where small groups were formed. Each group had to travel across the width of the gym floor, stepping only on the materials given to the group. Materials were poly spots or rug pads given to each group prior to the start of the activity. No part of the person's body could contact the floor unless they were using the materials. For a complete list of all the team initiatives used, please refer to Appendix D.

Dependent Variable

The main dependent variable for this study was team cohesion as measured by the Group Environment Questionnaire. Team cohesion had been defined by Carron et al. (1998) as "a dynamic process that is reflected in the tendency of a group to stick together and remain united in the pursuit of its instrumental objectives and/or for the satisfaction of member affective needs" (p.213). Team cohesion had been measured in numerous investigations using the GEQ. With copyright permission (Appendix E), a copy of the GEQ and the GEQ scoring template can be found in Appendix F and Appendix G.

Instrumentation

The Group Environment Questionnaire (GEQ) was used for the purpose of this study. "The GEQ has been found to be valid and demonstrates content, factorial, concurrent, predictive, and construct validity, which reflect the ongoing process of its construct validation" (Brawley et al. 1987, p.277). Widmeyer, Brawley, and Carron (1985) stated:

The GEQ represents a concerted effort to (a) operationalize constructs by independent methods, and (b) separately assess the previously confounded perceptions of individual attraction to the group and group integration. The characteristics of the GEQ are that it (a) is generalizable to a large cross-section of sports, (b) is reliable across samples, and (c) possesses more than one form of validity. (p.50)

The reliability coefficients of the GEQ are $r = .75$, $.64$, $.70$, and $.76$. There were two studies that attempted to increase the reliability of the GEQ. In the first study, 53 items were examined and as a result of the analyses, the 53 items were reduced to 24. In the second study, the 24 items were examined with a different sample. From the second study, the GEQ was reduced to 18 items. The current version of the GEQ that will be used for this study is the 18-item GEQ.

Scoring the GEQ

Scores on the GEQ were the dependent variable. An aggregate score for each player was calculated by combining the two Social Attraction (SS) scales and the two Task Integration scales (TS). Team cohesion scores were the total players' aggregate score on both scales. Individual scores can be found in Appendix H.

Procedures

A week before team tryouts, there was a team meeting where parent consent forms (Appendix I) were provided to all potential varsity girls' basketball players who were the participants in this study. On the first day of tryouts, at the end of practice, the pretest GEQ (test time 1) was administered to all potential varsity players who had been given parental consent to participate in the study. All parent consent forms were collected. By the fifth day of practice the final selection of team members was made after seeing skill levels during tryouts and all GEQ forms and parent consent forms of girls not on the team were destroyed. Only the forms for those participants on the team were used for data analysis.

On each of the consecutive practice days following the pretest, School 0, which was the experimental school,

performed the team initiatives at the end of practice followed by a short debriefing. School 1, which was the control group, received no treatment. For example, activities from Project Adventure™ resources such as "Pair Walks" that develop trust and "Commonalities" that develop communication among participants were used for this study. During the coach/researcher led debriefing meetings, the participants discussed the importance of the team initiative activities, how the activity helped a team to be united, and other ways the team initiative activities could have been completed. On the last day of practice, the posttest GEQ (test time 2) was administered.

Design

Although this study used a pretest-posttest control group design, the research is considered quasi-experimental since the research was conducted in schools and salient variables could not be experimentally controlled. No attempt was made to randomize the treatments. In addition, the researcher was the coach for the experimental group.

Chapter 4

DATA ANALYSIS

Results of the data analysis and a visual presentation for both schools are presented in this chapter. The purpose of this study was to examine if Project Adventure Team™ Initiatives would affect team cohesion of girls' high school basketball players.

Results of the Data

Overall Team Cohesion

The descriptive statistics with respect to team cohesion are illustrated in Table 1. A 2x2 mixed-design analysis of variance (ANOVA) was performed. The between subjects independent variable, school, had 2 levels (School 0, School 1). The within-subjects independent variable, test time, possessed 2 levels (pretest, posttest). Mean cohesion scores represented the dependent variable. The results of this ANOVA are shown in Table 2.

The results of this study highlighted a significant main effect for School. The data show that the mean team cohesion score for School 0 ($M = 15.13$) was significantly larger than the mean team cohesion score for School 1 ($M = 13.56$), $F(1,15) = 6.97$, $p < .05$. In other words, when the two levels of test time were collapsed, students from

Table 1

Descriptive Statistics for Team Cohesion

School 0				School 1				Overall Average			
Test time	Sample		SD	Test time	Sample		SD	Test time	Sample		SD
	Mean	size			Mean	size			Mean	size	
Pre-test	13.17	10	2.30	Pre-test	13.05	7	2.41	Pre-test	13.11	17	0.58
Post-test	17.09	10	0.31	Post-test	14.08	7	0.51	Post-test	15.58	17	0.10
School Average	15.13	10	0.38	School Average	13.56	7	0.45				

Table 2

Analysis of Variance for Team Cohesion

Source	df	MS	F	p
Between subjects				
School	1	20.15	6.97*	.02
Error	15	2.89		
Within subjects				
Test time	1	50.53	18.27**	.00
School x test time	1	17.20	6.22*	.03
Error	15			

*P<.05

**p<.01

School 0 achieved higher mean team cohesion scores relative to School 1.

The results of this study highlighted a significant main effect for test time. The data show that the mean team cohesion score for the test time 1 condition ($M = 13.11$) was significantly smaller than the mean cohesion score for the test time 2 condition ($M = 15.58$), $F(1,15) = 18.27$, $p < .01$. In other words, when the two levels of School were collapsed, mean team cohesion scores were significantly larger in test time 2 in comparison to the test time 1 condition.

The results of this study highlighted a statistically significant interaction between the two independent variables, $F(1,15) = 6.22$, $p < .05$. More specifically this interaction indicates that the impact of test time on the dependent variable (team cohesion score) depends on the level of School (See Figure 1).

Social Cohesion Scale

The descriptive statistics with respect to social cohesion are illustrated in Table 3. Mean social cohesion scores represented the dependent variable. The results of this ANOVA are shown in Table 4. The results of this study

Figure 1. Mean cohesion scores of the GEQ for both schools.

Table 3

Descriptive Statistics for Social Cohesion

School 0				School 1				Overall Average			
Test time	Mean	Sample size	SD	Test time	Mean	Sample size	SD	Test time	Mean	Sample size	SD
Pre-test	6.40	10	1.13	Pre-test	6.20	7	1.31	Pre-test	6.30	17	0.30
Post-test	8.56	10	0.22	Post-test	7.33	7	0.57	Post-test	7.94	17	0.10
School Average	7.48	10	0.21	School Average	6.76	7	0.25				

Table 4

Analysis of Variance for Social Cohesion

Source	df	MS	F	p
Between subjects				
School	1	4.22	4.70*	.05
Error	15	0.90		
Within subjects				
Test time	1	22.40	31.18**	.00
School x test time	1	2.11	2.94	.11
Error	15	0.72		

*P<.05

**p<.01

highlighted a significant main effect for School. In Table 4, the data show that the mean social cohesion score for School 0 ($M = 7.48$) was significantly larger than the mean social cohesion score for School 1 ($M = 6.76$), $F(1,15) = 4.70$, $p < .05$. In other words, when the two levels of test time were collapsed, students from School 0 achieved higher mean social cohesion scores relative to School 1.

The results of this study highlighted a significant main effect for test time. The data show that the mean social cohesion score for the test time 1 condition ($M = 6.30$) was significantly smaller than the mean social cohesion score for the test time 2 condition ($M = 7.94$), $F(1,15) = 31.18$, $p < .01$. In other words, when the two levels of School were collapsed, mean social cohesion scores were significantly larger in test time 2 in comparison to the test time 1 condition.

The results of this study indicated no statistically significant interaction between the two independent variables, $F(1,15) = 2.94$, $p > .05$. This phenomenon is shown graphically in Figure 2.

Task Cohesion Scale

The descriptive statistics with respect to task cohesion are illustrated in Table 5. Mean task cohesion

Figure 2. Mean social scale scores of the GEQ for both schools.

Table 5

Descriptive Statistics for Task Cohesion

School 0				School 1				Overall Average			
Test time	Mean	Sample size	SD	Test time	Mean	Sample size	SD	Test time	Mean	Sample size	SD
Pre-test	6.77	10	1.27	Pre-test	6.86	7	1.16	Pre-test	6.81	17	0.30
Post-test	8.53	10	0.24	Post-test	6.75	7	0.35	Post-test	7.64	17	0.07
School Average	7.65	10	0.19	School Average	6.80	7	0.23				

scores represented the dependent variable. The results of this ANOVA are shown in Table 6. The results of this study highlighted a significant main effect for School. In Table 6, the data show that the mean task cohesion score for school 0 ($M = 7.65$) was significantly larger than the mean task cohesion score for School 1 ($M = 6.80$), $F(1,15) = 8.03$, $p < .01$. In other words, when the two levels of test time were collapsed, students from school 0 achieved higher mean task cohesion scores relative to School 1.

The results of this study highlighted a significant main effect for test time. The data show that the mean task cohesion score for the test time 1 condition ($M = 6.81$) was significantly smaller than the mean task cohesion score for the test time 2 condition ($M = 7.64$), $F(1,15) = 6.62$, $p < .05$. In other words, when the two levels of school were collapsed, mean task cohesion scores were significantly larger in test time 2 in comparison to the test time 1 condition.

The results of this study highlighted a statistically significant interaction between the two independent variables, $F(1,15) = 8.51$, $p < .01$. More specifically this interaction indicates that the impact of test time on the

Table 6

Analysis of Variance for Task Cohesion

Source	df	MS	F	p
Between subjects				
School	1	5.93	8.03**	.01
Error	15	0.74		
Within subjects				
Test time	1	5.64	6.62*	.02
School x test time	1	7.26	8.51**	.01
Error	15	0.85		

*P<.05

**p<.01

dependent variable (task cohesion score) depends on the level of school (See Figure 3).

In summary, it appears that the intervention was successful in increasing team cohesion for School 0. Interesting in the social cohesion scale, Schools 0 and 1 increased together. However, School 0 showed a larger increase. In the task scale, School 1 decreased at posttest time, while school 0 increased. The intervention showed larger increases in overall team cohesion for School 0. Throughout the season, the intervention used only at practice was successful. In each scale used for this study, the intervention increased cohesion.

Figure 3. Mean task scale scores of the GEQ for both schools.

Chapter 5

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

This chapter is devoted to the summary, conclusions, and recommendations for this study. The main purpose of this study was to examine if Project Adventure™ team initiatives would affect team cohesion of girls' high school basketball players. Provided is an interpretation of the results and recommendations for others who may want to conduct a similar study using a similar methodology.

In summary, the study demonstrated that Project Adventure™ team initiatives developed team cohesion in girls' high school basketball players. As Widmeyer (1991) stated, team cohesion was an important factor for members of a team to function and play well. The intervention was successful for the experimental group with overall team cohesion scores increasing. Although the overall team cohesion improved for the experimental group, both schools finished with winning seasons, with the control group's winning percentage higher. Although their winning percentage was higher, their cohesion scores were not, which is similar to what Iso-Ahola and Hatfield (1986) believed that team cohesion does not necessarily mean success. Brandon (2002), also pointed out, just because a

player enjoys the team atmosphere does not mean the team is going to win more games.

Throughout the season, the intervention, which was used only on practice days, was successful in increasing both task (TS) and social (SS) cohesion scores for the experimental group. The experimental group showed a higher increase in TS scores over time. As for SS, both groups showed the same levels of increase in SS scores overall. The experimental group showed an increase in the posttest SS scale. The increase both groups had in the social scale could be due to each team having great communication skills. As Rohnke and Butler (1995) and Williams and Widmeyer (1991) believed that communication was a very important factor in team cohesion. Communication possibly allowed the teams to share their viewpoints of each of the basketball games and to learn from others' experiences.

Interestingly in the TS, the control group scores decreased at posttest time, while the experimental group increased. The result for the increase the experimental group had could have been due to the fact that the team was able to share the same focus to work together as a unit, as Lembke and Wilson (1998) stated. The control group's decrease could have been due to the fact that the coach was

not alert of the team members who became alienated, which resulted in players not buying into the team, as Freischlag (1985) stated. The increase the experimental group showed could have been due to factors such as increased team performance (i.e., winning percentage, improved free throw percentages, and fewer turnovers) and athlete satisfaction as Freischlag (1985) described. Another factor could have been the players cooperating with one another as this was essential in getting the team to play together. As Rohnke and Butler (1995) stated cooperation was important for the group to develop an appreciation of what each individual could contribute.

Project Adventure™ team initiatives had a direct influence on team cohesion as this study demonstrated for the experimental group. Team initiatives could be implemented with high school girls' basketball teams during the season, to increase team cohesion. Coaches should take the time to develop team cohesion because the coach is the catalyst for developing team cohesion and the team's dynamics (Freischlag, 1985).

Conclusions

The following conclusions can be made based on the results of this study. Due to the interaction effect, the

null hypothesis was rejected. Project Adventure™ team initiatives can increase team cohesion. Overall team cohesion for the experimental group increased. This study highlighted a significant main effect for both school and test time. The study also highlighted a statistically significant interaction between the two independent variables.

At posttest time the Social and Task Scales both increased for the experimental group. Although for the control group, the posttest Social Scale increased, while the posttest Task Scale decreased. These outcomes could be related to the fact that the teams develop over time and cohesion fluctuates because of the developmental nature of groups (Bray and Whaley, 2001).

Recommendations for Future Research

For future research, the following recommendations should be made based on the results of the present study:

1. The need to replicate this study using different team sports.
2. The need to replicate this study using individual/dual sports where individual success leads to team success.
3. The need to replicate this study using different age groups.

4. The need to conduct future studies that includes males.
5. The need to replicate this study using more than two teams.
6. The need to replicate this study in non-sport environments (i.e., work and clubs).
7. The need to replicate this study with both groups having equal minutes at practice.

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APPENDIX A

Human Subjects Approval

San José State
UNIVERSITY

**Office of the Academic
Vice President**

**Academic Vice President
Graduate Studies and Research**

One Washington Square
San José, CA 95192-0025
Voice: 408-283-7500
Fax: 408-924-2477
E-mail: gradstudies@sjsu.edu
<http://www.sjsu.edu>

To: Melodee Kiyota
758½ 8th Street
San Francisco, CA 94118

From: Pam Stacks,
Interim AVP, Graduate Studies & Research

Date: September 10, 2004

The Human Subjects-Institutional Review Board has approved your request to use human subjects in the study entitled:

“Effects of Project Adventure™ on cohesion of girls’ high school basketball.”

This approval is contingent upon the subjects participating in your research project being appropriately protected from risk. This includes the protection of the anonymity of the subjects’ identity when they participate in your research project, and with regard to all data that may be collected from the subjects. The approval includes continued monitoring of your research by the Board to assure that the subjects are being adequately and properly protected from such risks. If at any time a subject becomes injured or complains of injury, you must notify Pam Stacks, Ph.D. immediately. Injury includes but is not limited to bodily harm, psychological trauma, and release of potentially damaging personal information. This approval for the human subjects portion of your project is in effect for one year, and data collection beyond September 10, 2005 requires an extension request.

Please also be advised that all subjects need to be fully informed and aware that their participation in your research project is voluntary, and that he or she may withdraw from the project at any time. Further, a subject’s participation, refusal to participate, or withdrawal will not affect any services that the subject is receiving or will receive at the institution in which the research is being conducted.

If you have any questions, please contact me at (408) 924-2480.

cc: Susan Wilkinson, Ph.D.

APPENDIX B

Principal Permission

Santa Clara High School

SANTA CLARA UNIFIED SCHOOL DISTRICT
3000 Benton Street
Santa Clara, CA 95051
(408) 423-2600

Brad Syth
Principal

"To prepare every student to succeed in an ever-changing world"

May 4, 2004

To Whom It May Concern:

I am writing this note in support of Melodee Kiyota's thesis statement.

"If team initiatives build team cohesion, will they then improve performance."

I believe this will make an interesting study with the potential of aiding all of our coaches at Santa Clara High school. I will be interested to see the approach she takes and the results that she gathers.

Sincerely,

Brad Syth
Principal

Vice Principals

- Lynne Ewald
- Gerri Forte
- Rob Griffin
- Dave Grissom

APPENDIX C

Athletic Director Permission

Santa Clara High School

SANTA CLARA UNIFIED SCHOOL DISTRICT

3000 Benton Street
Santa Clara, CA 95051
(408) 423-2600

Brad Syth
Principal

"To prepare every student to succeed in an ever-changing world"

May 6, 2003

To Whom It May Concern:

It is my pleasure to write this letter of support for Melodee Kiyota. As Athletic Director I believe that Melodee's study will be a great addition to her program. I support her study and believe it will help her team to achieve high levels of success.

As studies show, female participation in sport is mainly based on socializing. By completing this study with the basketball team, Melodee could develop ways to instill tighter bonds and deeper relationships amongst her team.

This study has my full support and I am very interested in the outcome.

Sincerely,

Tony McGilvery
Teacher/Athletic Director
Santa Clara High School

Vice Principals

• Lynne Ewald • Gerri Forte • Rob Griffin • Dave Grissom

APPENDIX D
Team Initiatives

DAILY TEAM INITIATIVES

PRACTICE DAY	ACTIVITY	BOOK	PAGE	NOTES
1	Commonalities	QS	76	
2	How We Differ	QS	77	
3	Who Are You?	QS	81	
4	Billboard	QS	84	
5	Categories	QS	85	
6	Pairs Squared	QS	90	
7	Alienation	QS	96	
8	Bean Bag Tag	QS	101	
9	Commons	QS	108	
10	Copy Cat	QS	109	
11	Hoop Loops	QS	117	
12	Klingon Tag	QS	120	
13	Name Five	QS	125	
14	Ricochet	QS	131	
15	Stepping Stones	QS	186	
16	Maze	QS	203	
17	Trust Circle	QS	233	
18	Pairs Walk	QS	229	
19	Hammerroids	QS	160	
20	Paperchute	QS	179	
21	Pit Fall	QS	232	
22	Off The Wall	SB	29	
23	Wink	SB	52	
24	Shark	SB	47	
25	All Aboard	SB	106	
26	Whooo	SB	75	
27	Traffic Jam	SB	122	
38	Knots	SB	117	
29	Booop	SB	49	
30	Cat & Mouse	SB	47	
31	Jelly Roll	SB	134	
32	Trolley	SB	118	

33	Shipwreck	SB	112
34	Full House	SB	40
35	Paper Golf	SB	32
36	Fast Draw	SB	28
37	Bump	SB	68
38	Sardines	SB	30
39	Fire in the Hole	SB	51
40	Impulse	SB	35
41	Name Tag	QS	207
42	The Shoe Sort	QS	185
43	Earthwinds	QS	155
44	Zombie	QS	142
45	Key Punch	QS	167
46	Striker	QS	133
47	Do-I-Go	QS	152
48	Hawser	QS	160
49	The Ego Walk	QS	159
50	Waiter Wars	QS	137

Key

Quicksilver = QS

Silver Bullets = SB

APPENDIX E
Copyright Permission

The widely acclaimed Group Environment Questionnaire, a test that assesses group cohesion in sport, measures the task and social aspects of an athlete's perceptions of and attraction to the group. The GEQ contains 18 items and has four scales: Individual Attraction to Group-Task; Individual Attraction to Group-Social; Group Integration-Task; and Group Integration-Social.

The Group Environment Questionnaire Test Manual provides the test user with extensive detail about the GEQ. The manual is organized into the following chapters:

- Chapter 1: An Introduction to Group Cohesion in Sport
- Chapter 2: Development and Description of the GEQ
- Chapter 3: Psychometric Properties of the GEQ
- Chapter 4: Normative Data for the GEQ

The Group Environment Questionnaire Test Manual also contains the GEQ and scoring key. Purchase of the manual entitles the user to reproduce multiple copies of the GEQ for test projects.

An electronic version of the GEQ and manual are also available at www.fitinfotech.com. By purchasing a license to the GEQ, the user can provide test participants with password access to complete the GEQ online. Scale scores for each participant are calculated automatically and can be easily accessed by the test user. We can also provide the test user with the raw data of their participants in a database format. The test user has the option of downloading hard copies of the GEQ when test participants do not have Internet access. The electronic version of the manual contains convenient hyperlinks for easy access to each chapter.

APPENDIX F

Group Environment Questionnaire

**The Group
Environment
Questionnaire**

**Now, a few questions about your team sport experience.
Please respond by checking a numerical response for each
question.**

1. I do not enjoy being a part of the social activities
of this team.

Strongly
Disagree

Strongly
Agree

1 2 3 4 5 6 7 8 9

2. I am not happy with the amount of playing time I get.

Strongly
Disagree

Strongly
Agree

1 2 3 4 5 6 7 8 9

3. I am not going to miss the members of this team when
the season ends.

Strongly
Disagree

Strongly
Agree

1 2 3 4 5 6 7 8 9

4. I am unhappy with my team's level of desire to win.

Strongly
Disagree

Strongly
Agree

1 2 3 4 5 6 7 8 9

5. Some of my best friends are on this team.

Strongly
Disagree

Strongly
Agree

1 2 3 4 5 6 7 8 9

6. This team does not give me enough opportunities to improve my personal performance.

Strongly
Disagree

Strongly
Agree

1 2 3 4 5 6 7 8 9

7. I enjoy other parties more than team parties.

Strongly
Disagree

Strongly
Agree

1 2 3 4 5 6 7 8 9

8. I do not like the style of play on this team.

Strongly
Disagree

Strongly
Agree

1 2 3 4 5 6 7 8 9

9. For me, this team is one of the most important social to which I belong.

Strongly
Disagree

Strongly
Agree

1 2 3 4 5 6 7 8 9

10. Our team is united in trying to reach its goals for performance.

Strongly
Disagree

Strongly
Agree

1 2 3 4 5 6 7 8 9

11. Members of our team would rather go out on their own than get together as a team.

Strongly
Disagree

Strongly
Agree

1 2 3 4 5 6 7 8 9

12. We all take responsibility for any loss or poor performance by our team.

Strongly
Disagree

Strongly
Agree

1 2 3 4 5 6 7 8 9

13. Our team members rarely party together.

Strongly
Disagree

Strongly
Agree

1 2 3 4 5 6 7 8 9

14. Our team members have conflicting aspirations for the team's performance.

Strongly
Disagree

Strongly
Agree

1 2 3 4 5 6 7 8 9

15. Our team would like to spend time together in the off season.

Strongly
Disagree

Strongly
Agree

1 2 3 4 5 6 7 8 9

16. If members of our team have problems in practice, everyone wants to help them so we can back together again.

Strongly
Disagree

Strongly
Agree

1 2 3 4 5 6 7 8 9

17. Members of our team do not stick together outside of practices and games.

Strongly
Disagree

Strongly
Agree

1 2 3 4 5 6 7 8 9

18. Members of our team do not communicate freely about each athlete's responsibilities during competition or practice.

Strongly
Disagree

Strongly
Agree

1 2 3 4 5 6 7 8 9

APPENDIX G
GEQ Scoring Template

GEQ Scoring Template

ID#: _____ Date: _____ Time: _____

Name (last) _____ (first): _____

Age (yrs/mos): ____/____ Gender: Male/Female (circle one)

Sport: _____ Years you have competed
on your sport team _____

Individual Attractions to the Group - Social		Individual Attractions to the Group - Task	
Item#	Score	Item#	Score
1*	_____	2*	_____
3*	_____	4*	_____
5	_____	6*	_____
7*	_____	8*	_____
9	_____	Sum:	_____
Sum:	_____	Mean:	_____
Mean:	_____		
Group Integration - Social		Group Integration - Social	
Item#	Score	Item#	Score
11*	_____	10	_____
13*	_____	12	_____
15	_____	14*	_____
17*	_____	16	_____
Sum:	_____	18*	_____
Mean:	_____	Sum:	_____
		Mean:	_____

*Reverse score items

APPENDIX H

Raw Data

		Pretest Social Scores											Pretest
School	Athlete #	S 1	S 3	S 5	S 7	S 9	S 11	S 13	S 15	S 17	Mean		
0	3	1	9	9	6	7	8	6	7	9	6.89		
0	4	9	5	1	7	2	7	3	3	5	4.67		
0	5	2	5	5	7	6	5	4	6	4	4.89		
0	11	9	9	9	5	9	4	8	5	5	7		
0	12	1	9	5	9	9	7	9	7	8	7.11		
0	20	9	7	9	6	9	7	5	4	6	6.89		
0	44	9	9	9	9	8	9	3	7	9	8		
0	32	9	9	6	6	8	5	4	7	5	6.56		
0	23	9	9	9	5	5	3	5	9	9	7		
0	54	5	5	5	4	3	6	7	4	6	5		
1	10	1	8	6	7	5	5	3	5	5	5		
1	11	8	5	1	2	2	4	6	4	6	4.22		
1	12	5	9	9	9	5	5	3	9	8	6.89		
1	13	9	9	2	6	8	9	8	7	9	7.44		
1	14	5	9	5	5	9	6	5	7	9	6.67		
1	15	9	9	7	9	9	5	7	9	5	7.67		
1	18	7	9	8	4	5	5	4	3	4	5.44		

		Pretest Task Scores										Pretest
School	Athlete #	T 2	T 4	T 6	T 8	T 10	T 12	T 14	T 16	T 18	Mean	
0	3	2	8	9	9	9	9	9	9	9	8.11	
0	4	5	8	9	5	1	8	5	3	5	5.44	
0	5	3	4	6	4	2	4	5	6	9	4.78	
0	11	9	9	9	7	9	4	9	7	6	7.67	
0	12	1	9	8	9	6	7	8	5	5	6.44	
0	20	7	5	6	6	8	8	6	7	4	6.33	
0	44	9	9	9	9	9	1	8	8	9	7.89	
0	32	6	7	8	9	9	8	3	8	6	7.11	
0	23	9	9	9	9	9	5	8	9	9	8.44	
0	54	6	7	8	4	5	4	3	6	6	5.44	
1	10	9	6	5	6	3	5	5	6	7	5.78	
1	11	3	5	4	7	5	5	6	7	5	5.22	
1	12	9	2	8	9	9	9	7	9	5	7.44	
1	13	9	9	8	9	9	9	9	9	3	8.22	
1	14	7	9	7	7	9	9	7	8	9	8	
1	15	9	2	9	9	8	9	5	9	5	7.22	
1	18	8	5	6	7	7	6	5	6	5	6.11	

		Posttest Social Scores											Posttest
School	Athlete #	S 1	S 3	S 5	S 7	S 9	S 11	S 13	S 15	S 17	Mean		
0	3	9	8	9	7	8	9	8	9	8	8.33		
0	4	9	9	9	9	9	9	9	9	9	9		
0	5	8	8	8	9	8	9	9	9	9	8.56		
0	11	9	9	7	8	8	9	9	8	9	8.44		
0	12	9	8	9	7	9	9	9	9	9	8.67		
0	20	8	7	9	8	9	9	9	7	9	8.33		
0	44	7	8	9	8	8	9	9	8	9	8.33		
0	32	9	9	9	8	7	9	9	8	9	8.56		
0	23	7	9	9	9	9	9	9	9	9	8.78		
0	54	8	8	9	8	9	9	9	9	8	8.56		
1	10	8	7	9	9	5	5	4	7	3	6.33		
1	11	8	6	9	9	7	8	6	6	8	7.44		
1	12	7	8	9	9	8	7	7	5	8	7.56		
1	13	9	7	9	9	9	8	8	7	8	8.22		
1	14	8	9	9	9	5	4	7	9	7	7.44		
1	15	7	8	9	9	4	6	7	8	8	7.33		
1	18	6	8	9	9	7	5	5	9	5	7		

		Posttest Task Scores										Posttest Mean
School	Athlete #	T 2	T 4	T 6	T 8	T 10	T 12	T 14	T 16	T 18		
0	3	9	9	9	8	9	9	8	9	9	8.75	
0	4	9	9	9	7	8	9	9	9	9	8.63	
0	5	9	9	8	8	9	9	9	9	9	8.75	
0	11	9	9	9	9	8	9	9	8	9	8.75	
0	12	8	8	9	9	6	8	9	7	8	8	
0	20	7	9	9	9	7	9	9	7	9	8.25	
0	44	9	9	9	9	8	8	9	8	8	8.63	
0	32	8	7	9	9	7	9	9	9	9	8.38	
0	23	6	8	9	9	8	9	9	9	9	8.38	
0	54	5	9	9	9	9	9	9	9	9	8.5	
1	10	8	6	8	4	5	8	9	8	8	7	
1	11	5	7	7	5	5	7	7	8	7	6.38	
1	12	6	8	9	6	7	5	8	7	5	7	
1	13	7	6	5	7	5	8	6	9	8	6.63	
1	14	7	5	8	7	5	5	8	6	5	6.38	
1	15	6	8	7	8	5	7	5	7	7	6.63	
1	18	9	9	6	6	7	7	6	8	7	7.25	

APPENDIX I
Parent Consent Form

Parent Consent Form

Dear (insert name of parent):

My name is Melodee Kiyota and I am a graduate student at San Jose State University and Girls' Basketball Coach at Santa Clara High School. As part of my thesis for my Master's Degree in Human Performance, I am conducting a study involving the players on my team. The focus of my study is to investigate if team initiatives have an effect on the girls' basketball team's cohesion. I also hope to obtain information regarding how high school girl basketball athletes might learn how to use teamwork and confidence through participation in basketball.

As the coach for the Santa Clara High School Girls' Varsity Basketball team, I will ensure the athletes receive coaching on positive team building during the basketball season.

If you agree to your child's participation, she will be given the Group Environment Questionnaire (GEQ), to measure group cohesiveness among the team. The GEQ will be given twice, once at the beginning of the season and once

Initials_____

at the end of the season. I have attached a copy of the GEQ for you to review.

There will be no risks or discomforts to the athletes participating during data collection. Furthermore, it is my hope that your daughter will benefit from this study. This study seeks to improve teamwork and self-confidence in sport. The results of the study may be published but no information that could identify your child will be included. All data collection sheets will be stored in a combination locker. The athletes will receive no compensation for their participation.

Consent is given voluntarily. Whether you and your daughter agree to participate in the study or not, it will in no way affect the treatment of the player or their basketball season experience. You and your daughter may refuse to participate in the study or in any part of the study and are free to withdraw at any time without prejudice to the subject's relations with San Jose State University or any other participating institutions.

I am available to answer any questions you may have about this study. Please call me any time at

Initials_____

(408) 666-6104, my graduate advisor at San Jose State University, Dr. Susan Wilkinson at (408) 924-3034, or the Human Performance Department Chair at San Jose State University, Dr. Greg Payne at (408) 924-3028. Questions about research, subjects' rights, or research-related injury may be presented to Dr. Pam Stacks, Associate Vice President for Graduate Studies and Research, at (408) 924-2427. You will be given a copy of this form to keep.

The signature of a parent or guardian on this document below indicates that this document has been read and you have given your approval for your child or ward to participate in this study.

Name of Child or Ward

Date

Parent Signature

Relationship to Child

Print Name

(_____)_____
Phone Number

Full Mailing Address

Investigator's Signature

Date

(408) 666-6104, my graduate advisor at San Jose State University, Dr. Susan Wilkinson at (408) 924-3034, or the Human Performance Department Chair at San Jose State University, Dr. Greg Payne at (408) 924-3028. Questions about research, subjects' rights, or research-related injury may be presented to Dr. Pam Stacks, Associate Vice President for Graduate Studies and Research, at (408) 924-2427. You will be given a copy of this form to keep.

The signature of a parent or guardian on this document below indicates that this document has been read and you have given your approval for your child or ward to participate in this study.

Name of Child or Ward

Date

Parent Signature

Relationship to Child

Print Name

(_____)_____
Phone Number

Full Mailing Address

Investigator's Signature

Date