

INTERSCHOLASTIC SPORTS AND THE MIDDLE SCHOOL STUDENT:

A CASE STUDY

by

Patricia Lyons- Daniels

Dissertation Submitted to the Faculty of the

Virginia Polytechnic Institute and State University in

Partial Fulfillment of the Requirements for the Degree of

DOCTOR OF EDUCATION

in

EDUCATIONAL LEADERSHIP & POLICY STUDIES

Approved:

Chairs

---

Christina M. Dawson

---

Robert R. Richards

---

Richard G. Salmon

---

Thomas E. Gatewood

---

George M. Graham

Blacksburg, Virginia

November 11, 1999

Key Words: Adolescents, Interscholastic Sports, Case Study

INTERSCHOLASTIC SPORTS AND THE MIDDLE SCHOOL STUDENT:  
A CASE STUDY

Patricia Lyons-Daniels

ABSTRACT

Participating in organized sports activities can result in developmental benefits to the adolescent. Increased fitness, self-esteem, competency, academic success and increased recognition by peers are few of the benefits cited by researchers. Participation can also provide opportunities for developmental liabilities to occur. Researchers have cited liabilities such as stress, anxiety and physiological injury. Developmental benefits and liabilities have been the foci of the controversy that has existed over adolescents participating in interscholastic sports programs in the middle and junior high school.

Although research has studied the impact of interscholastic sports on the high school and collegiate athlete, few studies have investigated the impact of interscholastic sports on the middle school athlete. This qualitative case study of four middle school athletes investigated the benefits and liabilities of participating on an interscholastic team to the adolescent athlete.

Based on the literature, four domains were identified as benefits and two domains were identified as liabilities. These six domains were achievement, competency, fitness, self-esteem, sports injuries, stress and anxiety. Interviews were held with students, coaches and parents. These interviews were based on domain specific questions. A journal was kept, and a document review of achievement, attendance and medical records was completed.

The study revealed a pattern of improved grades, increased skill levels in the sport, improved fitness, and increased self-esteem. The students experienced injuries and moments of stress and anxiety.

#### Dedication

This paper is dedicated to my sons, Ashley and Daniel, my daughter, Joanna, and my husband, Melvin. Ashley and Daniel persevered through my stressful craziness. Joanna's spiritual guidance kept me focused on the real meaning of my work, and Melvin whose sense of humor and endless love kept the family focused on the true meaning of family during this entire process.

### Acknowledgements

I want to acknowledge God's grace. He has blessed me by surrounding me with dedicated people who love, care and give big hugs as needed.

This paper would not have come to fruition without the direction and guidance of Dr. Christina Dawson. Dr. Dawson spent many hours giving expert knowledge which enabled me to complete this document at my own pace. Her patience with my Mad Hatter work schedule was dearly appreciated.

I want to also thank my committee members, Dr. Gatewood, Dr. Graham and Dr. Salmon for their individual assistance as this study evolved. I thank Dr. Richards and Dr. Parks for committing their invaluable time to listening to my thoughts on adolescents.

I want to acknowledge Susan Gordon ,Gary Welles and Dr. Thomas L. Brown. Susan for her ability to keep me on track when the going got very tough. Her friendship gives meaning to the word "sisterhood." Gary for his editorial comments when I needed them the most. Dr. Brown, my mentor and friend, who endured my whining at all hours of the night.

A special thanks to my principal and staff who endured my many days away from my responsibilities to meet with my chair and my committee members during this process.

TABLE OF CONTENTS

Abstract .....	ii
Dedication .....	iii
Acknowledgements .....	iv
Table of Contents .....	v
List of Tables .....	ix
List of Figures .....	x
Chapter 1 .....	1
INTRODUCTION AND REVIEW OF LITERATURE.....	1
History of Sports in the Junior High and Middle School.....	2
The Controversy.....	3
Statement of Purpose .....	5
Significance of Study .....	5
Definition of Terms .....	5
Theoretical Framework.....	6
Piaget.....	8
Erikson .....	9
Gesell .....	9
Adolescent Development .....	10
Interscholastic Sports and Developmental Benefits.....	12
Self-esteem and Interscholastic Sports Participation .....	12
Competency and Interscholastic Sports Participation.....	13
Motivation.....	15

Academic Achievement and Interscholastic Participation.....	16
Fitness and Interscholastic Sports Participation.....	18
Interscholastic Sports and Developmental Liabilities.....	19
Injuries and Interscholastic Sports Participation.....	20
Stress and Anxiety and Interscholastic Sports Participation.....	22
Summary .....	24
Chapter 2.....	26
METHODOLOGY.....	26
Research Design.....	26
Setting .....	26
Sample.....	27
The Cases .....	28
Limitations .....	29
Data Collection .....	30
Development of Interview Protocol.....	31
Pilot Study.....	37
Content Validity.....	37
Data Analysis .....	37
Reliability and Coding .....	38
Summary .....	39
Chapter 3.....	43
FINDINGS OF THE STUDY.....	43
Emergent Themes.....	43

Achievement .....	43
Competency.....	45
Fitness .....	46
Self-esteem.....	48
Sports Injuries .....	50
Stress and Anxiety.....	51
Observation Journal .....	52
Chapter 4.....	56
CONCLUSIONS AND IMPLICATIONS.....	56
Conclusions .....	56
Benefits .....	56
Liabilities .....	59
Implications for Administration and Policy.....	61
Recommendations for Further Research.....	63
Summary .....	63
References.....	66
Appendices.....	76
A. Permission Letter From School Division.....	76
B. Middle School League Rules and Regulations.....	77
C. Parent Consent Letter .....	81
D. Achievement Data.....	82
E. Content Validity Survey .....	84
F. Interview Protocol.....	90

G VITA ..... 92

List of Tables

- 1. Interview Questions by Domains ..... 33
- 2. Research Questions and Emerged Themes by Categories ..... 40
- 3. Results of Interrater Coding of Emergent Themes ..... 41

List of Figures

1. Eclectic Theoretical Framework of Adolescent Development and Developmental Benefits and Liabilities of Interscholastic Sports .....	7
2. Triangulation of Data .....	32

## CHAPTER 1

### Introduction and Review of Literature

More than twenty-five million students participate in organized sports programs in the United States (Browne & Francis, 1993). Participating in sports provides many opportunities necessary for growth and development of adolescents as they transition from childhood to adulthood. Researchers have found that participating in sports builds character and leadership skills (McEwin, 1994; Goldberg & Chandler, 1992). Research has also indicated that adolescents who engage in sports activities are more likely to be rated as competent by their peers (Harter, 1993).

The middle school years are considered a time of transition in the life of the adolescent. The influences of peers, family, and school experiences have strong impacts on adolescent behavior during this transitional period. This is a time of great physical, sexual, emotional and social development. It is also a time when patterns of motivation, self-concept, achievement, and social relations emerge (Anderman & Maehr, 1994).

Participating in organized sports activities can result in developmental benefits and developmental liabilities to the adolescent. Increased fitness (Fox, 1988) self-esteem and competency (Harter, 1993), academic success (Gerber, 1996), and increased recognition by peers (Hawkins, 1992) are a few of the benefits cited by researchers. However, participation can also provide opportunities for developmental liabilities to occur. Researchers (Malina, 1988; Martens, 1988; Weiss, 1993) have cited liabilities such as stress, anxiety, and physiological injury to the adolescent sport participant. Developmental benefits and liabilities, such as these, have been the foci of the

controversy that has existed over adolescents participating in sports programs in the middle and junior high school.

### History of Sports in the Junior High and Middle School

The idea of teaching students in the early adolescent age group (10-14 years of age), in a specific grade setting, began in the late 1890s and evolved into the junior high school movement of the 1920s (George, Stevenson, Thomason, & Beane, 1992). The controversy of junior high school students participating in interscholastic sports dates from the 1930s. Although interscholastic sports have been a part of the high school programs since the turn of the century, educators were concerned about the injuries occurring among the younger athletes in the junior high schools. In 1938 the American Association of Health, Physical Education and Recreation (AAHPER) passed a resolution that recommended interscholastic sports in junior high school be eliminated. The AAHPER resolution resulted in some divisions eliminating athletic programs in junior high schools, but many schools retained their interscholastic sports programs. In 1958 a survey of junior high school principals revealed that 85% of the respondents had interscholastic programs in their schools (McEwin, 1981).

Interscholastic sports programs for both boys and girls continue to increase. Between 1968 and 1988, interscholastic sports programs for boys increased by 55% and sports programs for girls increased by 27% (Alexander & McEwin, 1989). This growth concerned many who followed the development of the middle school concept. The middle school concept (Carnegie Council, 1989) encouraged less competition among middle school students by advocating intramural sports programs.

The accumulated research on competition (Kohn, 1986) discussed the destructive effects of competition on youth. Kohn's review of the data discussed the effects of stress and anxiety created by competition. Kohn recommended the elimination of athletic competition as well as academic competition due to the negative effects of stress and anxiety.

As the scope of the interscholastic sports program in the middle school grew, so grew the educators' concern for the middle school athlete (Alexander, & McEwin, 1989). In 1974, the delegates to the Twentieth World Congress of Sports Medicine discussed the potential of highly competitive sports on children and voiced a disagreement with interscholastic sports for elementary and junior high school children (McEwin, 1981). These educators expressed concern about the psychological stress and physiological 'overuse' injuries young athletes experienced in highly organized competitive sports (McEwin & Dickinson, 1997). However there were also educators in favor of interscholastic sports, and they discussed the benefits of skill development and competency, increased self-esteem, better grades, and increased physical fitness (Coyle, 1995; Snyder, & Spreitzer, 1992; Broughton, 1992; Camp, 1990).

### The Controversy

Thus, a controversy between opponents and supporters of sports programs in the middle school surfaced during the middle school movement of the 1980s. The middle school concept began as a movement to reorganize the junior high school model (McEwin, 1994). The middle school movement was intended to provide programs designed for the developing adolescent (Carnegie Council, 1989). The health and fitness programs in the junior high school became a controversial issue during the development

of the middle school model when the middle school concept recommended intramural sports programs instead of interscholastic sports programs (Carnegie Council, 1989). Should interscholastic sports be a part of the new middle school program for the developing adolescent? Should intramural athletic programs be an extension of the physical education program for the middle school student instead of an interscholastic sports program?

Intramural programs are athletic programs that offer a variety of sporting programs. Team sports (i.e. basketball, volleyball, and softball) and individual sports (tennis, in-line skating, aerobic activities) are offered in intramural programs. Intramural programs are open to all students, whereas interscholastic sports programs are selective and can accommodate only a limited number of students (McEwin & Dickinson, 1997). Intramural programs can give students a sense of belonging and school cohesiveness. Intramural programs promote fun and are not competitive. Interscholastic sports promote competition and winning. Both activities promote life long participation in physical activities for fitness (Redfern, 1979). Both activities promote a positive self-worth, peer socialization skills, and sportsmanship (McEwin & Dickinson, 1997).

It was a controversial issue in the 1960s and 1980s, and it is still a controversial issue today. Supporters of interscholastic sports programs believe that participation has developmental benefits to the adolescent, whereas others believe that participation in interscholastic sports has developmental liabilities to the adolescent.

### Statement of Purpose

This study will target the middle school student who participates in interscholastic sports. It will investigate the developmental benefits (self-esteem, competency, academic achievement and fitness) and developmental liabilities (stress and anxiety and bodily injury) to the participating adolescent student.

### Significance of Study

The issue of interscholastic sports is a debatable issue. This debate has generated an abundance of research on the high school and collegiate student, but research is limited on the middle school interscholastic sports student. It is hoped that this study will add to the body of knowledge about middle school students and interscholastic sports participation. The interscholastic sports policies of middle schools are governed by local school divisions and mirror the regulations of state high school leagues. This research will assist school administrators in making decisions that influence student participants of interscholastic sports programs in the middle school. This research will hopefully influence policy decisions on middle school athletics. This research will also add a dimension to the basic knowledge on developmental benefits and developmental liabilities of the student athlete that parents and coaches need to make informed decisions.

### Definition of Terms

Academic achievement – grade point average based on a 4.0 grading scale.

Attendance – the number of days present during the school year.

City Wide Track Meet – The school division's culminating track meet for qualified middle track athletes.

Competency - mastery of a skill (Harter, 1982).

Fitness – physical strength and condition and physical self-worth

Intramural – competitive athletic programs in which all students may participate regardless of skill level.

Interscholastic sports – any structured competitive sport activity played between middle schools within one school division.

Long Jump – A field event where a single leap is made after running down a long runaway (Marx, 1994).

Middle school – is defined as a school organized in a grade 6, 7, 8, configuration (Alexander & George, 1981).

Self-esteem – assessment of one’s self-worth (Harter, 1993).

Sports injury – harm to the body due to sports participation that results in reduction of play level or play time (Backx, 1996).

Starting blocks - devices that fasten to the track and give foot support to sprinters, so they can push off at the sound of the starter pistol (Marx, 1994).

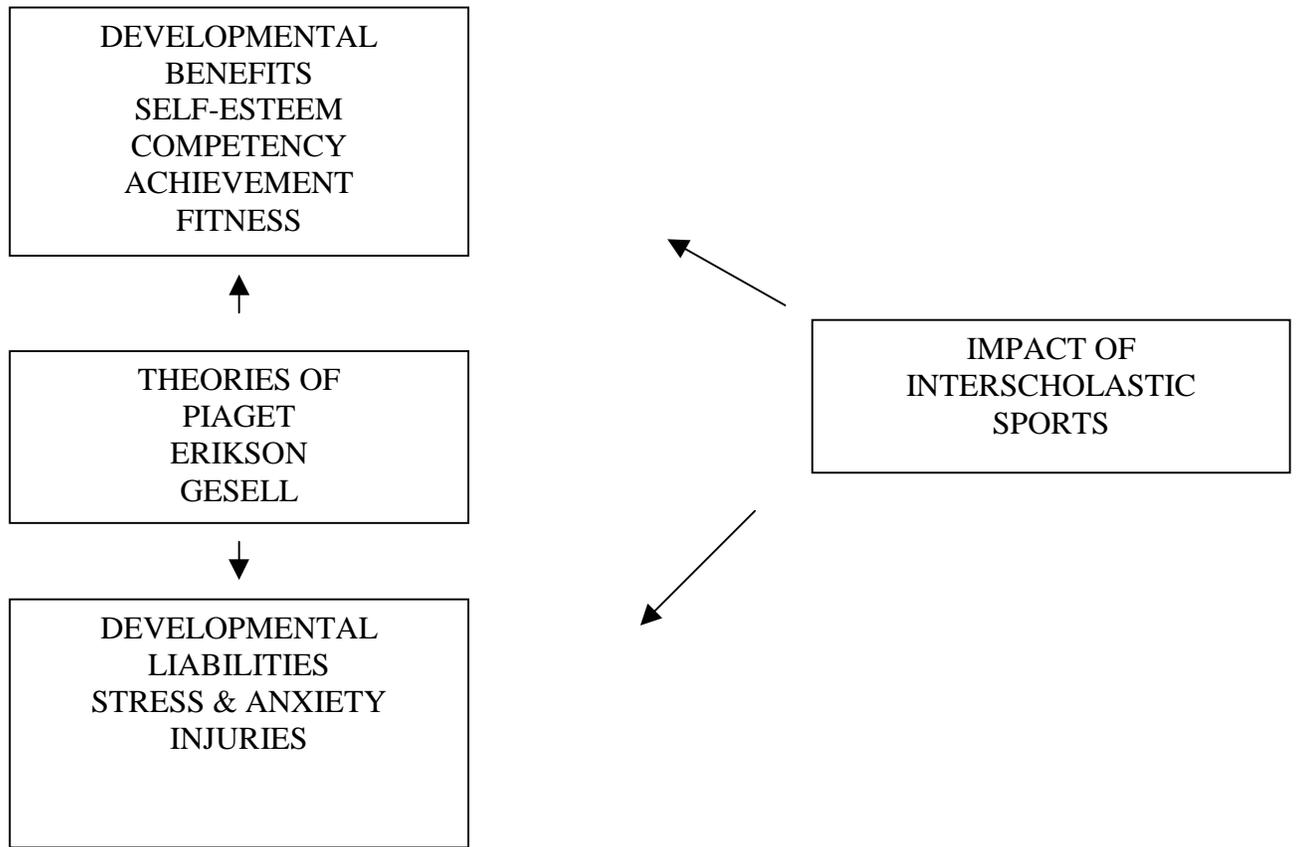
Stress and anxiety – negative feelings which can manifest into physical symptoms (Gould, & Eklund, 1991).

Student athlete – a participant on a middle school competitive interscholastic sports team.

Track Meet - An athletic event of field and running competitions

### Theoretical Framework

An eclectic theoretical framework will be utilized for this study. This eclectic model combines the theories of three theorists to explain the development of the



• Figure 1. Eclectic theoretical framework of adolescent development and developmental benefits and liabilities of interscholastic sports.

adolescent (Santrock, 1996). Each theorist has developed theories relative to specific developmental stages of the adolescent (Figure 1). This framework is based on the adolescent development theories of Jean Piaget, Erik Erikson and Arnold Gesell. Piaget, Erikson and Gesell viewed child development in a stage or phase related concept (Gallahue, 1989). The stage theorist believes that development occurs in stages by age and that each age has certain developmental and behavioral characteristics. Piaget documented the changes in the cognitive development of the child at the time of puberty and early adolescence. The concrete problem solving skills of the child evolve into the abstract, flexible, formal and logical thinking skills of the adolescent. Erikson developed theories relating to the psychosocial development of the adolescent. Gesell studied the development of the adolescent from a biological or psychomotor point of view (Gallahue, 1989).

### Piaget

Piaget identified four stages of cognitive development. Each stage is associated with an age range for the developing child. The concrete operational stage is age 7 years to age 11 years, and the formal operational stage is from age 11 years to adulthood (Thornburg, 1975). Adolescents move from the concrete operational stage to the formal operational stage during the middle school years. During early adolescence children still think in concrete terms. As they mature, their thinking become more flexible and abstract. Adolescents can use inductive reasoning and logic to solve problems and draw conclusions. They become introspective in their thinking. They are able to think about their own thoughts in a reflective way (Elkind, 1974).

Adolescents engage in egocentric thoughts. This form of egocentrism occurs at the transition from concrete to the formal stage of cognitive development. They participate in daydreaming, fantasizing and hero role identity (Adams, Gullotta, Markstrom-Adams, 1994).

### Erikson

The theories of Erikson are pertinent to the identity issues of the adolescent. Once the adolescent reaches the formal operative stage of cognitive development, egocentrism emerges. Erikson identified this stage in adolescent development as the identity versus identity diffusion stage of psychosocial development (Erikson, 1963). The central task of the adolescent is to establish a firm sense of identity. It is during this stage that the adolescent must resolve issues of self-identity. Self-identity is the adolescent's sense of individual uniqueness. Failure to resolve issues of identity can lead to what Erikson called role diffusion. Role diffusion leads to identity confusion, which can lead to risk taking behaviors (Thornburg, 1975). Successfully negotiating this phase of development allows the adolescent to be more introspective and realistic about one's strengths and limitations. The adolescent becomes more competitive. Activities become skill oriented. The adolescent begins to master skills and to become competent (Gallahue, 1989). It is also during this stage of social development that the adolescent develops a sense of self-concept, competence and achievement (Harter, 1993).

### Gesell

Gesell believed that biology controlled all development. Gesell's maturation theory emphasized the physical and motor aspects of development (Gallahue, 1989). Gesell placed development in age related stages. The behaviors the adolescents exhibited

were based on observations characteristic of one specific age. Gesell described adolescence as a period of rapid and intense physical growth in which the changes involve all aspects of the individual (Thornburg, 1975). He studied the psychomotor tasks of adolescents at different stages of the adolescent's development. Gesell characterized each stage by age. Each stage of adolescent development, beginning at age 11 years to age 16 years, described very specific behaviors. These behaviors presented a very "normal" (Thornburg, 1975, p 23) pattern of adolescent development. Gesell described his stages in maturity profiles. These stages are evolving processes as the adolescent matures.

#### Adolescent Development

Adolescence is defined as a period of growth between childhood and adulthood (Rice, 1992). Children pass through adolescence at their own pace and consequently have growth spurts over a range of chronological ages (Thornburg, 1975).

Physical development is relevant to puberty. Puberty begins between ages 10 and 11 years and continues until approximately age 18 years. Puberty is controlled by the reproductive endocrine system. The process is controlled by the complex interaction among the brain, pituitary gland and the gonads (ovaries and testes). It is a period of sexual maturation and immense physical growth. Puberty is characterized by rapid muscular and skeletal growth and by the continued development of the secondary sex characteristics. This includes the continued development of the sex glands (gonads). The secondary sex characteristics include breast development and menarche in girls, genital development in boys and growth of body hair for girls and boys. Physiological growth and sexual maturation are the results of hormonal changes initiated by the action of the

pituitary gland and the hypothalamus gland located at the base of the brain (Tanner, 1962).

The timing of the adolescent growth spurt varies considerably among children. The onset of the adolescent growth spurt in girls is about 10 years of age and in boys, about 12 years of age (Beunen & Malina, 1988). The growth spurt in height and weight begins in preadolescence and continues until the third year of adolescent development. During this time, there is also the development of adipose, muscle and skeletal tissue. The human growth hormone is extremely active at this time (Tanner, 1962).

One of the most obvious effects of the human growth hormone is the development in the skeletal tissue. During childhood, the rate of bone growth tends to be approximately constant each year. However during puberty in the growth spurt years, the skeletal growth spurt may increase the skeletal age by more than two physiological years in one chronological year (Pappas, 1983). Skeletal maturity is strongly related to percentage of adult stature (Beunen & Malina, 1988). Although most research in this area has been done on adolescent boys, growth patterns in girls have revealed that skeletal growth usually stops two years earlier than boys. The ages for this phenomena are approximately 15 years for boys and 13 years for girls (Thornburg, 1975). Skeletal and muscle growth have implications for the athlete because strength is related to body size and muscle mass (Beunen & Malina, 1988). It is because of these physiological and anatomical changes that athletic ability increases in boys at adolescence (Tanner, 1962).

Differences in stature, weight, and body composition between early and late maturing adolescents can be translated into physique differences and body type differences. The three body types are called ectomorphic, mesomorphic, and

endomorph. Ectomorphs are long, tall and thin. Endomorphs are usually shorter with heavy trunks and limbs. Mesomorphs are a blend of ectomorph and endomorph with medium length limbs, wide shoulders, and muscled bodies (Tanner, 1962). During the growth spurt years, body image becomes important to the developing adolescent (Rhea, 1998). Body image is part of the adolescent's self-identity.

Self-identity issues emerge as part of the psychosocial development of the adolescent. Peer relationships contribute to an adolescent's sense of identity. Peer friendships have increasing influences on adolescent behavior and attitudes as adolescents move away from parental influences and closer to their peers. It is during this time that loyalties and commitments to peers emerge (Savin-Williams & Berndt, 1990).

#### Interscholastic Sports and Developmental Benefits

Educators who support interscholastic sports programs in the middle school believe that participation on an interscholastic team has benefits to the developing adolescent. Research has shown that participation in sports provides an opportunity for enhancement for self-esteem, self-efficacy, competence, academic achievement and fitness (Camp, 1990; Braddock, 1991; Hawkins, 1992; Gerber, 1996).

#### Self-esteem and Interscholastic Sports Participation

In sports, students encounter demands that mirror other life experiences. Participants have the opportunity for self-evaluation, peer comparisons, and healthy competition which help to promote the development of positive self-esteem and self-concept (Fox, 1988). Self-concept is how an individual perceives his or her self, whereas self-esteem is how an individual assesses his or her self-worth (Harter, 1993).

Self-concept is aligned with self-description and self-esteem is identified with self-evaluation. Self-esteem is considered part of an individual's self-concept (Weiss & Ebbeck, 1997). Harter (1993) discusses a multidimensional view of self-concept utilizing domains. According to Harter, individuals perceive their competency across several domains: domains are academic, social, physical and personal development (Harter, 1990). Within the physical development domain, four self-conceptions have been identified as sport competence, physical strength, physical conditioning and body attractiveness (Fox, & Corbin, 1989). Harter believed individuals have high self-esteem within the domains that they perceive themselves competent.

Braddock (1979) noted that the relationship between athletic participation and self-esteem is a positive one for adolescent students. Holland and Andre (1994) noted a significant positive relationship between athletic participation and self-esteem for boys. The prestige resulting from athletic participation may produce a more positive self-concept as well as higher aspirations in academics (Snyder & Spreitzer, 1992).

Self-esteem is associated with goal accomplishments (Gordon, 1995). Gordon found that students who participated in extracurricular activities placed more emphasis on goals and goal setting. Her study revealed that students believed that they gained immediate and long-term benefits from their participation in extracurricular activities. Successful accomplishments according to Gordon (1995) form the basis for self-esteem. Participation in interscholastic sports also fosters responsibility and responsibility contributes to self-esteem (Snyder & Spreitzer, 1992; Gholson, 1985).

Competency and Interscholastic Sports Participation

Bandura (1977) has described one aspect of self-concept as self-efficacy. Bandura's theory on self-efficacy describes how one's competence determines the effort put forth in overcoming obstacles in one's environment. This self-efficacy theory asserts that actual performance can be predicted by the person's competence level (Mahoney, 1984). Harter (1982) defined competence as mastery of a skill. Research in youth sports by Weiss and Horne (1990) revealed that students with high percentages of physical competence possess higher perceptions of self-efficacy. Harter (1982) theorized that children who perceive themselves as being competent in a particular skill would continue with that skill until mastery is achieved. This theory surmises that preadolescents can make judgements about their competence levels in scholastic performance, physical performance, and peer relationships.

Research has linked competency to motivation (Klint & Weiss, 1987; Ewing & Seefeldt, 1990; Coyle, 1995). Consistent with Harter's theory that individuals are motivated to be competent, Klint and Weiss revealed that intrinsic reasons were the most frequent motives for participating in sports activities. Klint and Weiss (1987) demonstrated that individuals are motivated to be competent in the areas of sports and academics. They tested Harter's competence motivation theory by explaining the relationship between perception of competence and student's motives of participating in sports. Harter's Perceived Competence Scale for Children was administered to sixty-seven students in a gymnastic program. Motives were ranked and competence related motives were tabulated. The list consisted of 32 items. Learn new skills and improve skills were listed among the top ten in the ranked list. A discriminant function analysis

was conducted for each domain (physical, social, cognitive). The discriminant function analysis for perceived physical competence was significant, thus supporting the relationship between participant's motives and self-perceptions of competency. When individuals believe they have demonstrated competence, they perceive themselves as successful (Williams & Gill, 1995).

### Motivation

Research on motivation in sports has made certain determinations about intrinsic and extrinsic motivation. Intrinsic motivation "... is based on the need to be competent and self-determining in dealing with one's surrounding..." (Ryan, Vallerand, & Deci, 1984 p. 231) or is, as Bandura (1977) has defined it, performance for no apparent external reward. We participate in an activity because we like it. Extrinsic motivation is performance for an outside reason or reward. An outside reason could be peer acceptance. Research with adolescents reveal mostly intrinsic motivation constructs (Klint & Weiss, 1987; Csikszentmihalyi & Nakamura, 1989; Coyle, 1995).

Deci and Ryan (1992) indicated that there was a positive relationship between intrinsic motivation, perceived competence, and effort. They investigated self-regulation and intrinsic motivation. Their study revealed that intrinsic motivation remains high when an individual makes choices about participation in activities as opposed to being forced to perform. Csikszentmihalyi and Nakamura (1989) also discuss self-regulation as it relates to intrinsic motivation. They used self-regulation to investigate the flow theory of motivation. These researchers believed that adolescents are aware of their own behavior and can direct that behavior. Adolescents chose which activities to participate in based on competency levels and which activities they enjoyed. Csikszentmihalyi and

Nakamura's investigation revealed that when challenges and skill experiences are equal, then the intrinsically rewarding flow experience is present. If the challenge was greater than the skill level of the adolescent, then anxiety was the result. Thus, adolescents are intrinsically motivated to participate in activities that they demonstrate competency.

### Academic Achievement and Interscholastic Sports Participation

Supporters of interscholastic sports programs believe that athletic participation has a beneficial impact on academic achievement. Ballantine (1981) summarized 20 years of research on the relationship between sports and academic achievement. He noted that a positive relationship existed between sports and academic achievement. Other researchers (Camp, 1990; Braddock, Royster, Winfield, & Hawkins, 1991; Hawkins, 1992; Broughton, 1992; Coyle, 1995; Gerber, 1996) have also demonstrated a beneficial impact on academic achievement. Camp (1990) investigated eligibility requirements as part of a complete extracurricular program in the high schools. Camp suggested that academic achievement could be enhanced by student participation in extracurricular activities. His study examined the effects of participation on student success as measured by grades. Participation in student activities has a positive relationship to grades.

Braddock et al.'s (1991) studies on minority students also revealed a positive relationship between academic achievement and sports participation. They noted that the strategies coaches apply, (i.e. reviewing game strategies, reviewing problem areas, devising a plan of action) are designed to improve performance in individual and team skills. According to Braddock et al. (1991), these skills are also strategies that allow

students to analyze strengths and weaknesses, and develop a plan of action that prevents consecutive academic failure.

Braddock (1991), Hawkins (1992), and Lee, Winfield, and Wilson (1991) examined the relationship between interscholastic athletic participation and academic resilience for adolescent African American students. African American athletes experience less stress due to this resilience mechanism (Baldwin, Harris, & Chamblis, 1997). Resilience as defined by Braddock (1991) is a positive response to stress. According to Lee et al. resilience, and the ability to thrive and mature, increases one's competence in the face of adverse circumstances. Lee et al. (1991) found that a positive relationship existed between academic achievement and pro-academic behaviors for African American students. A few of the academic behaviors cited were homework habits, attitude toward school, cooperation with teachers, and study habits. Hawkins (1992) also did a study on African American students in the middle grades. His study suggests that sports participation is positively associated with the aspirations of African-American eighth-grade males to enroll in college preparatory programs.

Broughton, (1992) and Coyle (1995) studied the effects of participation in interscholastic sports on achievement. Broughton's results compared male and female athletes, minority and non-minority athletes as well as participants and non-participants in sports. Although his study did not reveal increased academic achievement in all areas, it did show significance in two areas. Broughton's study did indicate that minority athletes scored higher grade point averages (GPA) than did non minority athletes and that individual sport (i.e. gymnastics) participants scored higher grade point averages (GPA)

than did team sport (i.e. football) participants. Coyle's study demonstrated that athletes had significantly greater achievement motivation than did the nonsport participants.

Gerber (1996), like Camp, examined the relationship between participation in extracurricular activity and academic achievement. Gerber cited sports as the number one extracurricular activity chosen by the students. Scores represented academic achievement in mathematics, reading, and science cognitive tests administered as part of the base year data collection in this study. The test results indicated that the amount of sports participation was significantly related to academic achievement.

#### Fitness and Interscholastic Sports Participation

Adolescents cite increased physical fitness most often, for participating in sports (Klint & Weiss, 1987). Because of physical training, students may experience changes in aerobic capacity, cardiovascular functioning, muscular strength, flexibility, body composition and improvement in the immune system (Lee, 1995). Physical fitness is a set of attributes that are either health or skill related. Health related fitness includes cardio-respiratory endurance, muscular strength and endurance, flexibility and body compositions. Skill related fitness includes balance, agility, power, reaction time, speed and coordination (Caspersen, Powell, & Christenson, 1985).

Although aerobic power, body composition, joint flexibility, and strength and endurance of skeletal muscles are partly influenced by heredity, appropriate exercise and training can significantly influence those components of physical fitness. Physical activity is viewed as having a favorable influence on body composition. Regular activity is associated with a decrease in body fat and is considered an important factor in the regulation of body weight (Janz & Mahoney, 1997). Regular instruction in motor skills

results in improved levels of speed, power and agility. Responses of maximal aerobic power also improve with training (Berkowitz, Agras, Korner, Kraemer, & Zeanah, 1985).

Research concerned with physical performance and human physiques indicate that the mesomorphic body type is positively associated with skilled performance whereas endomorphic body physique has a negative association with skilled performance (Caspersen, et al., 1985). Regular training has been noted to result in an increase in lean body mass and a corresponding decrease in body fat (Caspersen, et al., 1985). Although a recent study on body composition and fitness (with twenty-two male cyclists aged 15 to 19 years) proved inconclusive on body fat composition (Rico, Revilla, Villa, Gomez-Castresana, & Alvarez Del Buergo, 1993), as well as fitness. The significance of this study was on bone density. This study did discuss the possible adverse effect that prolonged training may have on bone mass density in adolescent athletes. Longitudinal studies have attempted to separate exercise induced changes in adolescent functions and growth from normally occurring growth changes in adolescence. Many of these studies have suggested that students may be susceptible to training effects during the adolescent growth period (Ekblom, 1969; Bailey & Mirwald, 1988).

### Interscholastic Sports and Developmental Liabilities

Despite all the research on the benefits of interscholastic participation, there is still a concern for the physical and psychological well being of the young adolescent athlete. Although Smoll and Smith (1990) suggest that for most children sports are not very stressful, Ryan (1995) describes a pattern of physiological stress and psychological stress to young female athletes that results in physical injuries. Micheli (1983) investigated growth plate abnormalities due to over use injuries from participation in

sports. Size, maturity, physique, strength, and motor proficiency are all factors involved in injuries to adolescent athletes.

### Injuries and Interscholastic Sports Participation

Sports injuries are the unwanted side effect of sports participation. McEwin (1994) discussed the physical side of competition. McEwin indicated that interscholastic participation in the middle school has increased considerably and so have adolescent sports injuries. Injuries occur during intense activities generated by participation in competitive sports. The growth patterns of the skeletal and muscular systems during early adolescence may contribute to injury due to the lack of coordination during the rapid growth and development of the adolescent. "...The data from the Pop Warner football leagues, for boys under the age of 15, suggest that there is one injury per team, per year, and that on average, there is one fracture per league, per year..." (Taft, 1991 p. 430). In adolescents, the most frequently injured body parts are the head and fingers followed by the ankles and knees (Backx, 1991, 1996). Most of these injuries are overuse injuries, because of repetitive training, dislocations and fractures (Malina, 1988). Repetitive training usually results in overuse injuries to cartilage, bone, muscle, and tendon tissues of the body. Overuse injuries occur when an adolescent athlete does not give tissues damaged by extensive training time to heal. The tissue gradually breaks down and fails, which gives the adolescent pain (Taft, 1991; Micheli, 1990). Overuse injuries are associated with endurance training. Training errors are the most common cause of these types of injuries. Common training errors like changes in intensity, running too far or poor running techniques are attributed to overuse injuries (Micheli, 1983).

These types of injuries have researchers concerned about the effect of the injury on the maturation and growth of the skeletal and muscular systems during the developmental years. The normal growing skeleton has three main growth sites, the epiphyseal plate, the joint surface and the apophysis (Peck, 1995). Growth cartilage is also located at these same sites. Longitudinal bone growth occurs when these cartilage cells multiply and undergo the necessary metabolic changes to form bone. The growth plates are softer than fully formed bones and are therefore more likely to be injured from trauma to this area. Ligaments are attached to the long bones and when tension occurs on the ligaments, it is directly transmitted to the growth plate (Renstrom & Roux, 1988). Tenderness around the periphery of the growth plate is usually diagnosed as a growth plate injury (Speer & Braun, 1985). In adolescents, the strength of the tendons and ligaments is greater than the bones. As pressure is applied from overuse, the adolescent usually suffers skeletal injuries as a result of trauma to these areas. Relative skeletal maturation is extremely important for protecting the ultimate effect of any epiphyseal injury (Peck, 1995).

Malina (1988) inquired into the effect of sports on the physiological maturation process of the adolescent. He took his data from the Wroclaw Growth Study in Poland. This was a longitudinal study of students during their prepubertal and pubertal years from ages 8 to 18 years of age. The complete maturation records of his sample were kept. This information included secondary sex characteristics development, skeletal maturity, and somatic (body type) indicators. The data were collected and converted to z scores. For males, the data suggested a more advanced sexual, skeletal and somatic maturation whereas for females a delayed sexual, skeletal and somatic maturation was noted. Malina

concluded that training is a significant factor influencing body composition and performance but not body size (stature).

Body composition and training concerns have also surfaced for females in the area of sexual maturation and menarche (Loucks, 1992). Loucks (1992) has surmised that females who participate in organized endurance and performance sports (i.e. gymnastics) have demonstrated a delay in menarche. Malina and Bouchard (1991) have indicated no difference in the athlete and non-athlete, but these researchers have noted that the category of sports (e.g. gymnastics or swimming) may have an influence on menarche in early adolescent females.

#### Stress and Anxiety and Interscholastic Sports Participation

Specific categories of sports may have an influence on the stress and anxiety levels of the adolescent. Stress and anxiety in competitive sports have been a research concern for many years (Gould & Eklund, 1996). Stress is a physiological and psychological occurrence. Physiological stress is how the neurological and cardiovascular system responds to demands placed on the body. Psychological stress involves a dynamic interaction between environmental and personal factors (Smith & Smoll, 1982).

Hanson (1967) studied physiological stress in adolescent boys participating in a baseball game. He monitored the heart rates of the players before, during, and after the game. The results demonstrated an increased heart rate in the dugout, in the field, while batting, and while sitting on the bench. Therefore, Hanson concluded that participation in youth sports increases the physiological stress level of youth.

Psychological stress experiences have also been reported. According to research, parents reported increased sleep problems, nervousness, and emotional distress as a few

stress conditions experienced by their children during athletic competition (Feltz & Albrecht, 1986).

Eating disorders in young female athletes have been linked to excess stress in competitive sports (Rotella & Heil, 1985). In the general population, the prevalence of eating disorders is reported to be between 1% and 3% whereas in female athletes the prevalence of eating disorders has been reported between 15% and 62% (Nattiv, Agostini, Drinkwater, & Yeager, 1994). These eating disorders are seen more in gymnastics and figure skating where a slim ectomorph physique and low body weight are emphasized for peak performance (Ryan, 1995).

State and trait anxiety are self-reporting measures for stress levels. Simons and Marten (1979) studied state anxiety levels experienced in competitive sports and noncompetitive activities. State anxiety is defined as a negative feeling experienced at any particular moment in time (Marten, 1977). Simons and Marten compared state anxiety levels of 9 to 14 year old boys with respect to athletic competition. Sleep disturbance was evident before anticipated athletic competitive events and anxiety levels were recorded as higher during the interscholastic season than during the off season. Marten (1977) used the Competitive State Anxiety Inventory for Children (CSAIC) and demonstrated that individual sport participants have a greater stress level than team sport participants. The increased stress appears to come from the importance placed on the outcome (of the competition) by the participant. Researchers have also demonstrated fear of losing and fear of failure as predictors of anxiety in young athletes (Gould, Horn, & Spreeman, 1983; Passer, 1983). Stress also occurs when an adolescent athlete is forced to perform to a standard that exceeds the adolescent's capacity. This type of stress can

create an imbalance in the emotional well being of the adolescent athlete (Rotella & Heil, 1985).

### Summary

As the middle school interscholastic programs have grown, so have the concerns for the young middle school athlete grown. The controversy that began at the beginning of the twentieth century is still evident at the end of the twentieth century. Although many studies have linked sports with increased self-esteem, competency, increased fitness, and increased academic achievement, still many others have linked sports with injuries and psychological stress and anxiety.

Research has indicated that as the young athlete experiences competency within a skill area, the athlete also experiences an increase in self-esteem (Harter, 1993). Self-esteem and ego identity have been linked to the psychosocial and cognitive development of the adolescent (Gallahue, 1989). As the adolescent's cognitive functions evolve from the abstract to the formal, issues of academic achievement surface. Academic achievement has been positively associated with sports participation. Research has examined the cognitive development of the adolescent and the ability of the adolescent to transfer skills learned through sports into the academic and the social arena (Hawkins, 1992; Braddock, 1979).

The physiological development of the adolescent and sports injuries has been examined by researchers. Although training has contributed to the physical fitness of the young athlete (Caspersen, et al., 1985), it also has been associated with overuse injuries in adolescents (Malina, 1988). The pressure to compete has contributed to stress and anxiety symptoms for young athletes (i.e. eating disorders) (Ryan, 1995).

Studies on the young adolescent and interscholastic sports participation are limited. It was the intention of this researcher to concentrate on the middle school athlete and discover the impact of interscholastic sports on four young adolescents as they participate on an interscholastic team. The researcher examined the developmental benefits and developmental liabilities of sports participation to these four young athletes.

## CHAPTER 2

### Methodology

The purpose of this study is to investigate the impact of participating in interscholastic sports on the middle school adolescent student. The following research questions guided this investigation:

1. What are the benefits to the middle school student who participates in interscholastic sports?
2. What are the liabilities to the middle school student who participates in interscholastic sports?

This chapter contains the research design, the setting, the sample, data collection and data analysis.

#### Research Design

The research design is a qualitative research case study method. This method was chosen because qualitative research "...examines people's words and actions in narrative or descriptive ways more closely representing the situation as experienced by the participants..." (Maykut & Morehouse, 1994, p.2). The case study method has been described as the method of choice in answering questions for understanding (Merriam, 1998). This is a multiple case study with four cases.

#### Setting

The Virginia Beach City Public School division in the Commonwealth of Virginia was chosen for this study. Five boroughs comprise the city of Virginia Beach. They are the boroughs of Bayside, Black Water, Lynnhaven, Princess Anne and Pungo. Virginia Beach has a culturally diverse population. The city is approximately 68 percent

Caucasian, 24 percent African American, 5 percent Asian Pacific Islander and 3 percent other. Although it is a resort city on the Virginia shoreline, it is also the home of a large naval amphibious military base and a large air naval military base. There are approximately 78,000 students in this school division. There are fourteen middle schools in this division. Interscholastic sports are an integral part of the middle school extracurricular program. One middle school was chosen as the site for this study. This middle school is representative of the middle schools in this urban district. There are approximately 1,200 students in this school. The school is divided into grades six, seven and eight. Sixth grade students did not participate in the interscholastic program during this study.

The appropriate applications requesting permission to perform this study were filed in the office of Research and Accountability in advance of beginning the pilot study. Permission from the principal of the chosen middle school was also received at that time (See Appendix A).

### Sample

A purposeful sample (Merriam, 1998) of four students were selected to participate in this study. Although 20 percent of the student body are minority students, the track team is approximately 50 percent minority students and almost evenly divided by male and female participants. There are 45 male participants and 43 female participants. The students selected represented the ethnic and gender percentages of the track team. A purposeful sample is a deliberate sample chosen to ensure that the chosen students meet the criteria for this study. The criteria for this sample are:

1. The students must be members of an interscholastic team during the study.

2. The students must be eligible according to the division middle school league standards (See Appendix B).
3. The students must be in the seventh grade and first time participants in middle school interscholastic sports.
4. In addition, the students must attend the middle school chosen for this study.

The researcher was given a list of the students on the track team. The researcher met the entire team at the first practice session. The researcher attended five conditioning sessions to observe the team. After meeting with the track coaches, four students were selected based on the stated criteria. In addition to the stated criteria, the researcher chose students who displayed an enthusiasm for track. Two students were male, and two students were female. Two students were minority students and two students were non-minority students. Each student participated in a running event and the long jump event. The long jump is the only field event for middle school students. The researcher met with the four students and explained the purpose of the study. Letters of explanation about the study and letters requesting permission to participate in the study were distributed to the selected students and their families. The students and parents were informed about issues of confidentiality (See Appendix C).

### The Cases

Participant 1 is a Caucasian male student age twelve. He has a short yet muscular build (mesomorphic body type). He possesses a sharp and witty sense of humor and underneath he seems truly serious about school and sports. He is polite, compassionate, and loves to express his opinion. Running is one of the many activities that he enjoys. In

elementary school, he enjoyed baseball. Although he is now an honor roll student, as an elementary school student he received below average grades.

Participant 2 is an African American male aged thirteen. He is tall, lanky and muscular (ectomorphic body type). He is shy, speaks slowly and softly. He has an infectious smile and laugh. He speaks of others using kind words and phrases. He can be silly at times. He has always enjoyed running. In elementary school, he participated in the Hershey track meet as a fourth grade participant. Participant 2 became a honor roll student during the track season.

Participant 3 is a Caucasian female age 12. She has a small frame (ectomorphic body type). Participant 3 has a sparkling smile and makes friends easily. She is always willing to help her teammates during a track practice or during track meets. Participant 3 takes things in life calmly and is a patient with her peers. She is soft spoken and is sensitive to her track ability. She is serious about track and loyal to her teammates and the team. Participant 3 is an honor roll student.

Participant 4 is an African American female age 12. She has a medium body frame and is proud of her muscular fitness (mesomorphic body type). She is friendly and possesses an effervescent smile. She literally bounces when she is excited or happy. She expresses herself well. She speaks clearly and precisely. Participant 4 is aware of her track skills and talents. She is also an honor roll student.

### Limitations

This qualitative case study is limited by the sample size. Generalizability to the population cannot be considered because of the purposive sampling technique utilized. This study is also limited by the criteria utilized to select the sample cases. A third

limitation is on the collected data for Case 4. Towards the end of the track season, Case 4 was removed from the track team by her parents. Although attempts were made to include the parents of Case 4 in the interview phase of the study, the parents chose not to participate in the interview sessions.

### Data Collection

The data were collected primarily through interview questions and document analysis. Two to three in-depth interviews were conducted with each of the four students during the track season. The first interview took place after the second week of the season. The researcher asked all interview questions at the first interview session. Subsequent interview sessions consisted of three to four interview questions per session. All interview sessions took place at the school site during the track interscholastic season. The track season is approximately a six to seven week season. The interview questions were domain specific (See Table 1).

The researcher held interview sessions with the coaches and with the parents of the student cases. The coaches' interviews were held at the school site in the coach's office. Two of the parent interviews were phone interviews, and one interview was in the parent's home. Interviews were held to validate information obtained from the students. The researcher kept a journal of practice sessions and scheduled track meets attended. The data from the journal also were corroborating evidence to the student interview data.

The data obtained from report card grades are in Appendix C. The medical records indicated no injuries or abnormalities. During the track season, each participant had no absences from school. According to attendance records, the participants in this study had very good to excellent school attendance. Participant 1 had one absence for the

year; Participant 2 had six absences for the year; Participant 3 had zero absences for the year; Participant 4 had four absences for the year. The interviews, the journal entries, and the document analyses of report card grades, medical and attendance records formed the bases for the triangulation of data (Figure 2).

#### Development of Interview Protocol

Open ended interview questions were developed based on domains in the conceptual framework and the research questions. To further assist with the development of the interview protocol, a pilot study was conducted with two student athletes. The six domains of (1) self-esteem, (2) competency, (3) achievement, (4) stress and anxiety (5) sports injury and (6) fitness were variables indicated from the literature review and specific research on adolescent development. Open-ended questions are used to facilitate a conversation between the researcher and the interviewees (Maykut & Morehouse, 1994).

Table 1

Research Questions and Interview Questions by Domains

Research Questions	Interview Questions
1. What are the benefits to the middle school students who participates in interscholastic sports?	<u>Achievement</u>
	8. How has participating on this team influenced your study habits?
	9. How has participating on this team influenced how you think about grades?
	10. As a result of participating on this team how are your grades monitored?
	11. How has the eligibility requirement of 2.0 GPA influenced your participation on this team?
	<u>Competency</u>
	5. What kinds of skills have you learned as a result of participating in this sport?
	6. What kinds of skills have you learned as a result of participating on this team?
	7. How has participating on this team influenced how often you practice your skills?

(Table continued)

Table 1

Research Questions and Interview Questions by Domains

Research Questions	Interview Questions
	<u>Fitness</u>
	12. How has participating in this sport contributed to your overall physical fitness?
	13. How has participating on this team influenced how you feel about fitness and health
	<u>Self-esteem</u>
	1. How does participating on this team contribute to your self-confidence?
	2. How has participating on this team influenced how you feel about yourself?
	3. As a result of participating on this team how do your friends see you?
	4. How has participating on this team contributed to your self-image?

(Table continued)

Table 1

Research Questions and Interview Questions by Domain

Research Questions	Interview Questions
2. What are the liabilities to the middle school student who participates in interscholastic sports?	<u>Sports Injuries</u>
	20. As a result of participating on this team how often do you experience muscle soreness?
	21. As a result of participating on this team how often do you experience pain?
	22. How often have you participated in your sport while injured?
	23. As a result of participating on this team, what kinds of injuries do you get?
	24. As a result of participating on this team, how often do you see a doctor for a sports related injury?
	<u>Stress and Anxiety</u>
	14. As a result of participating on this team, how do you handle the night before an important meet?
	15. As a result of participating on this team, how often do you feel anxious?

(Table continued)

Table 1

Research Questions and Interview Questions by domains

Research Questions	Interview Questions
	16. As a result of participating on this team how often do you feel restless?
	17. How often have you experienced feelings of panic since participating on this team?
	18. Since participating on this team, explain how you handle stress.
	19. How has participating on this team influenced your sleeping habits?

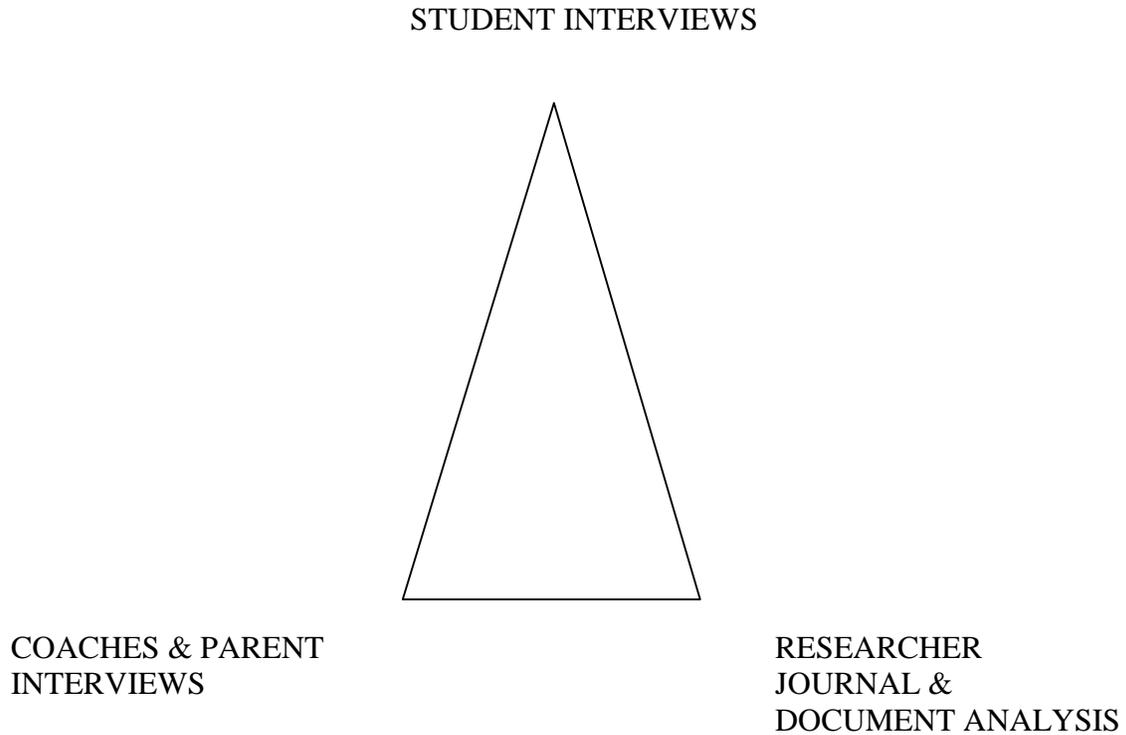


Figure 2  
Triangulation of Data

### Pilot study

The pilot study facilitated the development of the interview protocol (Yin, 1997). One male and one female seventh grade student athlete were chosen to participate in the interview process. Three different ten to twenty minute interview sessions were held with each student. The pilot study generated thirty-four interview questions.

### Content Validity

Twelve educational administrators attending the Tidewater graduate seminar for doctoral students assisted with the content validity of the interview protocol. The recommendations and responses were used to improve the instrument. The administrators made recommendations on question clarity and domain specificity. Interview questions were accepted based on an 83 to 100 percentage rating on domain specificity, association, and clarity of each interview question. Ten interview questions were eliminated based on this criterion.

### Interview Protocol

The purpose of the study is explore and describe the influence of interscholastic sports participation on the adolescent athlete by investigating the benefits and liabilities to the athlete. The interview protocol can be found in Appendix F.

### Data Analysis

All interviews with the students except one were taped using a portable tape recorder and a flat microphone. One student interview was not taped but hand scribed. A secretary was recruited to transcribe each taped interview. Once transcribed, the tapes were returned in a timely manner. The researcher proceeded with a constant comparative method of data analysis as described by Maykut and Morehouse. "... This is a non-

mathematical procedure that is designed to identify themes and patterns in qualitative data....” (Maykut & Morehouse, 1994, p. 176).

The transcription of the taped responses was placed in raw data tables by domain specific interview questions. The responses from the coaches and parents are intended as corroborating evidence. These transcribed tapes were also placed in raw data tables for readability.

All raw data transcripts of the student participants were copied. The researcher used scissors to cut the raw data transcribed responses into sentences, phrases, and words that conveyed similar meanings, and patterns. The researcher coded the responses by domains and case number. The researcher next placed each piece of evidence on three by five-inch cards, and posted each card, by domain specific categories, on large pieces of newsprint. As the themes emerged, the researcher recorded the theme directly on the card and placed each card on large sheets of newsprint paper under specific domain categories. The cards were next arranged by themes within that category.

### Reliability and Coding

The accuracy of the researcher’s coding of the emerged themes was checked by two educators, one postgraduate student, and a high school administrator. The two educators worked together, and the postgraduate student and administrator worked alone. The volunteers were instructed to read the responses under each domain and write any theme, or pattern within that domain for each group of cards. The researcher instructed the volunteers to write as many themes as they thought were applicable. The researcher compared the themes described by the volunteers with the themes written on the backs of the cards for each grouped theme. Three of the four volunteers consistently agreed with

the researchers original theme as written on the cards. There was 100% agreement in all but three themes. Two themes without 100% agreement are within the self-esteem domain and one theme is in the sports injuries domain. The themes are listed in Table 2. Results of the interrater coded themes are in Table 3.

The researcher's journal was not coded. However, it was used to corroborate data presented by the student participants.

### Summary

The case study approach enabled the researcher to provide information on the impact of sports participation on the adolescent middle athlete. The descriptive nature of the research enabled the researcher to corroborate the evidence among the student's perspective, the coach's perspective and the parent's perspective to determine the influence of participation on the adolescent.

Table 2

Research Questions and Emerged Themes by Categories

Research Question	<u>Themes</u>
What are the benefits to the middle school student who participates in interscholastic sports?	<p style="text-align: center;"><u>Achievement</u></p> <ul style="list-style-type: none"> <li>• Better grades</li> <li>• Goals</li> <li>• Importance of grades</li> <li>• Parent involvement</li> <li>• Positive attitude</li> <li>• Sense of accomplishment</li> <li>• Time management</li> </ul>
	<p style="text-align: center;"><u>Competency</u></p> <ul style="list-style-type: none"> <li>• Determination</li> <li>• Improved track skills</li> <li>• Improved ability to handle stress</li> <li>• Increased nutritional knowledge</li> <li>• Social skills</li> </ul>
	<p style="text-align: center;"><u>Fitness</u></p> <ul style="list-style-type: none"> <li>• Better physical condition</li> <li>• Body image</li> <li>• Endurance</li> <li>• Healthy habits</li> </ul>
	<p style="text-align: center;"><u>Self-esteem</u></p> <ul style="list-style-type: none"> <li>• Confidence</li> <li>• Positive attitude</li> <li>• Pride</li> <li>• Role model/Visibility</li> <li>• Team spirit</li> <li>• Social skills</li> <li>• Valuable</li> </ul>
What are the liabilities to the middle school student who participates in interscholastic sports?	<p style="text-align: center;"><u>Sport Injuries</u></p> <ul style="list-style-type: none"> <li>• Ankle injuries</li> <li>• Minor injuries</li> <li>• No treatment</li> <li>• Pain</li> </ul>
	<p style="text-align: center;"><u>Stress and Anxiety</u></p> <ul style="list-style-type: none"> <li>• Anxious/Anticipation</li> <li>• Coping</li> <li>• Losing</li> <li>• Panic</li> </ul>

Table 3  
Results of Interrater Coding of Emergent Themes

Themes Identified	Coders				
	Researcher	1	2	3	4
<u>Achievement</u>					
Better grades	y	y	y	y	y
Goals	y	y	y	y	y
Importance of grades	y	y	y	y	y
Parent involvement	y	y	y	y	y
Positive attitude	y	y	y	y	y
Sense of accomplishment	y	y	y	y	y
Time management	y	y	y	y	y
<u>Competency</u>					
Determination	y	y	y	y	y
Improved track skills	y	y	y	y	y
Improved ability to handle stress	y	y	y	y	y
Increased nutritional knowledge	y	y	y	y	y
Social Skills	y	y	y	y	y
<u>Fitness</u>					
Better physical condition	y	y	y	y	y
Body image	y	y	y	y	y
Endurance	y	y	y	y	y
Healthy habits	y	y	y	y	y

(Table continues)

y = yes

n = no

(Table continued)

Table 3

Results of Interrater Coding of Emerged Themes

Themes Identified	Coders				
	Researcher	1	2	3	4
<u>Self-esteem</u>					
Confidence	y	y	y	y	y
Positive attitude	y	y	y	y	y
Pride	y	y	y	y	y
Role model	y	n	y	y	y
Team spirit	y	n	y	y	y
Social skills	y	y	y	y	y
Valuable	y	y	y	y	y
<u>Sports Injuries</u>					
Ankle injuries	y	y	y	y	y
Minor injuries	y	n	n	y	y
No treatment	y	y	y	y	y
Pain	y	y	y	y	y
<u>Stress/Anxiety</u>					
Anxious	y	y	y	y	y
Coping	y	y	y	y	y
Losing	y	y	y	y	y
Panic	y	y	y	y	y

y = yes

n = no

## CHAPTER III

### Findings of the Study

The results of interviews, journal entries, and document analysis are presented in this chapter. This chapter will summarize the themes that emerged from those data sources. Emerging themes are grouped in alphabetical order by categories and presented in Table 2. Student cases in this chapter are referred to as Participant 1, 2, 3 and 4.

#### Emergent Themes

The issues identified as benefits and liabilities to the developing adolescent are achievement, competency, fitness, self-esteem, sport injuries, stress and anxiety. These categories are arranged in alphabetical order by the researcher and do not in any way denote significance by placement order. The themes are also discussed in alphabetical order and not by preference within the context of the category (See Table 2).

#### Achievement

Better grades and the importance of grades were a recurring theme with the students interviewed. During the track season, all four cases maintained a B or better average (See Appendix D). Two students were honor roll students and one student was on the 'A' Honor Roll. One student was tutored prior to track tryouts in order to make the C eligibility requirement of the division. Students stated, "I've gotten straight As" (Participant 1) and "It helped me to get better grades"(Participant 3). Grades were important to the students.

A sense of accomplishment emerged as the students discussed their grades. One student (Participant 2) had three failing grades at mid semester, but by track season had improved to honor roll status (see Appendix D). Parents of Participant 1 stated, "He's so

self motivated ... he got all As for the first time in his life.” Another student discussed how making good grades meant making the team. Participant 1 related how he knew students who did not try out for the team because they did not have the grades by the time track tryouts began.

Although participating on the team infringed on study time, students related that they studied harder and adjusted their schedules to maintain passing grades. Thus, a positive attitude and time management emerged as themes in the achievement category. Each student discussed how practices and meets cut into study time but not the quality of that study time. Participant 2 stated, “I studied more,” whereas Participant 1 and 4 reported respectively, “It has cut back my study time, but I spent the majority of my evening on my studies and homework.” Participant 4 added, “It doesn’t give me much time to study but I manage and still pull the grades that I expect myself to make being on the team.” The parents of Participant 2 and 3 agreed that their children studied more effectively or harder. “He studies and tries a little harder...” and “...she would come home right after school and do her homework,” were typical comments made by parents.

Goals, both short and long term emerged as a theme. Students discussed the short-term goal of remaining eligible by maintaining good grades and their long-term goals of good scholarship and college admittance. One student discussed being a possible contender in the Olympics. For Participant 1 and Participant 2, grades became part of the plan to accomplish these long-term goals and a way of maintaining the short-range goal of remaining eligible to participate on the track team. “I felt they were important because I want to go to college now” (Participant 2). The parent of Participant

2 discussed how important grades were to his son to maintain eligibility. He stated, “He wants to run on the track team, so in order to do that, he has to get good grades.”

Parental involvement emerged as a theme in this category. Each participant stated that a parent oversees grades. Statements such as, “My mom”; “My parents monitor my grades,” and “My parents have pretty much been on my back” are examples of this involvement.

### Competency

The students practiced hard and often. Each was determined to improve. Thus, determination emerged as a theme under competency. The desire to do a good job for themselves and the team became evident. The students remained cognizant of their track scores earned in running events and long jump events. The students reported that they practiced on weekends, mornings and evenings as well as regular track practice in the afternoons. Improved track skills, and improved ability to handle stress were by-products of this determination. All four students stated their determination. “ I practiced harder so I could get better” (Participant 1). “I run more...three miles a day. Now I can run the mile in less than five minutes” (Participant 2). “I run on Friday night and Saturday afternoons...I have to stay with it” (Participant 3). “To never give up...keep pushing myself” (Participant 4). They discussed specific track skills such as foot placement in the long jump (Participant 1), breath control (Participant 1, Participant 2, Participant 3), proper use of the starting blocks (Participant 1) and hand and arm movements for speed (Participant 2, Participant 3).

Increased nutritional knowledge emerged under this category and under the fitness category. The students discussed what they learned from their coaches.

Participant 1 developed an interest in how the digestive system and the muscular system worked together to improve one's skill level. Participant 3 ate pasta because the coach said it would give everyone more energy.

Social skills emerged in two categories also. Social skills as a theme in self-esteem will be discussed under the self-esteem category. Development of certain social skills stemmed from relationships that developed during the track season. Students developed friendships within the team unit (journal entry June 7, 1999). The students learned to take constructive criticism from each other as well as the coaches. They supported and encouraged each other's efforts through successes and defeats (journal entry May 6, 1999)). Although Participant 3 did not qualify to participate in the City Wide Meet, Participant 3 assisted teammates by holding the starting blocks for the members of the team competing in running events (journal entry June 3, 1999). Typical responses in this category were, "I'm not afraid to talk to people anymore" (Participant 2); "Concentrate on your teammates and not just yourself" (Participant 4); "I'm not that shy anymore" (Participant 3); "It's helped me to learn social skills for when I'm with my friends... I'm more open to their opinion" (Participant 1).

### Fitness

One attribute of continued exercise is fitness. Several themes emerged under this category. The themes of better physical condition, body image, and endurance emerged as the students talked. Healthy habits emerged as the students discussed nutrition and sleep habits.

Bigger, tighter, and more flexible muscles appeared to be expressed by most of the cases. Better physical condition emerged as the students talked about: "My calves

have enlarged” (Participant 1), “I have bigger muscles” (Participant 4), “My stomach’s gotten tighter” (Participant 1), and “I have a trimmer stomach” (Participant 4). The students saw themselves “in shape” (Participant 1, Participant 3, Participant 4) and “looking good”(Participant 3, Participant 4). Body image and physical condition also emerged from the data. One student considered herself “a star.” “I like working with my body to make it look good and feel good” (Participant 4).

“My endurance is better.” That one statement from Participant 2 sums up this theme. Endurance emerged as the students discussed how they felt better about their running performance. As the season progressed, they could run longer and more efficiently. They did not tire as easily and they increased their running times. Participant 1 stated, “You have to prepare your respiratory and cardiovascular system.” Participant 1 suffers from asthma.

The students discussed the development of healthy habits because of participating on an interscholastic team. Nutrition awareness emerged therefore as a result of becoming more fit and as a result of information given by the coaches throughout the track season. Participant 1 stated, “It (participating) makes me look more cautiously at what I eat ...grease...fat...nutrients.” Moreover, Participant 2 stated “I eat better, less fatty and greasy foods... I eat more salads.” The coaches periodically gave small talks on good sound eating habits for a healthier body. The nutritional information disseminated by the coaches was evident in those statements and the following statements: “For dinner I eat pasta and I drink lots of water” (Participant 4), “I had a good spaghetti dinner or pasta for carbohydrates” (Participant 1).

Another theme that emerged as a healthy habit was sleep habits. Most of the participants discussed how improved their sleep became. They claim they slept better during track season than before the season began. Statements such as “I tend to go to bed earlier and wake up earlier” (Participant 1), “I get a lot of sleep. I fall straight asleep ...I sleep better” (Participant 4), “I fall right to sleep. I go to bed around 9:30p.m. and wake up at 7:00a.m.” (Participant 2), “...a better night’s sleep...” (Participant 3) contributed to sleep emerging as a healthy habit under the fitness category. The parents of the participants did not see any change in their children’s sleeping patterns. The parent of Participant 3 believed her daughter slept better during track season.

### Self-esteem

Having a positive attitude and confidence emerged as definitive themes throughout this category. The student’s statements, “...feel better about myself” (Participant 1, Participant 3), “I feel better about my running ability” (Participant 2), “...it gives me a lot of confidence” (Participant 4), and “If I try hard enough it’s possible” (Participant 1) are evidence of the positive attitude and confidence the students developed as they participated on the track team. The coach discussed how Participant 1 and Participant 2 ‘s confidence level increased, as they became more proficient in specific track skills. The coach stated, “ ...as the season progressed, I could see a great improvement of their skills.” Participant 2 believed that participating led him to the belief that he could do more things. The ‘more things’ for Participant 2 were the confidence in his ability to get better grades as well as improve his track skills.

Pride, role model, team spirit and valuable emerged as themes as the students discussed how they felt about participating on the track team “...valuable to the team

...a star” (Participant 4), “...hearing my name on the announcements in the morning for doing well running...I could do good for our team” (Participant 1), and “I can be more positive and do other things” (Participant 3). Participant 1 gave encouragement to team members to not give up but work hard for the team. Team spirit for Participant 1 also meant running while injured because “... the team needed the points.” Participant 4 discussed supporting the team and doing “team things.” Participant 1 discussed “feeling honored” when he found out that he had qualified to participate in the City Wide Track Meet. Participant 1 spoke in terms of what the team accomplished instead of “I” when discussing his record of accomplishments. “I feel we did very well...our best personal record...we dropped our time by three seconds” (Participant 1).

Social skills that develop in relationships emerged as a theme in this category as the discussion focused on rapport with team members, coaches and teachers. Participant 1 was the cheerleader. He could be seen during practices and at meets walking over to runners and saying a few words. The researcher would see him put his arms around Participant 3 and make her laugh when she was visibly unhappy with her performance (journal entry May 6, 1999). He remarked, “...give others encouragement.” Participant 4 enjoyed the relationship she had with her teachers and coaches. “Teachers support me,” Participant 4 stated. As Participant 1 discussed his friendships he stated, “I listen more.” The researcher noted that during practices and meets Participant 1 and Participant 3 gave each other strategy points. Participant 3 and Participant 4 monitored each other’s long jump scores during practices. The researcher noted that high fives were given between Participant 1 and Participant 2 when either ran successfully during a meet (journal entry June 3, 1999).

### Sports Injuries

The emergent theme in this category was ankle injuries. Three of the four participants reported hurting an ankle at some time during the season. Minor injuries and pain also emerged as themes in this category. Muscle soreness and muscle pain, from over using a muscle or “muscle pulls,” as stated by Participant 4, were reported by the students. The students reported participating in practices and meets while injured or in pain. Participant 3 reported a feeling sensation of “muscles and bones grinding.” Participant 4 reported, “Every time I’m injured I pass it off and think of the team.” Participant 1 stated “...that really hurt...and since we didn’t have enough guys to run the 200 meters, I ran it anyhow.” Although the students claim they told the coaches about their pain, the coaches believed the students were not injured. The male coach said, “I did not have any injuries this year.” However an assistant coach volunteer was heard to say, “Walk it off,” when a student reported a pain in the calf or ankle area (journal entry April 19, 1999). One coach stated to the researcher, “...at the beginning of the season, there were a few complaints, but these kids were pretty tough kids... end of the season I didn’t have any more complaints.” Another coach discussed how he gave the students advice on how to “rub down (muscles) each night.” No treatment for injuries was another theme. The students either bore the pain or followed the coaches advice of ice and rest. As Participant 4 stated, “I bear the pain.” Participant 4 believed that following the coaches advice on how to treat different aches, pains, and muscle pulls helped. She did not see a doctor for any injuries that occurred during the track season. Participant 3 stated, “I have an ace bandage I just wrap it around there (the ankle).”

The researcher noted an injury that was not reported to the coach. During a long jump event, Participant 1 fell instead of landing properly. Although visibly hurt, he attempted a second jump that injured him again. He did not try the third jump (journal entry May 20, 1999).

### Stress and Anxiety

Stress emerged with positive and negative themes. The themes in this category were anxiety/participation, coping, losing, and panic. Students discussed how track enabled them to handle stress better. Running and participating in track conditioning exercises became a way to cope with stress. Participant 1, Participant 2, and Participant 3 used their running skills to reduce stress. “I just run it off,” stated Participant 1. “Sometimes I run,” said Participant 2 and “...running just relieved it,” said participant 3. Participant 3 discussed stretching before a meet to relieve stress Eating for energy and relaxing were two coping mechanisms mentioned as a way to handle stress the night before a meet. “I think about how I can relax myself so I don’t get stressed,” stated Participant 3. “I eat pasta and drink lots of water,” said Participant 4. However, coping mechanisms did not relieve the sense of panic experienced by the students. Students experienced panic before a meet and during a tough competitive event. Participant 4 reported, “ getting butterflies in my stomach.” Participant 2 reported feeling panic when “...everybody got a head start on me and I had to catch up with them.” Panic emerged as one of the themes in this category.

Losing emerged as a theme also. Losing and feeling panicked emerged together. Feelings of panic surfaced when a student believed he/she was about to lose or were actually losing the race. Participant 1 claimed, “I panicked because I was losing.”

Participant 2 said, “Like if somebody beats me,” when discussing stress and panic.

During the discussion on stress, Participant 1 also mentioned losing with this statement,

“Once during a meet this guy was beating me....”

Participating created positive and negative feeling of anxiety. Participant 4 stated, “Every time I step on the track, I feel anxious.” Participant 4 believed she had to always win. She stated, “...you have to be first...so you can win.” However, anxiety for three of the cases meant anxious as in anticipation or excited. They were excited to be apart of the team, looked forward to practices and anxious to get started. Participant 3 stated, “I feel excited about practice and hyped up...ready to go.” Participant 2 said, “...when we leave practice, I can’t wait to get back to the next practice” and Participant 1 said, “I’m anxious just to get to practice everyday.” The father of Participant 1 stated about his son, “He was just very excited.” The mother of Participant 2 said her son gets excited when he wants something, and he wanted very much to participate on the track team.

#### Observation Journal

Although research journals and diaries are methods of documenting the research process, this journal relates events observed during the track season. These observations are intended to corroborate the themes that emerged from the student, coaches and parent data sources.

#### Achievement

The students did not discuss their GPAs during track practice or track meets, but the coach discussed the importance of maintaining good grades for Track eligibility

requirements (April 12, 1999, April 13, 1999). Parent involvement was noted when Participant 4 was removed from the track team for receiving a C in one class ( May 20, 1999, May 21, 1999, May 25, 1999).

### Competency

The theme of improved track skills was evident throughout the observation journal. The coaches taught specific track techniques that reinforced track skills (April 13, 1999, April 16, 1999, April 19, 1999, April 22, 1999). Many of the practice sessions were explicit and detailed (April 26, 1999). The track sessions were organized like a physical education class. Warm up activities were first with specific instructions next and a cool down session at the end of the practice session. Once the competitive meets began, evidence of improved skills was noted as the students participated in individual and team track events (May 6, 1999). **R** improved her long distance running time ( May 17, 1999). Although the two volunteer assistants worked well with the students there was no evidence of training or specific directions from either coach (April 19, 1999).

Specific nutritional information was disseminated during two sessions (April 13, 1999, April 16, 1999).

Interacting with team members is noted as part of social skill development. Students were observed as shy and not interacting early in the season (April 26, 1999). As the season progressed, the students became more social and interacted well with each other (May 20, 1999, May 26, 1999, June 3, 1999).

### Fitness

Becoming physically fit takes continued work. The practice sessions included conditioning exercises at each session (April 12, 1999, April 26 1999, April 28, 1999).

Occasionally practice sessions were exercise condition sessions only ( April 21, 1999, April 28, 1999).

### Self-esteem

Evolving confidence in social skills and track ability was noted as the students developed friendships and began to mesh as a team (April 26, 1999, May 6, 1999, May 10, 1999). Team spirit was observed during track meets as students encouraged each other, practiced skills together, congratulated each other after a win and supported each other after a loss (May 6, 1999, May 10, 1999, May 20, 1999, June 3, 1999). Positive attitudes were noted as students laughed about mistakes made and self-corrected their errors (May 10, 1999).

### Sports injuries

Students experiencing pain from sore muscles, ankle injuries, nausea and taking falls incorrectly were documented in the journal (April 13, 1999, April 16, 1999, May 20, 1999). Inappropriate comments made by adult volunteers (April 19, 1999) indicated lack of treatment for student injuries and lack of training on the part of the volunteers. No trainer was evident at any track meet for an injured student to report to, thus minor injuries (i.e. falling in the long jump pit) were not reported to anyone (May 20, 1999).

### Stress and anxiety

Stress and anxiety reactions were not observed during track practices or meets. Frustration, disappointment, displeasure with oneself was observed (May 6, 1999, May 10, 1999, May 27, 1999), but nothing that would corroborate students' responses to this category.

### Summary

Triangulation of the data (interviews, document review, and observations) reveals complementing evidence of the benefits and liabilities of sports participation to the four participants of this study. The students identified more often with the benefits of participation. The benefits derived from participating appeared to have more of an influence on the students than the liabilities.

## CHAPTER 4

### Conclusions and Implications

A qualitative study on the benefits and liabilities to adolescents who participate in interscholastic sports in the middle school was conducted. A multiple case study was done. Four middle school students on the interscholastic track team participated in this study. The students were interviewed and were observed during track practices and track meets. The interview questions focused on specific domains as identified in the review of literature. Conclusions on the benefits and liabilities within these domains are discussed, as well as implications for administration and policy related to the interscholastic program, in this chapter.

#### Conclusions

Research has shown that academic achievement, competency, fitness and self esteem are benefits to participating in interscholastic sports activities for adolescents (Fox, 1988; Gerber, 1996; Harter, 1993). Research also demonstrated that sports injuries and stress are liabilities of interscholastic sports (Malina, 1988; Ryan, 1995). The emerged themes found in this research are the benefits and liabilities to the adolescent student. As themes emerged in the domains of achievement, competency, fitness, sports injuries and stress and anxiety, these themes indicated that participation in interscholastic sports have more benefits than liabilities for the participants in this study.

#### Benefits

The emerged themes of better grades and importance of grades demonstrated a positive relationship between academic achievement and interscholastic sports participation. Although all students in the study maintained eligibility throughout the

season, one student did start the track season on probation. The middle schools in this division have adopted the Virginia High School League's grade point average rule of 2.0 as an eligibility requirement for participation on interscholastic teams. All the students in the study were committed to good grades and to maintaining eligibility. The young man on probation was motivated to succeed because he wanted to run track. As the season progressed, he thought of grades and track in terms of receiving college scholarships.

In addition to maintaining good grades, the benefits to the adolescent continued in the areas of organization and responsibility. The students became more organized as they took on the responsibility of track practice sessions in addition to homework and study sessions. The desire to participate generated a time commitment to homework and studying which helped sustain and improve academic grades. Students became more cognizant of time as they became more time organized. Time management was essential in order to combine track practice time commitment with study time commitment. In the case of Participant 2, he took on additional time for tutoring sessions to reach his goal of passing math and language arts.

Each student took track participation quite seriously. The themes in competency and fitness speak to the issues of determination and perseverance. The four participants increased their track knowledge, skill level and overall fitness levels, which includes physical stamina and endurance. These first year athletes practiced daily including weekends. They were not prompted to do so by their coaches, teachers or parents, but by the sheer determination to do well.

The students enjoyed assisting each other. Social interpersonal skills were discussed and demonstrated. The ability to take constructive criticism from peers emerged as a developed interpersonal skill in the competency domain. They developed good listening and communication skills. These social skills were reinforced as the students progressed through the track season.

Social skills also emerged as one of the themes in the self-esteem domain. Self-esteem is perception of one's self-worth. Self-esteem issues emerged in several other domains. The development of interpersonal skills was noted. The students developed the ability to communicate with their peers and adults, as they became a cohesive group. A mutual respect developed between coach and athlete as well as athlete to athlete. The positive attitudes and increased confidence of the participants were indicative of how the students felt about themselves. One indication of the student's increase in self-esteem was the manner in which students discussed their successes. Students were proud of their accomplishments whether track accomplishments or grade improvement accomplishments. Participating in track gave the students a sense of feeling good about themselves.

One aspect of feeling good about oneself was the feelings generated from belonging to a team. Forming cliques is part of the adolescent culture (Erikson, 1986). The four students identified with the role of the athlete. The students identified with the team. They were a part of that group called the team. The students believed they were needed and valuable to the team. These feelings of value and commitment to the group did generate increased feeling of self-worth for the individual student. Positive peer influences were noted. The four participants encouraged each other. They congratulated

each other for jobs well done, whether the teammate won or lost the race or event. The researcher believes these behaviors helped to create the team cohesiveness and team spirit that emerged as a theme. During this phase of adolescent development, group and peer influences are very powerful (Epstein, 1983). This was noted in the strong commitment to the team and the way the students responded to each other physically and verbally. Commitment to a group can have positive or negative consequences in adolescence. Negative influences can generate risk-taking behaviors (Savin-Williams & Berndt, 1990). Interscholastic sports participation for these students provided a positive way to demonstrate commitment to a group.

### Liabilities

The two categories investigated were stress and anxiety and sports injury. Although the four students claimed they did not have stress, the researcher believes their statements indicated that competing did generate a type of stress and anxiety. They experienced feelings of panic and butterflies in the stomach during the track season. This type of stress and anxiety was the type the students claimed they would run off. Running became a way for the students to manage this type of competitive stress. Therefore, knowing how to cope with stress became a benefit to the adolescent. This benefit carried over into their life outside of school. The responses from the parents indicated that their children took things calmly; they go with the flow. The parents did not see their children as stressed.

Anxiety emerged as a positive and negative element. Students felt anxious as in 'worried' and anxious as in 'anticipation'. They were excited about participating in track. The students were anxious to get to practice sessions each day and to participate in

the track meets. The students were anxious as in worried when they experienced losing as a team. However, this sense of loss did not linger beyond the immediacy of the meet. Although research has indicated that irregular sleep patterns (Skubic, 1955) can indicate a form of anxiety for students who participate in competitive sports, the four student participants did not experience any change in sleep patterns except they noted that they slept better and more soundly during the track season. The ability to use a track skill (running) as a way of coping with stress turned this category into a benefit for the four participants in this study. Stress and anxiety did not interfere with the students' sleeping behaviors.

Injuries were perceived as not existing. The coaches claimed they did not have any injuries the entire season. The coaches did not see injuries occur and they were not apprised of any injuries. Hiding injuries is an issue. The students spoke of injuring ankles, but the coaches and parents were not aware of these injuries. The students did not tell the coaches they were injured or in pain during a track meet. The issues of team cohesiveness and value to the team are revisited here. The students wanted to continue to participate because they believed the team needed them. The students believed the team needed the points each student would get from participating during a meet. Although the coaches never pushed winning at any cost, the students still felt winning was important to the team.

Pain seemed to be more of an issue than the actual occurrence of injuries. The students spoke of pain. Pain was considered part of participating on an interscholastic team. You work hard and pain results. The coaches spoke to the students of ways to treat pain for muscle soreness resulting from pre-season conditioning exercises. However,

they only gave this advice when asked. The parents did not see or hear of pain. The students reported they did not go to the doctor for pain or injuries because the injuries were not severe enough to go to the doctor. In other words, nothing was broken so nothing was done. Minor or small injuries were not considered relevant injuries to the coaches or to the students.

The student participants received more benefits from participating in interscholastic sports than they experienced liabilities. As first time participants on a middle school team, the students experienced positive reinforcement of self-esteem issues, competency and fitness levels and academic achievement. Known liabilities from previous research became benefits for the participating students as in the stress and anxiety liability.

#### Implications for Administration and Policy

The middle school in this division comprises grades six, seven, and eight. The sixth grade will join the seventh and eighth grades in participating in interscholastic sports as of August 1999. The implications for administrators as policy makers address the issues from the benefits and liabilities experienced by the students in this study. The following implications are based on the findings and conclusions of this study:

1. The strong self-esteem factors and peer group dynamics should encourage administration to open the interscholastic program to less popular sports. Tennis and golf are individual sports that can be included in the interscholastic program.

2. A longer interscholastic season would permit first aid training for the students and a longer exercise-conditioning season. This would help to decrease the risk of injury.
3. Because academic eligibility is part of the middle school interscholastic policy, school divisions must consider providing tutors for those students who are motivated to participate but are borderline academic students.
4. A specific school employee should be designated to monitor student academic achievement. This employee would be responsible for securing tutors for students having academic difficulty during the interscholastic season.

The majority of these implications have budgetary concerns, but the safety of the students should be the administration's first concern.

#### Implications for Practice

Training of coaches and the availability of athletic trainers are concerns for administration and practitioners. All coaches should have minimum First Aid and Safety certification. Adults who work with students need current information in the sport skills and current information on safety issues related to the sport discipline. School divisions should insist that coaches are certified coaches. The availability of athletic trainers at every practice and every athletic event is ideal but having one at every athletic meet is a necessity for the safety of the student athletes. The following recommendations are to address these two concerns:

1. Coaches and volunteers need training, and this training should be ongoing.  
Although the coaches in this study were certified physical education

instructors, specific training on sports injuries and adolescent development would have been helpful for them. Adults who volunteer to work with the student athletes should also be required to have training. Ongoing training is needed for all adults who work with student athletes on common sports injuries and in the skill area of the sport for student athletic safety.

2. The middle school interscholastic sporting events need athletic trainers to accompany the teams. None was evident at any track meet. The researcher observed trainers and emergency medical equipment was provided for high school sporting events. Schools should consider this safety need for the middle school athletic events.
3. The physical examination to participate in interscholastic athletics should be a complete physical examination by a pediatric physician who specializes in skeletal muscular wellness for early adolescents in the growth spurt years.

#### Recommendations for Further Research

Research on middle school athletes and athletic programs is limited. The conclusions of this study are based on the data received from a small sample of adolescent athletes, the researcher's journal, and report card and medical documentation.

The implications for further research are as follows:

1. A descriptive policy study on the status of the middle school interscholastic program for the Commonwealth of Virginia is recommended. There is no

formal organization on a statewide level to monitor middle school sports programs as there is on the high school level.

2. This study can be broadened to encompass the entire Commonwealth of Virginia. The interview questions can be reorganized into a Likert type scale to measure self-esteem issues, competency issues, injury issues, and stress and anxiety issues.
3. A study on peer relationships in middle school athletes as it relates to the group dynamics of gang membership is recommended. Are the dynamics the same? On the other hand, is one more powerful than the other?
4. Is there a relationship between the training of the coaches and the sports injuries sustained by the athletes?
5. A longitudinal study on student athletes from middle school to high school.
6. A study to investigate the difference between male and female athletes and the influences of sports participation.
7. A study to investigate the differences between minority and non-minority athletes and the influences of sports participation.

#### Summary

The data in this study present corroborating evidence of the influences of interscholastic sports on four student participants in the middle school. The experiences of these students indicated that the benefits outweigh the liabilities. Although the liabilities in this study were limited, administration should consider policies that would improve the safety concerns presented in the recommendations. Appropriate and ongoing training of coaches and volunteers would do much to address the concerns and issues

raised in this study. Further research can expand on the liabilities issues and the benefit issues presented in this study.

References.

Adams, G. R., Gullotta, T. P., Markstrom-Adams, C. (1994). Adolescent life experiences. Pacific Grove, CA: Brooks/Cole .

Alexander, W. M., & George, P.S. (1981). The exemplary middle school. New York: Holt, Rinehart, and Winston.

Alexander, W. M., & McEwin, C. K. (1989). Schools in the middle: Status and progress. Columbus, OH: National Middle School Association.

Anderman. E. M., & Maehr, M. L. (1994). Motivation and schooling in the middle school grades. Review of Educational Research. 64, 287-309.

Backx, F. J. G. (1991). Injuries in persons and high-risk sports: A longitudinal study of 1,818 school children. American Journal of Sports Medicine. 19, 124-30.

Backx, .F J. G. (1996). Epidemiology of paediatric sports-related injuries. In O. Bar-or (Ed.), The child and adolescent athlete (pp. 163-172) Oxford: Blackwell Science.

Bailey, D., & Mirwald, R. (1988). The effects of training on the growth and development of the child. In R. Malina (Ed.), Young athlete (pp.33-47) Champaign, Illinois: Human Kinetics.

Baldwin, D. R., Harris, S. M., Chambliss, L. N. (1997). Stress and illness in adolescence: Issues of race and gender. Adolescence, 32, 839 – 853.

Ballantine, R. J. (1981). What research says: About the correlation between athletic participation and academic achievement. Eric Document Reproduction Service No. ED 233 994.

Bandura, A. (1977). Social learning theory. New Jersey: Prentice Hall.

Berkowitz, R. I., Argras, W. S., Korner, A. F., Kraemer, H. C. (1985). Physical activity and adiposity: a longitudinal study from birth to childhood. Journal of Pediatrics, 106, 734-738.

Beunen, G., & Malina R. M. (1988). Growth and physical performance relative to the timing of the adolescent growth spurt. Exercise and Sport Science Review. 16, 503-540.

Braddock, J. H. (1979). Athletics in American high schools: Some further considerations of the adolescent subculture hypothesis. Eric Document Reproduction Service No. ED 174 720

Braddock, J. H. (1991). Race, athletics, and educational attainment: Dispelling the myths. Youth and Society. 12, 335-350.

Braddock, J., Royster, D., Winfield, L., & Hawkins, R. (1991). Bouncing back: Sports and academic resilience among African-American males. Education and Urban Society, 24 (1) 113-131.

Brown, B. A. & Francis, S. K. (1993). Participants in school sponsored and independent sports: perceptions of self and family. Adolescence, 28, 383-392.

Broughton, P. F. (1992). A study of the effects of athletic participation on academic achievement. An unpublished dissertation, United States International University.

Camp, W. G. (1990). Participation in student activities and achievement. A covariance structural analysis. Journal of Educational Research. 83, 272-278.

Carnegie Council on Adolescent Development ( 1989). Turning points: Preparing American youth for the 21<sup>st</sup> century. New York: Carnegie Corporation of New York.

Caspersen, C., J., Powell, K., E., & Christenson, G., M., (1985). Physical activity, exercise, and physical fitness: Definitions and distinctions for health-related research.

Public Health Reports, 100 126-130.

Coyle, J. J. (1995). An analysis of the motivation for participation in extracurricular activities and their relationship to academic achievement. An unpublished dissertation, Temple University.

Csikszentmihalyi, M. & Nakamura, J. (1989). The dynamics of intrinsic motivation: A study of adolescents. In C. Ames & R. Ames (Eds.), Research on Motivation in Education 3, (pp 45-71). New York: Academic Press.

Deci, E. L. & Ryan, R. M. (1992). The initiation and regulation of intrinsically motivate learning and achievement. In A. K. Boggiano & T. S. Pittman (Eds.), Achievement and motivation (pp. 9-32) New York: Cambridge.

Ekblom, B., (1969) Effects of physical training in adolescent boys. Journal of Applied Physiology, 27, 350-355.

Elkind, D. (1974). Children and adolescents: Interpretive essays on Jean Piaget. New York: Oxford University press.

Epstein, J. L., & Karweit, N. (1983). Friends in school. New York: Academic Press.

Erikson, E. H. (1963). Childhood and society. New York: W. W. Norton.

Ewing, M. E. & Seefeldt, V. (1990). American youth and sports participation. Palm, City, FL: Athletic Footwear Association.

Felitz, D. L., & Albrecht, R. R. (1986). Psychological implications of competitive running. In R. M. Weiss, & Gould (Eds). Sports for children and youth. (pp

225-230). Champlain, Illinois: Human Kinetics.

Fox, K., R., (1988). The self-esteem complex and youth fitness. Quest, 230-246.

Fox, K. R. & Corbin, C. B. (1989). The physical self-perception profile: Development and preliminary validation. Journal of Sport and Exercise Psychology, 11, 408-30.

Gallahue, D., L., (1989). Understanding motor development: Infants, children, adolescents. Dubuque, Iowa: Brown and Benchmark.

George, P. S., Stevenson, C., Thomason, J., & Beane, J. (1992). The middle school and beyond. Reston, VA: Association for Supervision and Curriculum Development.

Gerber, S. G. (1996). Extracurricular activities and academic achievement. Journal of Research and Development. 30, 41-50.

Gholson, R. E. (1985). Student activity and cocurricular participation. NASSP Bulletin. 17-21.

Goldberg, A. D., & Chandler, T. J. (1992). Academics and athletics in the social world of j.h.s. students. The School Counselor. 40, 40-45.

Gordon, K., A., (1995). Self-concept and motivation patterns of resilient African American high school students. Journal of Black Psychology, 21, 239-255

Gould, D., & Eklund, R., C., (1996). Emotional stress and anxiety in the child and adolescent athlete. In O. Bar-Or (Ed.) The Child and Adolescent Athlete. (pp.383-398), Oxford: Blackwell Science.

Gould, D., Horn, T., & Spreeman, J. (1983). Sources of stress in junior elite

wrestlers. Journal of Sport Psychology, 5, 159-171.

Hanson, D. L. (1967). Cardiac response to participation in little league baseball competition as determined by telemetry. Research Quarterly, 38, 384-388.

Harter, S. (1982). The perceived competence scale for children. Child Development, 53, 89-97.

Harter, S. (1990). Self and identity development. In S. S. Feldman & G. R. Elliott (Eds.), At the threshold: The developing adolescent. (pp. 352-387). Cambridge, Massachusetts: Harvard University Press.

Harter, S., (1993). Causes and consequences of low self-esteem in children and adolescents. In R. f. Baumeister (Ed.), Self-esteem: The puzzle of low self-esteem. New York: Plenum Press.

Hawkins, R. (1992). Athletic investment and academic resilience among African American females and males in middle grades. Levin College of Urban Affairs. Cleveland, Ohio.

Holland, A., & Andre, T. (1987). Participation in extracurricular activities in secondary school: What is known, what needs to be known? Review of Educational Research, 57, 437-466.

Holland, A., & Andre, T. (1994). The relationship of self-esteem to selected personal and environmental resources of adolescents. Adolescence, 29, 345-361.

Janz, K. F., & Mahoney, L. T. (1997). Three-year follow-up of changes in aerobic fitness during puberty: the muscatine study. Research quarterly for Exercise and Sports, 68, 1-9.

Klint, K., & Weiss, M. R. (1987). Perceived competence and motives for

participating in youth sports: A test of Harter's competence motivation theory. Journal of Sports Psychology, 9, 55-65.

Kohn, A. (1986). No contest: The case against competition. Boston: Houghton Mifflin.

Lee, I. (1995). Exercise and physical health: Cancer and immune function. Research Quarterly for Exercise and Sport, 66, 286-291.

Lee, V. E., Winfield, L. F., & Wilson, T. C. (1991) Academic behaviors among high achieving African American students. Education and Urban Society, 24, 65-86.

Loucks, A. B. (1992). The reproductive system and exercise in women. Medical and Science Sports Exercise, 24, (Suppl.6), 288-309.

Mahoney, M. J. (1984). Cognitive skills and athletic performance. In W. F. Straub, & J. M. Williams (Eds). Cognitive sport psychology. (pp11-27). New York: Sports Science Associates.

Malina , R. M. (1988). Competitive youth sports and biological maturation. In E. W. Brown & C. F. Branta (Eds). Competitive sports for children and youth. (pp 227-245). Champaign, Illinois: Human Kinetics

Malina, R. M., & Bouchard, (1991). Growth, maturation, and physical activity. Champaign, Illinois: Human Kinetics

Martens, R. (1977). Sport competitive anxiety test. Champaign, Illinois: Human Kinetics.

Martens, R. (1988). Competitive anxiety in children's sports. In R. Malina (Ed) Young athletes in competitive sports. Champaign, Illinois: Human Kinetics.

Marx, D. (1994). Track and field. Vero Beach, Florida: Rourke Corporation, Inc.

Maykut, P., & Morehouse, R. (1994). Beginning qualitative research: A philosophic and practical guide. Washington, DC: The Falmer Press

McEwin, C. K. (1981). Focus on interscholastic sports and the middle school. ERIC Document Reproduction Service No. 209 203

McEwin, C., K., (1994) Interscholastic Sports and young adolescents. Transescence, 22, (1) 21-26.

McEwin, C. K. & Dickinson, T. S. (1997). Interscholastic sports: A battle not fought. National Association of Secondary School Principals, Janaury/ February, 17-22.

Merriam, S., B. (1998). Qualitative research and case study: Applications in education. San Francisco: Jossey-Bass Publishers.

Micheli, L. (1996). Overuse injuries in the young athlete. In O. Bar-or (Ed.) The child and the adolescent athlete. (pp. 189 – 201) Oxford: Blackwell Science.

Micheli, L. (1983). Overuse injuries in children's sports: The growth factor. Orthopedic Clinics of North America. 14, (2) 337-361.

Nattiv, A., Agostini, R., Drinkwater, B., & Yeager, K., (1994) The female triad. Clinics in Sports Medicine, 13, 405-418.

Pappas, A., M. (1983). Epiphyseal injuries in sports. The Physician and Sports Medicine. 11, 142-148.

Passer, M., W. (1983). Fear of failure, fear of evaluation, perceived competence and self-esteem in competitive-trait-anxious children. Journal of Sport Psychology, 5, 172-188.

Peck, D. (1995). Apophyseal Injuries in the young athlete. American Family Physician. 51, 1891-1895.

Redfearn, R., W. ( 1979) Interscholastic: too much, too soon. Middle School Journal, October, 10-13.

Renstrom, P. & Roax, C. (1988). Clinical implications of sports injuries. In A. Dirix, H. G. Knuttgen, & K. Tittel (Eds) The olympic book of sports medicine. London: Blackwell Scientific.

Rhea, D., (1998). Physical activity and body image of female adolescents: Moving towards the 21<sup>st</sup> century. The Journal of Physical Education, Recreation & Dance, 69, 27-33.

Rice, F. P. (1992). The adolescent. Boston: Allyn and Bacon.

Rico, H., Revilla, M., Villa, L., F., Gomez-Castresana, F., Alvarez Del Buergo, M. (1993). Body composition in post-pubertal boy cyclists. Journal of Sports Medicine and Physical Fitness, 33, 278-281.

Rotella, R. J., & Heil, J. (1985) Psychosocial aspects of sports medicine. In B. Reider (Ed.) Sports medicine. Philadelphia: W. B. Saunders Company.

Ryan, J., (1995). Little girls in pretty boxes. New York: Doubleday.

Ryan, R. M., Vallerand, R. J., Deci, E. L. (1984). Intrinsic motivation in sport: A cognitive evaluation theory interpretation. In W. F. Straub & J. M. Williams, (Ed.) Cognitive Sport Psychology. Lansing, New York: Sport Science Associates.

Santrock, J. W. (1996). Child development Madison: Bench & Benchmark

Savin Williams, R., C., & Berndt, T. J. (1990). Friendship and peer relations. In S. S. Feldman, & G. R. Elliott (Eds.), At the threshold: The developing adolescent (pp. 277-307). Cambridge, Massachusetts: Harvard University Press.

Simons, J. & Martens, R. (1979). Children's anxiety in sports and nonsport

evaluative activities. Journal of Sport Psychology. 1, 160-190.

Skubic, E. (1955). Emotional response of boys to Little League and Middle League competitive baseball. Research Quarterly. 26, 342-52.

Smith, R. E. & Smoll, R. L. (1982). Psychological stress. In R. A. Magill, M. J. Ash, & F. L. Smoll (Eds) Children in sport (pp 178-195). Champaign, Illinois: Human Kinetics.

Speer, D. P. & Braun, J. K. (1985). The biomechanical basis of growth plate injuries. The Physician and Sportsmedicine, 13, 75-78.

Synder, E. E., & Spreitzer, E. (1992). Social psychological concomitant of adolescent's role identities as scholars and athletes. Youth and Society. 23, 507-521.

Taft, T. N. (1991). Sports injuries in children. The Elementary School Journal, 91, 429 – 436.

Tanner, J. M. (1962). Growth at adolescence. Oxford: Blackwell Scientific Publications.

Thornburg, H. D. (1975). Development in adolescence. Monterey, California: Brooks/Cole Publishing.

Tompkins, E., & Roe, V.(1958). A survey of interscholastic athletic programs in separately organized junior high schools. NASSP Bulletin. 42, 3

Weiss, M. (1993). Self-esteem and achievement in children's sport and physical activity. In D. Gould & M. R. Weiss (Eds) Advances in pediatric sport sciences. (pp. 87-119). Champaign, Il : Human Kinetics.

Weiss, M., & Ebbeck, V. (1996). Self-esteem and perceptions of competence in youth sports: Theory, research and enhancement strategies. In Bar-Or (Ed.), The child

and adolescent athlete. (pp. 364-382). Oxford: Blackwell Science.

Weiss, M., & Horn, T. S. (1990). The relation between children's accuracy estimates of their physical competence and achievement related characteristics. Research Quarterly for Exercise and Sport, 61, 3, 250-258.

Williams, L., & Gill, D. L. (1995). The role of perceived competence in the motivation of physical activity. Journal of Sports & Exercise Psychology, 17, 363-378.

Appendix A

Permission Letter From School Division

December 3, 1998

Ms. Patricia Daniels  
Brandon Middle School  
1700 Pope Street  
Virginia Beach, VA 23464

Dear Ms. Daniels,

I am pleased to notify you that your research request, "Interscholastic Sports and the Middle School Student" has been approved. Please notify our office if you need to expand the study beyond the four students identified in your proposal. Finally, please forward a copy of your informal consent letter. We will need to review and approve the letter before you begin.

Good Luck with your research.

Sincerely

K. Edwin Brown  
Assistant Superintendent

Appendix B

Rules and Regulations

Virginia Beach Middle School League

INDIVIDUAL ELIGIBILITY REGULATIONS

GENERAL RULES APPLICABLE TO ALL STUDENTS

To be eligible to represent the school in any interschool contest, a student shall meet the following requirements:

- A. BONA FIDE STUDENT RULE-The student shall be a regular bona fide seventh or eighth grade student in good standing of the school, which he/she represents.

Interpretations:

- (1) A “regular” student considered a full-time student who is in regular attendance and is carrying a schedule of subjects which, if successfully completed, will render him/she scholastically eligible for League participation the ensuing grading period.
  - (2) Any student who is under the penalty of suspension, or whose character or conduct is such as to reflect discredit upon his/her school, is not considered in good standing.
  - (3) Any student otherwise eligible may represent the “home” middle school serving his/her district, provided that he/she is pursuing a middle school course or alternative program of study, regardless of whether or not he/she is enrolled in the building which is under the supervision of the middle school principal. However, in all cases, the principals shall be responsible for his/her eligibility.
- B. GRADE RULE-The student shall be enrolled in grade seven or eight to participate in athletic interscholastic events. The student shall be enrolled in grade 6,7, or 8 to participate in nonathletic interscholastic events—debate, forensics, and academic challenge. The student shall be currently enrolled in not fewer than five subjects, or their equivalent, and have passed five subjects, or their equivalent, the immediately preceding grading period, and have had a 2.0 grade point average in the preceding semester. Each student may elect to use a one-time waiver of the 2.0 grade point average rule during his or her middle school years.

NOTE: Deficiencies at the end of the school year may be made up only by work recognized by the Virginia Beach City Public Schools provided that the deficiencies are made up before the opening of the first semester.

Exceptions:

- (1) Any student who has been forced to withdraw from school (a) because of confining illness, (b) because of unavoidable circumstances or (c) because no formal school was reasonably available, upon re-entry in the school at the opening of the subsequent semester, may be exempt from the provision of this rule. If the withdrawal from school was because of confining illness, a written request for the exemption must be made by his/her principal to the Hardship Committee with an attached affidavit from the attending physician stating that the illness on the part of the student was of such a nature and duration as to make it impossible for him/her to earn credit for a grading periods work. If the forced withdrawal was because of the unavoidable circumstances or because no formal education was reasonably available, a statement verifying the condition shall accompany the request. In making application for such exemption the principal shall indicate the grades of the student at the time of his/her withdrawal from school. These shall be taken into consideration by the Hardship Committee in each such case. The exemption shall be available only to a student who has been forced to withdraw from school for more reasons set forth in the first sentence of this exception.
- (2) Any pupil who made standard progress for this level in a special education program for the handicapped who followed standards set by the Special Education Service of the State Department of Education.
- (3) A student who loses scholastic eligibility during the competitive season shall be allowed to complete that season. Pre-season practice is not included as part of the competitive season.

Interpretations:

- (1) "Immediately preceding" grading period is the last grading period prior to that which the student desires to compete.
- (2) For purposed of this rule, the student's eligibility or ineligibility shall be determined on the first day of the grading period following the end of the previous quarter.
- (3) "Equivalent" means that a course of less than one unit equals one subject and a course of more than one unit equals two subjects, etc.

- (4) A student who is suspended or expelled from school and, as a result of this, does not finish a grading period is ineligible throughout the following quarter since his/her record is "incomplete."
  - (5) The scholastic eligibility of a student who attended another school during the preceding grading period may be established only by an official certificate of transcript from that school.
  - (6) Incomplete work at the school at the end of a grading period must be completed before being eligible for the next grading period.
- C. AGE RULE-The student shall not have reached the age of 15 on or before the first day of August of the school year in which he/she wishes to compete.

NOTES:

- (1) In case of doubt as to age, the following evidence may be accepted as proof thereof: Birth certificates from the State Bureau of Vital Statistics, Affidavit of the physician attending at birth, and documentary evidence such as the family record of birth in the Bible, official school record, and the affidavit of parent or guardian. Documentary proof of age other than a birth certificate will be accepted in cases of doubt only when the Bureau of Vital Statistics in the state of birth reports no record exists.
  - (2) If there is discrepancy in the age record on the Master Eligibility List, the earliest date shall be considered correct until proof otherwise has been submitted and accepted.
- D. TRANSFER RULE-The student shall not have enrolled in one middle school and subsequently transferred to and enrolled in another middle school without a corresponding change in residence of his parents, parent, or guardian:
- (1) A student whose transfer from one league school to another has been authorized by the Office of Student Services is immediately eligible provided all other eligibility requirements are met.
  - (2) A student transferring from a school closed by executive or administrative order to the school serving the district in which his/her parent, parents, guardian reside.
  - (3) If the parents of a student move to separate districts, a student may transfer to the school serving the district to which either parent lives without loss of eligibility under this rule.
  - (4) A student entering the 7<sup>th</sup> grade for the first time becomes immediately eligible in the middle school in which he/she enrolls regardless of his/her

residence status, providing he/she meets all other eligibility requirements. A student entering sixth grade for the first time becomes immediately eligible for nonathletic interscholastic activities in the middle school in which he/she meets requirements for academic interscholastic activities.

- (5) A student under the care and guidance of any department of welfare, any department of corrections, or an orphanage or required to change residence by court order, or who is legally adopted, is eligible to participate in League activities in the school district in which he/she is placed.
- (6) A foreign exchange student becomes immediately eligible in the school in which he/she is placed regardless of his/her residence status; however, all other eligibility requirements shall be met.

NOTE: The provisions of the Transfer Rule apply to students transferring from one school to another, including transfer from a private school to a public school as well as transfers from one public school to another. For the purposes of this rule only, the phrase “middle school” is defined as a school providing instruction at the 6<sup>th</sup> or 7<sup>th</sup> or 8<sup>th</sup> grade level(s).

#### E. PARTICIPATION LIMITATIONS

- (1) The student may not participate in the same League-sponsored athletic activity more than two (2) years while enrolled in grades seven and eight. The student may not participate in same League-sponsored nonathletic activity more than three years while enrolled in middle schools.

Example: The student may not participate in baseball more than two (2) seasons while enrolled grades seven and eight.

- (2) 54-2-1 Participation Limitation-Boys may not participate on girls’ teams. If a school maintains separate teams in the same sport for girls and boys during the school year, regardless of sports season, girls may not compete on boys’ teams and boys may not compete on girls’ teams. If a school maintains only a girls’ teams in a sport, boys may not participate on that team.

Appendix C

Parental Consent Letter

Dear Parents:

I am requesting your permission for both you and your child to participate in research designed to study the impact of interscholastic sports on middle school students. This research will be used to complete a case study. The purpose of this study is to investigate the benefits and liabilities of sports participation. I am an assistant principal at Brandon Middle School and a doctoral student at Virginia Polytechnic Institute and University. This data will form the basis of my dissertation.

Your child will be asked a series of interview questions about his/her participation on an interscholastic team. I will observe your child during practice sessions as well as during team participation. Interviews will take place before and after practice sessions and competitive meets. I will also need to have one interview session with you. Your opinions and perceptions are also part of this study. This data will add to the body of knowledge on the middle school student.

Your child's participation is strictly voluntary. Your child will not be identified in the study. A code will be assigned to each participant to ensure anonymity. There is no risk or personal discomfort involved in this research, and you are free to withdraw your child's participation in this study at any time.

Please note the attached consent form. If you are willing to participate, please return the completed forms to your child's school by April , 1999. Whether or not you wish to participate, I would appreciate your returning this consent form.

If you have any questions related to your participation in this study, please contact Pat Daniels, researcher, at (757) 368-0525.

Sincerely

Pat Daniels, Researcher

Dr. Christina Dawson, Advisor

Dr. Robert Richards, Advisor

## Appendix D

Achievement DataReport Card Grades

	<u>Pre-season Grades</u>		<u>In-Season Grades</u>		<u>Post-Season Grades</u>		<u>Final Grade</u>
Case 1	English	B	English	A	English	A	B
	Math	B	Math	A	Math	A	A
	Science	A	Science	A	Science	A	A
	S.S.	A	S.S.	A	S.S.	A	A
Case 2	English	E	English	B	English	B	C
	Math	E	Math	B	Math	A	B
	Science	D	Science	C	Science	B	B
	S.S.	C	S.S.	C	S.S.	B	C
A/B = Above Average		C = Average		D = Below Average		E = Failure	

(Table continues)

Report Card Grades

	Pre-Season Grades		In-Season Grades		Post Season Grades		Final Grades	
Case 3	English	B	English	B	English	A	English	B
	Math	B	Math	A	Math	A	Math	A
	Science	B	Science	B	Science	B	Science	B
	S.S.	B	S.S.	B	S.S.	B	S.S.	B
Case 4	English	B	English	B	English	B	English	B
	Math	A	Math	A	Math	B	Math	A
	Science	B	Science	B	Science	B	Science	B
	S.S.	B	S.S.	B	S.S.	B	S.S.	B

A/B = Above Average

C = Average

D = Below Average

E = Failure

Appendix E  
Content Validity for Domain, Association and Clarity of Interview Protocol

Directions:

Domains – Using the following definitions to categorize the following questions into domains:

1. self-esteem – how an individual perceives his/her self-worth
2. competency- perceived mastery in a skill
3. achievement – grade point average
4. stress/anxiety- negative feelings which can manifest into physical symptoms
5. sports injury – harm to the body due to sports participation
6. fitness - physical strength and condition, and physical self-worth

Association – Using the following scale indicate how strongly you believe each question belongs in chosen domain.

A – Strong                      B – Neutral                      C – Weak

Clarity – Indicate question clarity with the following scale:

1 – Clear                      2 – Neutral                      3 – Revise

Domains:    1 – Self-esteem    2 – Competency    3 – Achievement    4 – Stress/Anxiety    5 – Sports Injuries  
                   6 – Fitness

Association:        A – Strong                B – Neutral                C – Weak

Clarity:                1 – Clear        2 – Neutral                3 – Revise

Interview Questions

	<u>Domains</u>	<u>Association</u>	<u>Clarity</u>
1. How does participating on this team contributed to your self-confidence?	1 2 3 4 5 6	A B C	1 2 3
2. How has participating on this team influenced how you feel about yourself?	1 2 3 4 5 6	A B C	1 2 3
3. What is the downside of participating on this team?	1 2 3 4 5 6	A B C	1 2 3
4. As a result of participating on this team how do your friends see you?	1 2 3 4 5 6	A B C	1 2 3
5. As a result of participating on this team how do you feel about your sport's skill level?	1 2 3 4 5 6	A B C	1 2 3
6. How has participating on this team contributed to your popularity?	1 2 3 4 5 6	A B C	1 2 3

<u>Interview Questions</u>	<u>Domains</u>	<u>Association</u>	<u>Clarity</u>
7. What kinds of things have you learned as a result of participating on this team?	1 2 3 4 5 6	A B C	1 2 3
8. What kinds of skills have you learned as a result of participating in this sport?	1 2 3 4 5 6	A B C	1 2 3
9. How has participating in this sport contributed to your overall physical fitness?	1 2 3 4 5 6	A B C	1 2 3
10. How has participating on this team influenced how you feel about fitness and health?	1 2 3 4 5 6	A B C	1 2 3
11. How has participating on this team contributed to your self-image?	1 2 3 4 5 6	A B C	1 2 3
12. How has participating on this team mentally prepared you for competition?	1 2 3 4 5 6	A B C	1 2 3
13. How has participating on this team influenced how you think about pre-season conditioning?	1 2 3 4 5 6	A B C	1 2 3
14. How has participating on this team influenced how you think about grades?	1 2 3 4 5 6	A B C	1 2 3

<u>Interview Questions</u>	<u>Domains</u>	<u>Association</u>	<u>Clarity</u>
15. How has participating on this team influenced your study habits?	1 2 3 4 5 6	A B C	1 2 3
16. How has participating on this team influenced your study schedule?	1 2 3 4 5 6	A B C	1 2 3
17. How has participating on this team influenced the way you perceive yourself academically?	1 2 3 4 5 6	A B C	1 2 3
18. As a result of participating on this team, how do you handle the night before an important meet/game?	1 2 3 4 5 6	A B C	1 2 3
19. As a result of participating on this team, how often do you feel anxious?	1 2 3 4 5 6	A B C	1 2 3
20. As a result of participating on this team how often do you restless?	1 2 3 4 5 6	A B C	1 2 3
21. As a result of participating on this team how often do you experience muscle soreness?	1 2 3 4 5 6	A B C	1 2 3
22. As a result of participating on this team how often do you experience physical pain?	1 2 3 4 5 6	A B C	1 2 3

<u>Interview Questions</u>	<u>Domains</u>	<u>Association</u>	<u>Clarity</u>
23. How has participation on this team influenced how often you practice your sport skills outside of practice?	1 2 3 4 5 6	A B C	1 2 3
24. How has participating on this team influenced you to do your best in this sport?	1 2 3 4 5 6	A B C	1 2 3
25. How has participating on this team influenced your physical appearance?	1 2 3 4 5 6	A B C	1 2 3
26. As a result of participating on this team, how are your grades monitored?	1 2 3 4 5 6	A B C	1 2 3
27. How has the eligibility requirement of 2.0 GPA influenced your participation on this team?	1 2 3 4 5 6	A B C	1 2 3
28. How often have you experienced feelings of inadequacy (not good enough) since your participation on this team?	1 2 3 4 5 6	A B C	1 2 3

<u>Interview Questions</u>	<u>Domains</u>	<u>Association</u>	<u>Clarity</u>
29. How often have you experienced feelings of panic since participating on this team?	1 2 3 4 5 6	A B C	1 2 3
30. Since participating on this team, explain how you handle stress?	1 2 3 4 5 6	A B C	1 2 3
31. How has participating on this team influenced your sleeping habits?	1 2 3 4 5 6	A B C	1 2 3
32. How often have you participated in your sport while injured?	1 2 3 4 5 6	A B C	1 2 3
33. As a result of participating on this team, how often do you see a doctor during the year for a sport related injury?	1 2 3 4 5 6	A B C	1 2 3
34. As a result of participating on this team, what kind of sport injuries do you get?	1 2 3 4 5 6	A B C	1 2 3

Appendix F

Interview Protocol

1. How does participating on this team contribute to your self-confidence?
2. How has participating on this team influenced how you feel about yourself?
3. As a result of participating on this team, how do you think your friends see you?
4. How has participating on this team contributed to yourself-image?
5. What kinds of skills have you learned as a result of participating on this sport?
6. What kind of skills have you learned as a result of participating on this team?
7. How has participating on this team influenced how often you practice your skills?
8. How has participating on this team influenced your study habits?
9. How has participating on this team influenced how you think about grades?
10. As a result of participating on this team how are your grades monitored?
11. How has the eligibility requirement of 2.0 GPA influenced your participation on this team?
12. How has participating in this sport contributed to your overall physical fitness?
13. How has participating on this team influenced how you feel about fitness and health?
14. As a result of participating on this team how do you handled the night before an important meet?
15. As a result of participating on this team how often do you feel anxious?
16. As a result of participating on this team, how often do you feel restless?
17. How often have you experienced feelings of panic since participating on this team?

18. Since participating on this team, explain how you handle stress?
19. How has participating on this team influenced your sleeping habits?
20. As a result of participating on this team how often do you experience muscle sourness?
21. As a result of participating on this team how often do you experience pain?
22. How often have you participated in your sport while injured?
23. As a result of participating on this team, what kind of sport injuries do you get?
24. As a result of participating on this team, how often do you see a doctor during the year for a sport related injury?

## VITA

Born and raised in Queens, New York, Patricia Lyons-Daniels currently resides in Virginia Beach, Virginia. She received her Bachelor of Arts from Hunter College of the City University of New York in 1969 where she majored in Health and Physical Education. Pat Daniels received her Master of Arts in Health Education from Teachers College, Columbia University in 1973. After receiving her Certificate of Advanced Studies in Administration and Supervision from Central Connecticut State University in 1987, she relocated to Virginia and received her Educational Specialist Certification in Educational Leadership and Policy Studies from Virginia Polytechnic Institute and State University in 1998.

Dr. Pat Daniels began her teaching career in 1970. She has held health and physical education teaching positions on the elementary and the secondary levels in New York City, New York and Hartford and Simsbury, Connecticut. During her tenure as a district health resource coordinator, she also supervised the summer camp programs for the Police Athletic League in New York City. Shortly after arriving in Virginia in 1990, Pat became an assistant principal on the elementary school level. After four years, she was promoted to the middle school level. Pat is currently an assistant principal at Brandon Middle School in Virginia Beach, Virginia.

Dr. Pat Daniels is a member of the National Association of Secondary School Principals, Association for Supervision and Curriculum Development, National Alliance of Black School Educators, and Phi Delta Kappa. In her leisure, she actively participates in the lay ministry at Grace Episcopal Church by sponsoring the Episcopal Youth Church

and the Breakfast Ministry Program. Pat enjoys a good game of social tennis, discussions with her teenage son, and walks on the beach with her husband and friends.